PixBar 600 Short IP G2



PixBar 600 Short IP G2 (CLPB600SIPG2)

PHOTOMETRIC TEST REPORT

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Report Introduction

About this report

We measure total luminous flux with state-of-the-art equipment, such as an integrating sphere and a goniophotometer, based on a 6-Axis industry Robot. In this process we rely on our professional Cameo photometric laboratory or certified partners. Our measurements reflect the utilised flux emitted from the luminaire at all radiating angles considering the zoom range.
We process our measurement data in a specialized software to calculate all photometric data. This photometric report includes spectra, light distribution, TM30-15, TLCI, and many other standardised reports. Additionally, we provide photometric data in IES and LDT file format.

Measurement conditions

- Stabilised laboratory room temperature for absolute consistency
- Stabilised luminaires (max. +-0.5% flux for at least 15min)
- Goniophotometer resolution: gamma = 5° and C-level = 0.1°
- Distance > photometric limit distance (tolerance < 1.0%)
- Calibrated and accurate tools

Equipment

- Goniometer with 6-Axis Robogonio by Opsira including Spectral Radiometer Spec`3 and frc-f-I, a fast Class-L Photometer for flicker etc.
- Integrating sphere UKU800 by Opsira
- Spectral Radiometer Spec`3 by Opsira
- Luxmeter Gossen MavoLux 5032-C
- Handheld-Spectrometer Gossen MavoSpec M600A
- Handheld-Spectrometer UPR-Tec MK350S Premium

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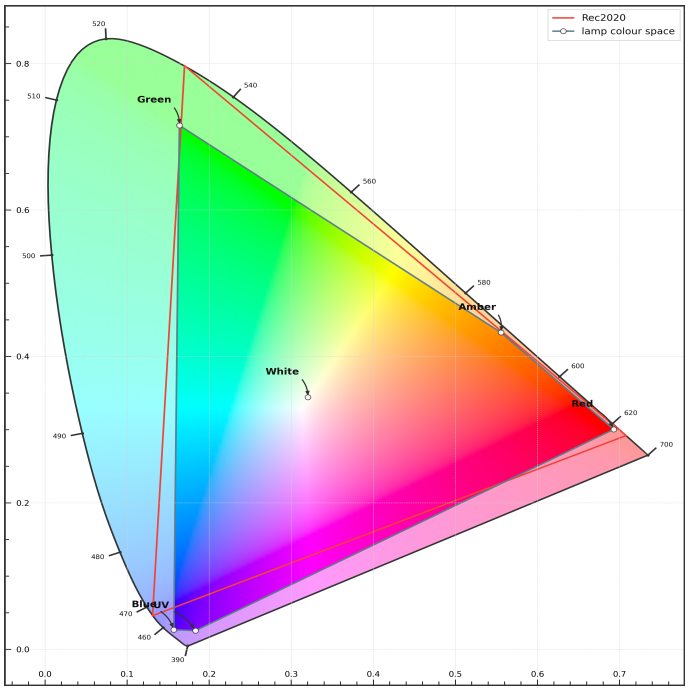
Overview

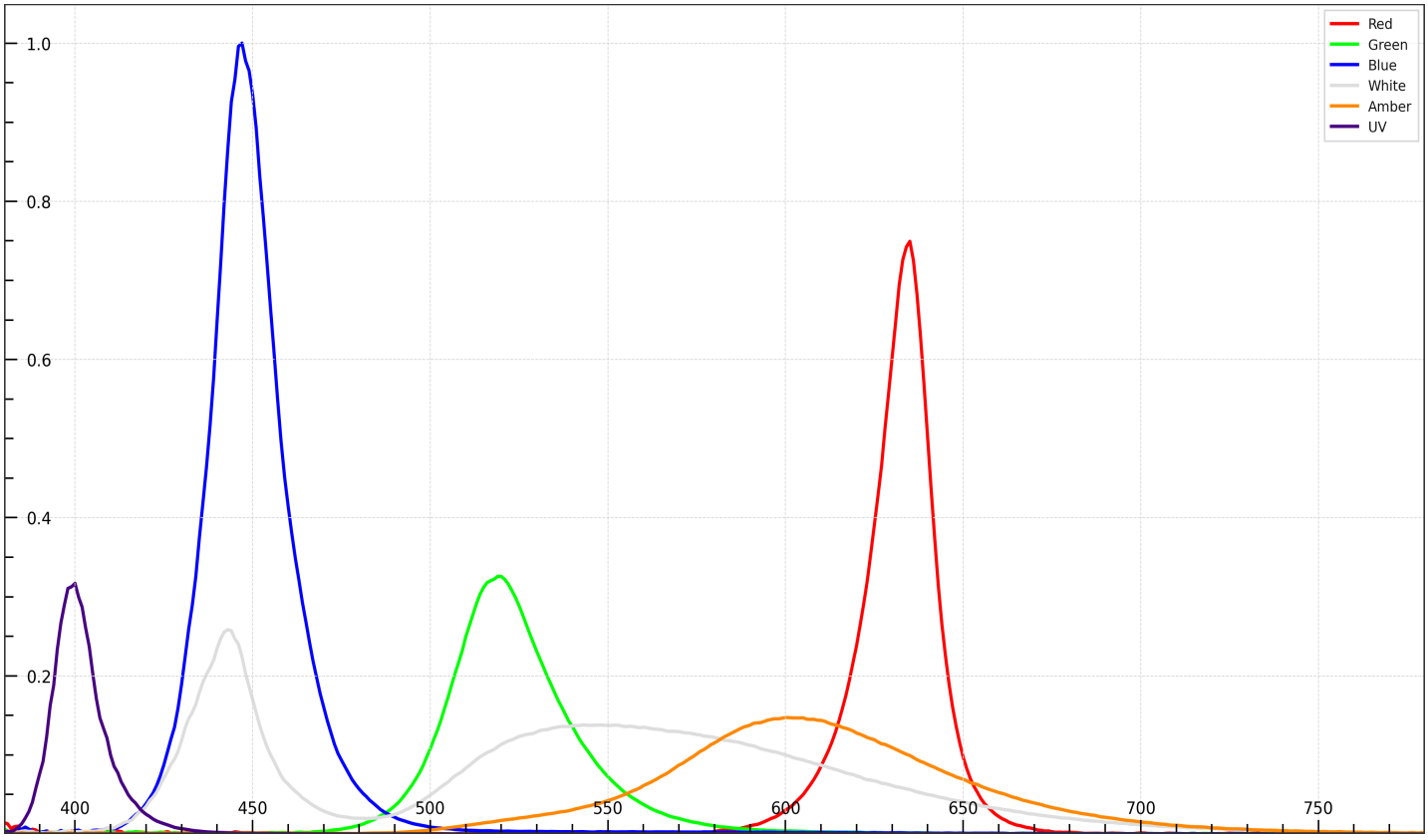
LED Colours	Lum flux [lm]	x	y
Red	778	0.6929	0.3005
Green	1402	0.1637	0.7156
Blue	227	0.1569	0.0268
White	1764	0.3203	0.3444
Amber	1168	0.5555	0.4328
UV	10	0.1833	0.0256

Colour space	Coverage [%]
Rec2020	87.3

CIE 1931 Chromaticity Diagram - 2° Standard Observer



Spectral Distribution for Colours (Wavelength [nm] --> relative Intensity)



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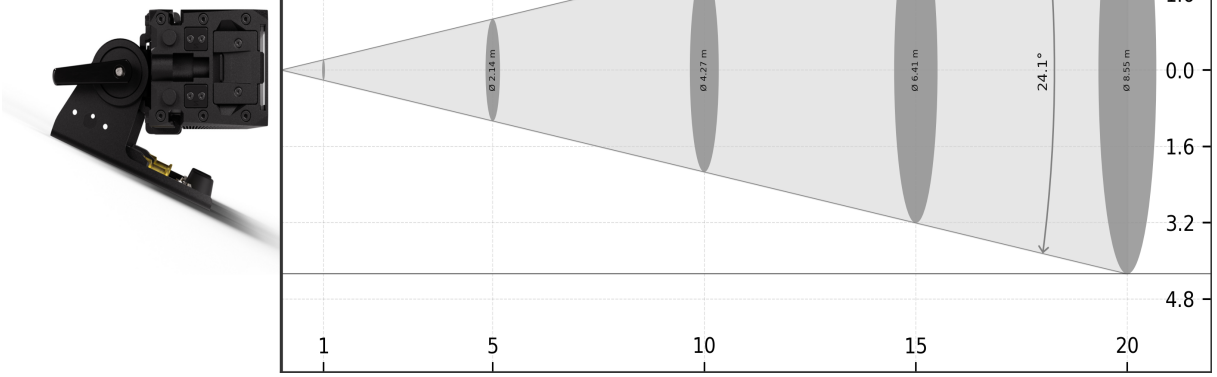
Full-On – Photometric Report

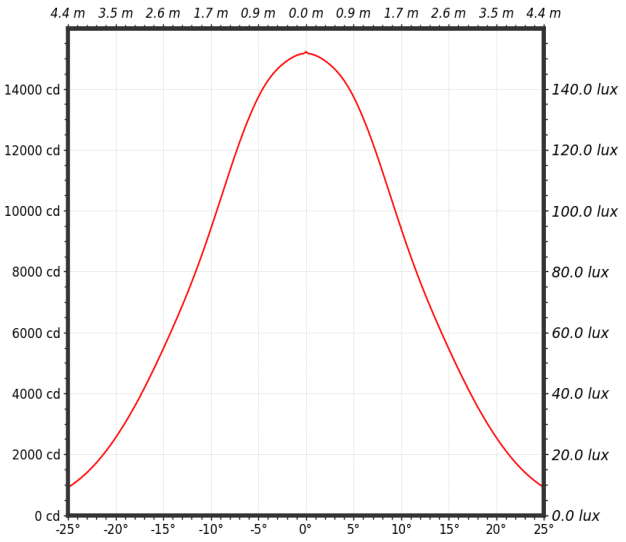
Beam Angle [°]	Field Angle [°]	Luminous flux [lm]	Power [W]	Luminous Efficacy [lm/W]
24.1	45.2	3316	90	36.6

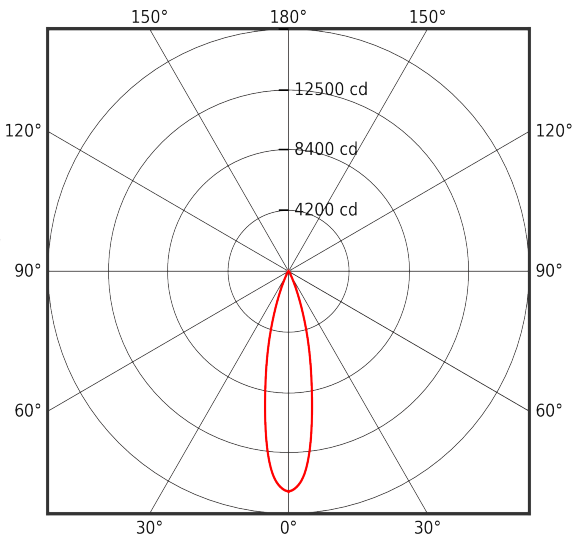
Distance-Diameter-Diagram (Distance [m] --> Beam Opening [m])



Distance [m]	1	5	10	15	20
Illuminance [lx]	15210	608	152	68	38
Diameter [m]	0.43	2.14	4.27	6.41	8.55

Light Distribution Diagrams / Illuminance





Fixture Settings: Full-On; No-Filter

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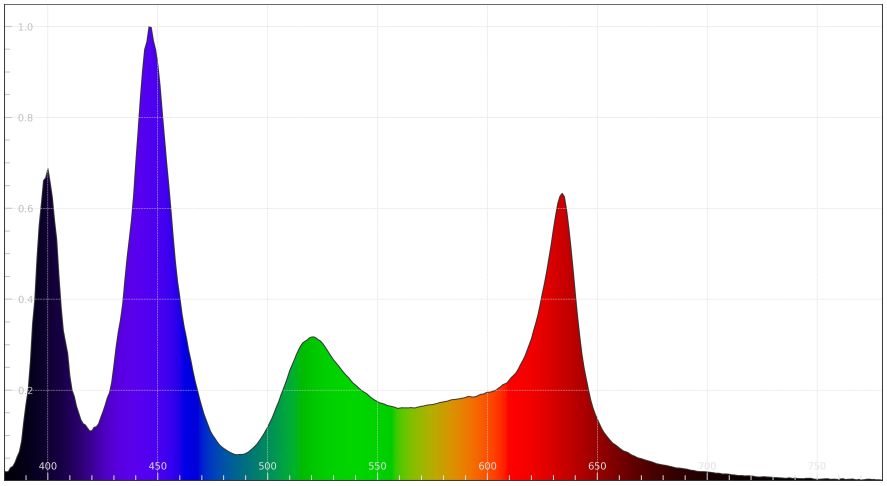
Full-On – Colorimetric Report

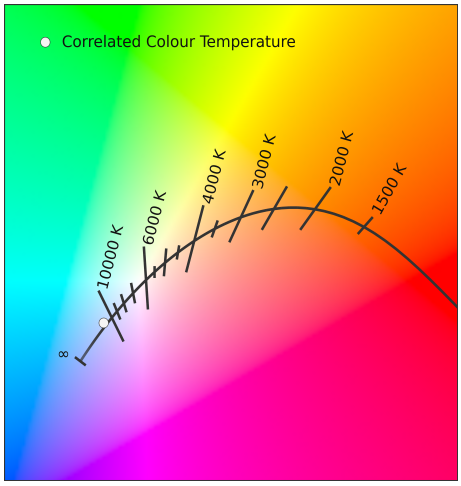
Colorimetric Characteristics

Correlated Colour Temperature [K]	**CCT**	11709	Luminous Flux [lm]	**Lum Flux**	3316
Colour Deviation from Black	**D_{uv}**	-0.0425	Colour Rendering Index	**CRI Ra**	51
Colour Coordinate CIE 1931	**x**	0.2990	Red Component	**CRI R9**	-126
Colour Coordinate CIE 1931	**y**	0.2383	Colour Fidelity	**TM30 R_f**	65
Colour Coordinate CIE 1976	**u'**	0.2273	Colour Gamut	**TM30 R_g**	128
Colour Coordinate CIE 1976	**v'**	0.4076	Television Lighting Consistency Index	**TLCI**	68
Spectral Similarity Index	**SSI[CIE D11709]**	52			

CIE 1931 2° Standard Observer (Wavelength [nm] --> relative Spectral Distribution)

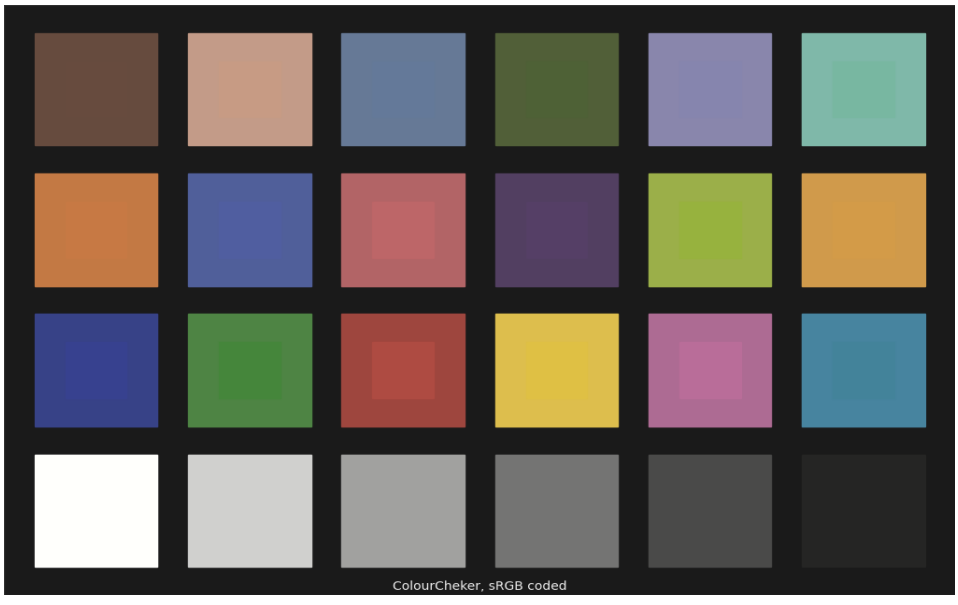


Colour Temperature

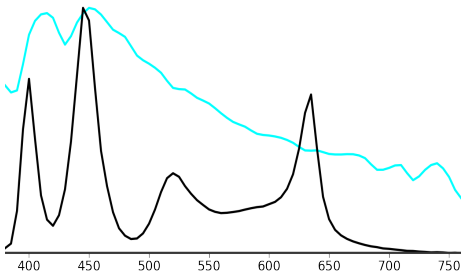


Television Lighting Consistency Index-2012

CCT = D11709 (-7.9) TLCI-2012 : 68 (D11709)



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



Fixture Settings: Full-On; No-Filter

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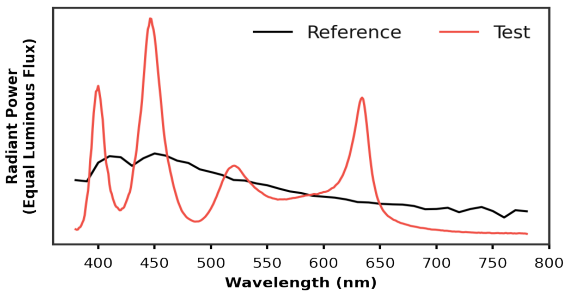
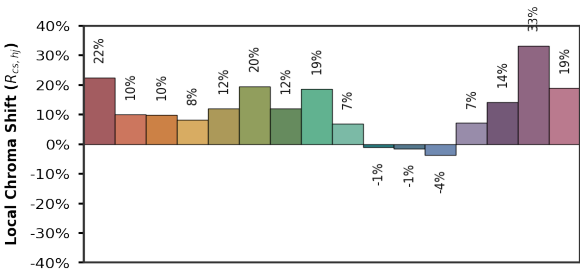
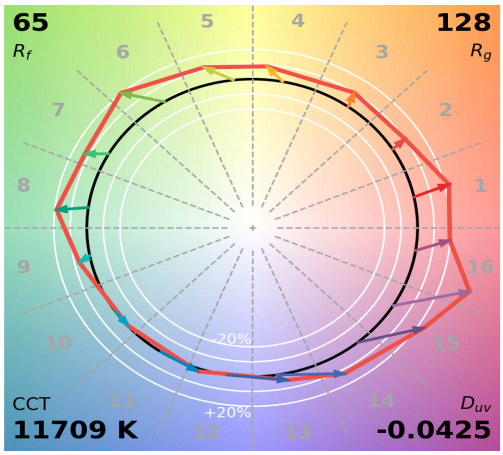
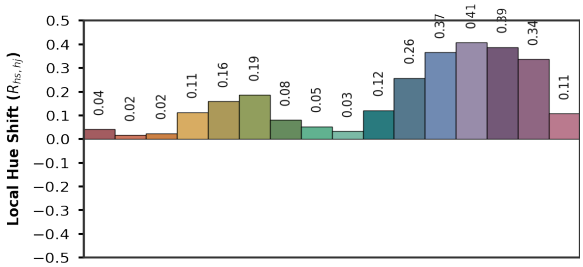
Full-On – Colorimetric Report

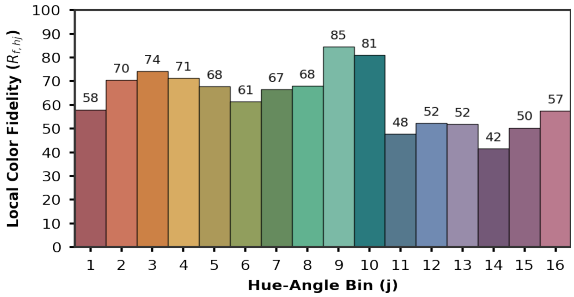
IES TM-30-18 Colour Rendition Report

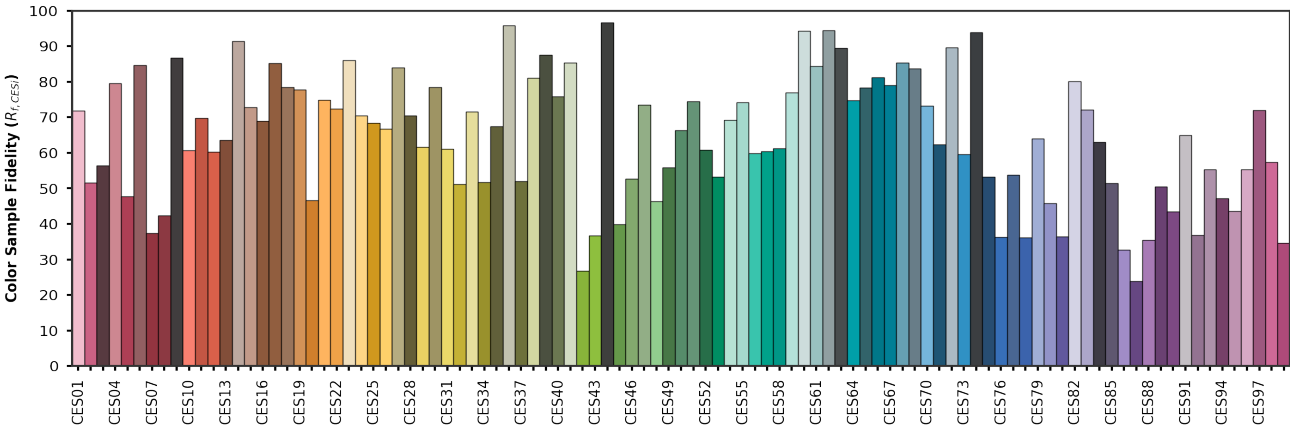












x	0.2990
y	0.2383
u'	0.2273
v'	0.4076

CIE 13.31-1995
(CRI)
R_a **51**
R_9 **-126**

Fixture Settings: Full-On; No-Filter

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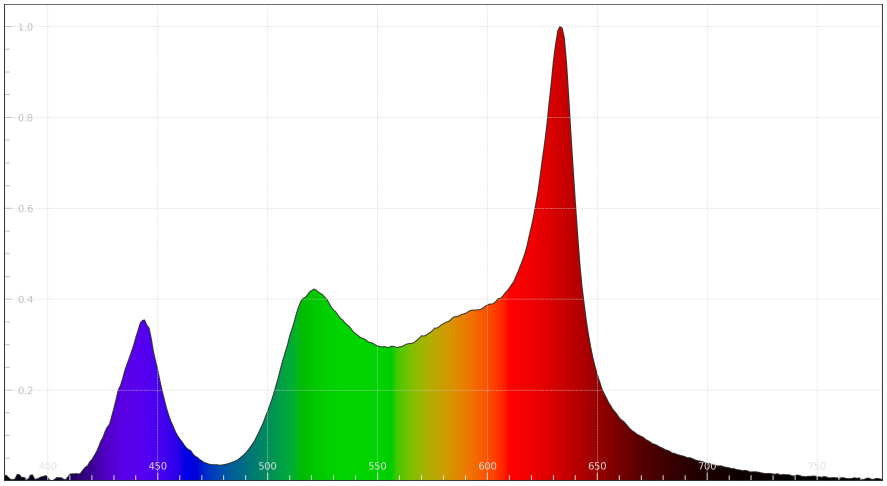
2700K – Colorimetric Report

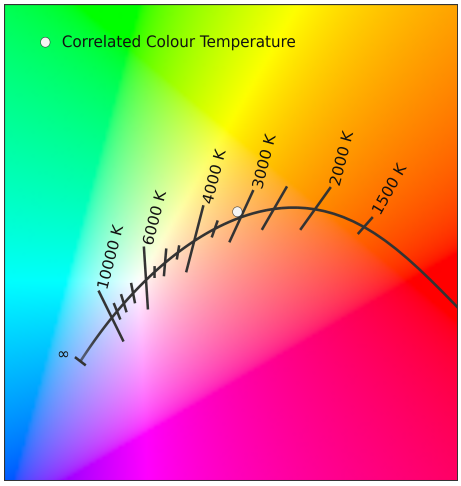
Colorimetric Characteristics

Correlated Colour Temperature [K]	**CCT**	3124	Luminous Flux [lm]	**Lum Flux**	3110
Colour Deviation from Black	**D_{uv}**	-0.0018	Colour Rendering Index	**CRI Ra**	88
Colour Coordinate CIE 1931	**x**	0.4259	Red Component	**CRI R9**	85
Colour Coordinate CIE 1931	**y**	0.3956	Colour Fidelity	**TM30 R_f**	85
Colour Coordinate CIE 1976	**u'**	0.2471	Colour Gamut	**TM30 R_g**	112
Colour Coordinate CIE 1976	**v'**	0.5163	Television Lighting Consistency Index	**TLCI**	51
Spectral Similarity Index	**SSI[P3124]**	65			

CIE 1931 2° Standard Observer (Wavelength [nm] --> relative Spectral Distribution)



Colour Temperature

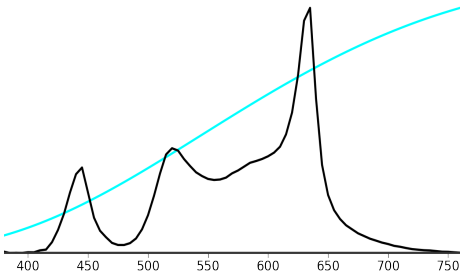


Television Lighting Consistency Index-2012

CCT = P3124 (-0.3) TLCI-2012 : 51 (P3124)



Sector	Lightness	Chroma	Hue
R	0	0	0
R/Y	+	0	0
Y	0	0	0
Y/G	0	-	0
G	0	--	+
G/C	0	---	+++++++
C	0	0	++++++++
C/B	0	++	10*+
B	0	-	0
B/M	0	---	+++++
M	0	--	++++
M/R	0	-	++++



Fixture Settings: CCT-2700K; No-Filter

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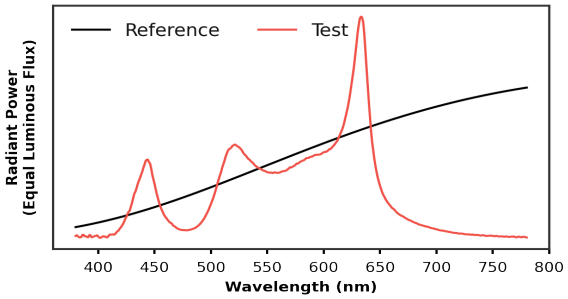
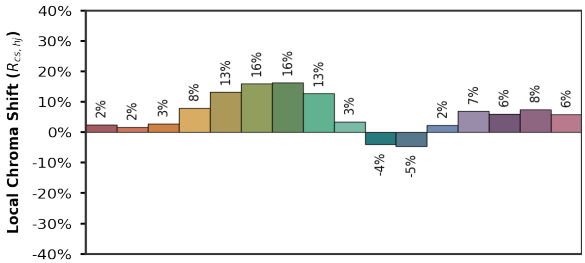
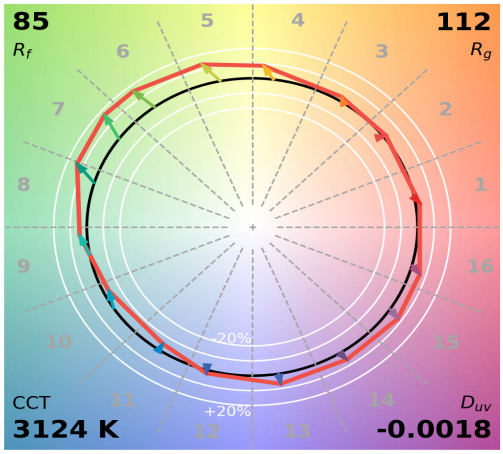
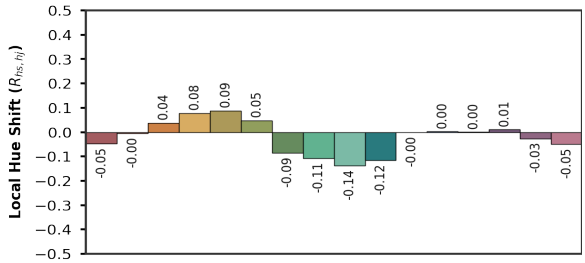
2700K – Colorimetric Report

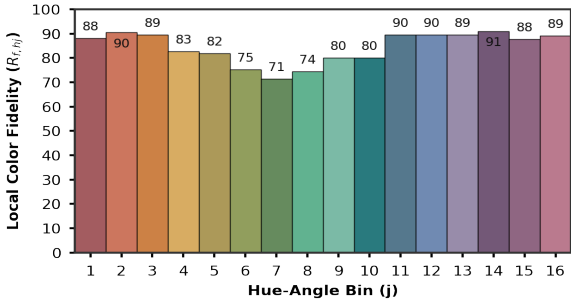
IES TM-30-18 Colour Rendition Report

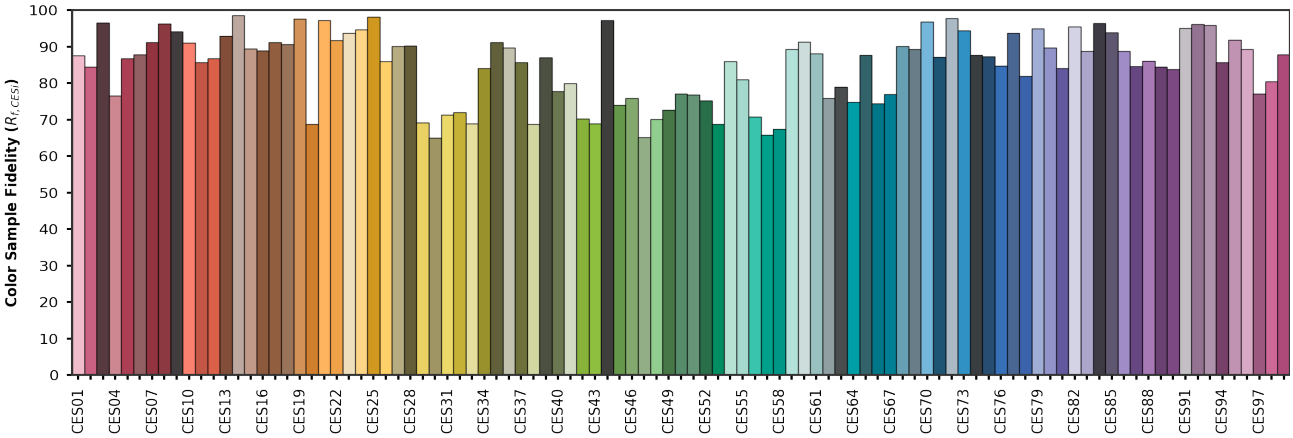












x	0.4259
y	0.3956
u′	0.2471
v′	0.5163

CIE 13.31-1995 (CRI)
R_a **88**
R_9 **85**

Fixture Settings: CCT-2700K; No-Filter

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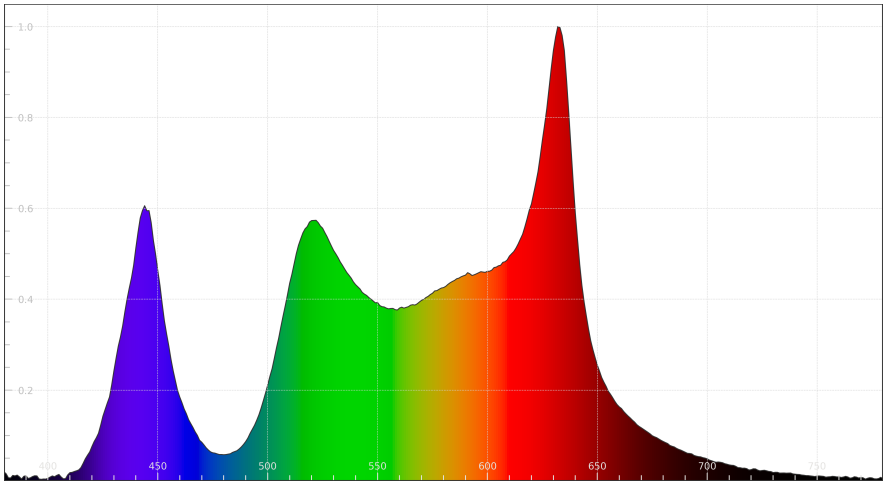
3200K – Colorimetric Report

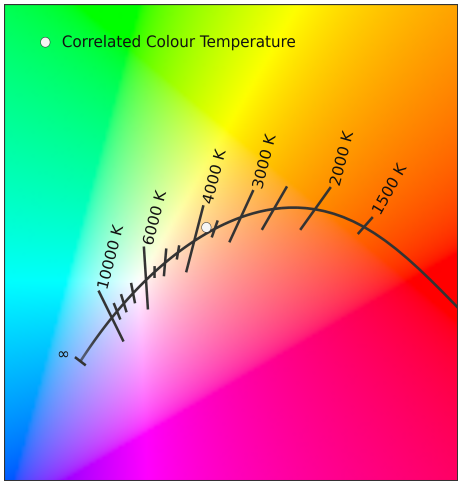
Colorimetric Characteristics

Correlated Colour Temperature [K]	**CCT**	3745	Luminous Flux [lm]	**Lum Flux**	3916
Colour Deviation from Black	**D_{uv}**	-0.0021	Colour Rendering Index	**CRI Ra**	89
Colour Coordinate CIE 1931	**x**	0.3906	Red Component	**CRI R9**	93
Colour Coordinate CIE 1931	**y**	0.3782	Colour Fidelity	**TM30 R_f**	86
Colour Coordinate CIE 1976	**u'**	0.2312	Colour Gamut	**TM30 R_g**	111
Colour Coordinate CIE 1976	**v'**	0.5037	Television Lighting Consistency Index	**TLCI**	59
Spectral Similarity Index	**SSI[P3745]**	63			

CIE 1931 2° Standard Observer (Wavelength [nm] --> relative Spectral Distribution)



Colour Temperature

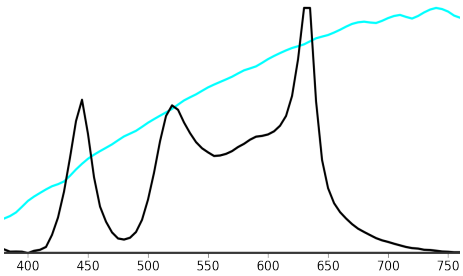


Television Lighting Consistency Index-2012

CCT = M3745 (-0.4) TLCI-2012 : 59 (M3745)



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



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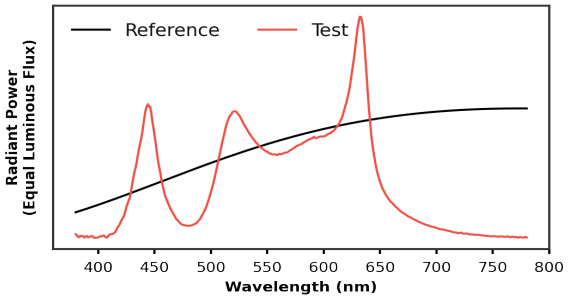
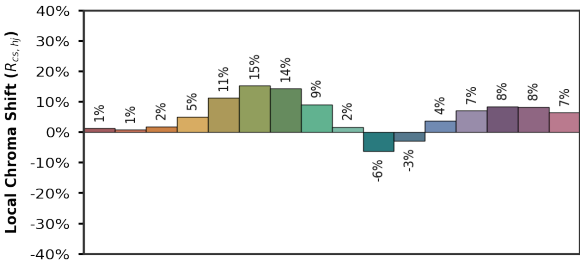
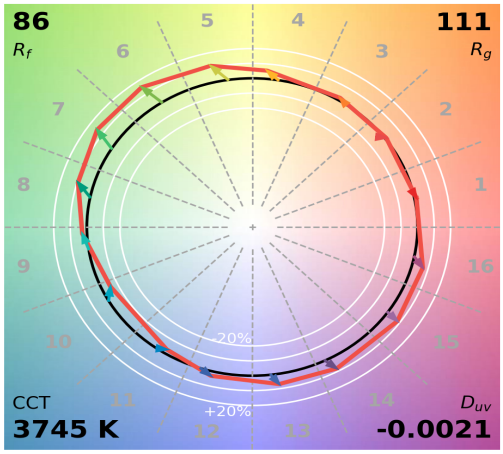
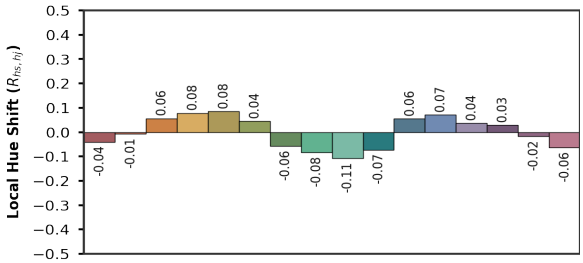
3200K – Colorimetric Report

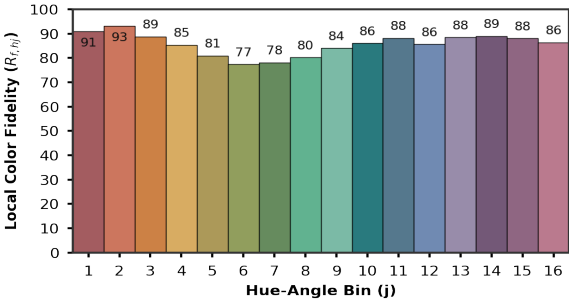
IES TM-30-18 Colour Rendition Report

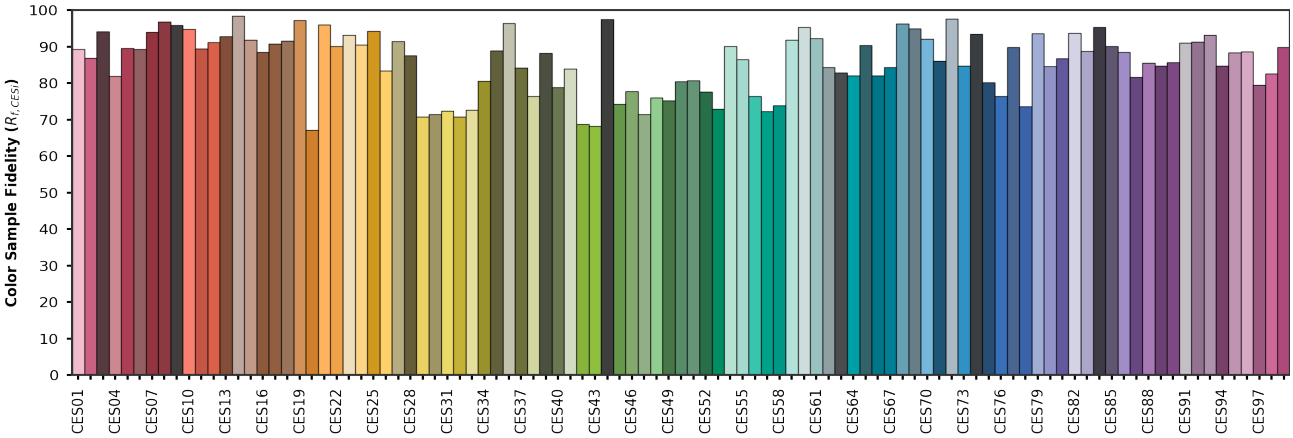












x	0.3906
y	0.3782
u′	0.2312
v′	0.5037

CIE 13.31-1995 (CRI)
R_a **89**
R_9 **93**

Fixture Settings: CCT-3200K; No-Filter

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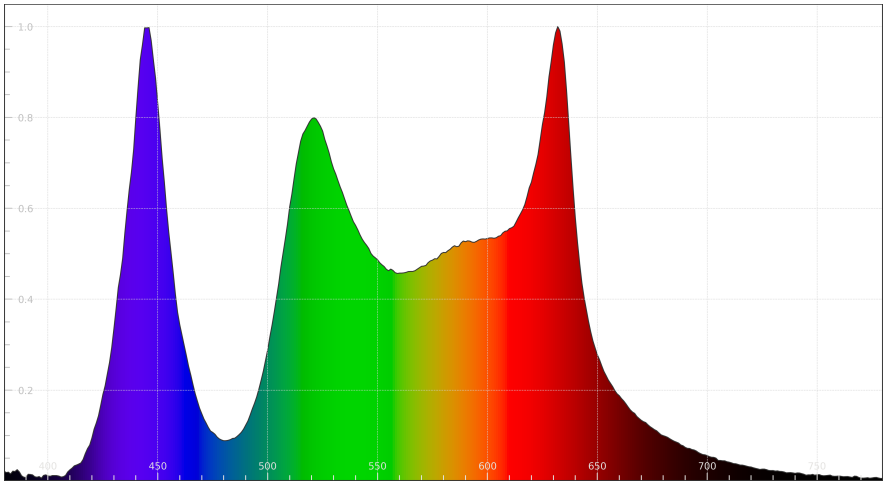
4000K – Colorimetric Report

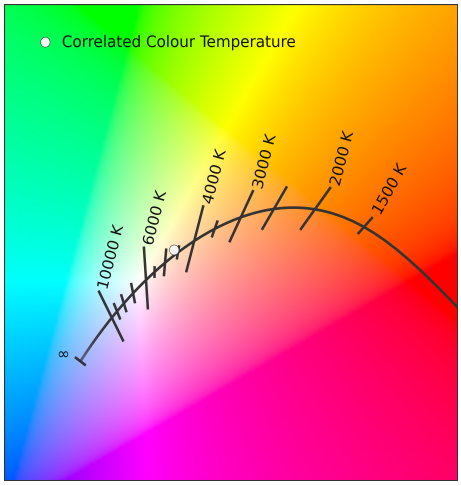
Colorimetric Characteristics

Correlated Colour Temperature [K]	**CCT**	4669	Luminous Flux [lm]	**Lum Flux**	4020
Colour Deviation from Black	**D_{uv}**	-0.0013	Colour Rendering Index	**CRI Ra**	88
Colour Coordinate CIE 1931	**x**	0.3547	Red Component	**CRI R9**	94
Colour Coordinate CIE 1931	**y**	0.3564	Colour Fidelity	**TM30 R_f**	85
Colour Coordinate CIE 1976	**u'**	0.2160	Colour Gamut	**TM30 R_g**	111
Colour Coordinate CIE 1976	**v'**	0.4884	Television Lighting Consistency Index	**TLCI**	63
Spectral Similarity Index	**SSI[P4669]**	60			

CIE 1931 2° Standard Observer (Wavelength [nm] --> relative Spectral Distribution)

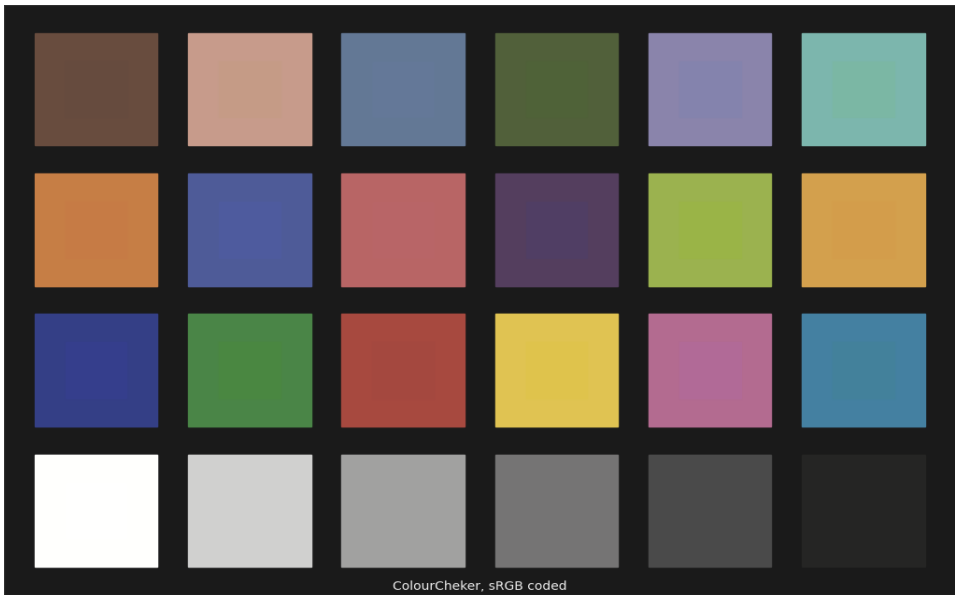


Colour Temperature

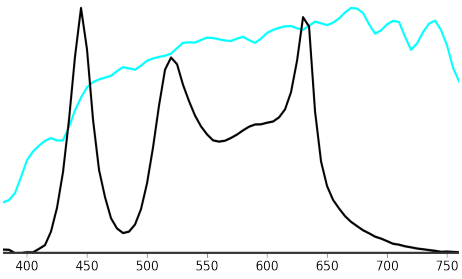


Television Lighting Consistency Index-2012

CCT = M4669 (-0.2) TLCI-2012 : 63 (M4669)



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



Fixture Settings: CCT-4000K; No-Filter

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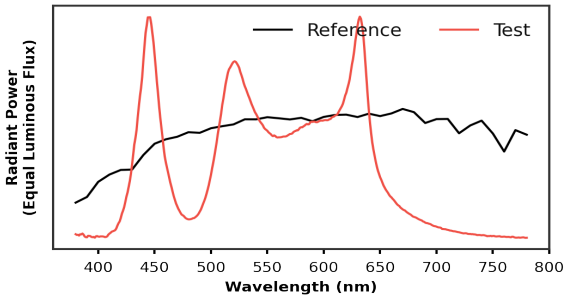
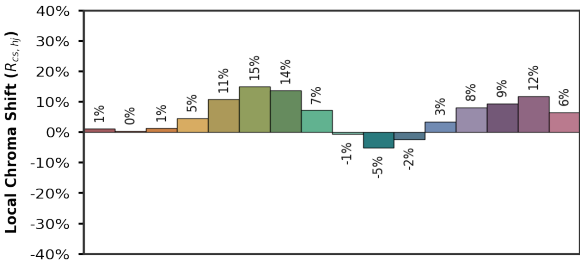
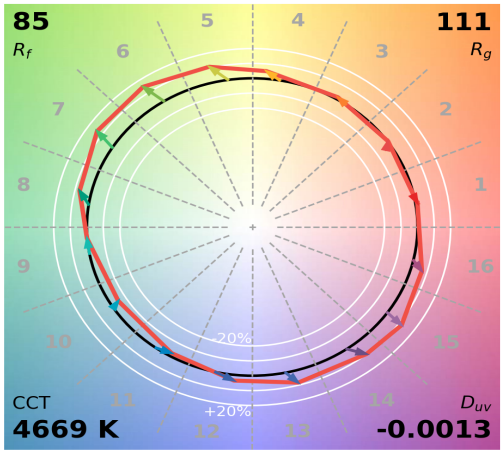
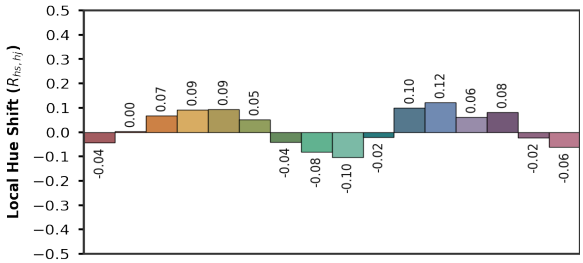
4000K – Colorimetric Report

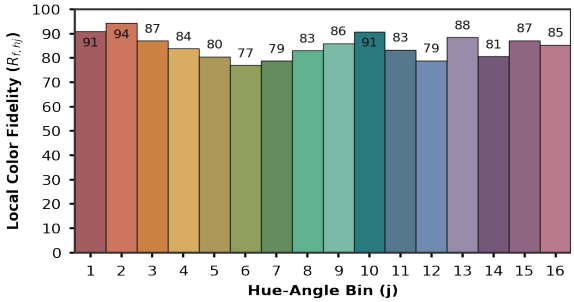
IES TM-30-18 Colour Rendition Report

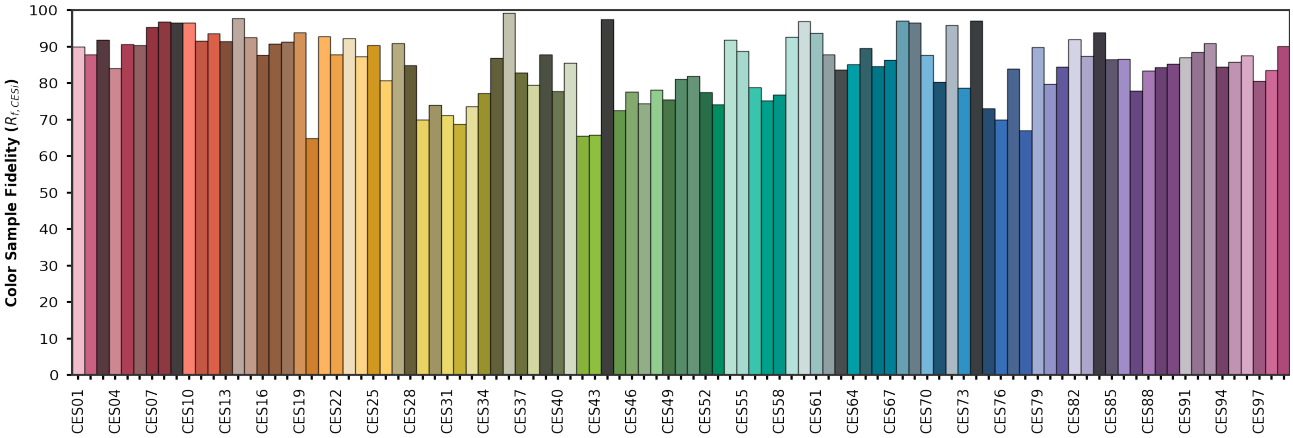












x	0.3547
y	0.3564
u′	0.2160
v′	0.4884

CIE 13.31-1995 (CRI)
R_a 88
R_9 94

Fixture Settings: CCT-4000K; No-Filter

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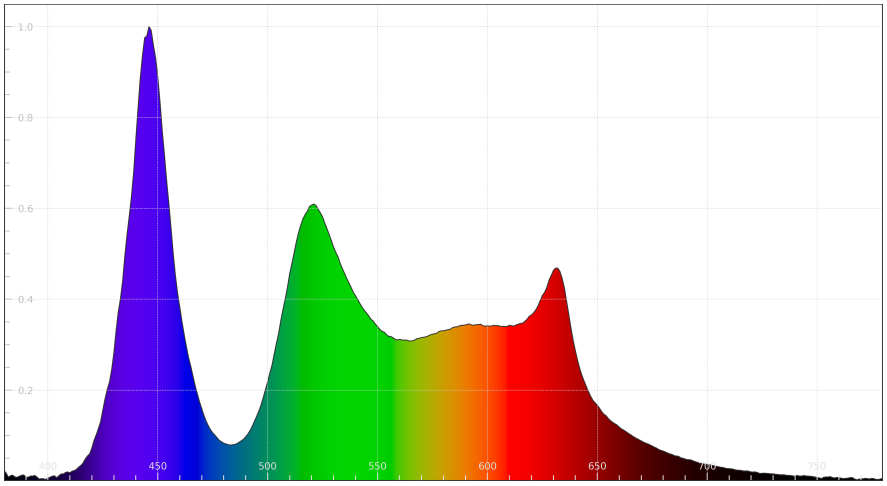
5600K – Colorimetric Report

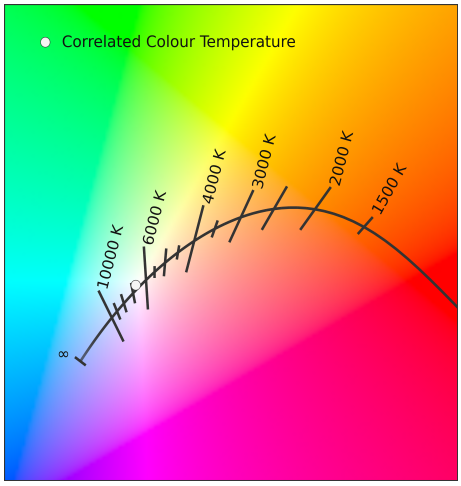
Colorimetric Characteristics

Correlated Colour Temperature [K]	**CCT**	6706	Luminous Flux [lm]	**Lum Flux**	4132
Colour Deviation from Black	**D_{uv}**	-0.0010	Colour Rendering Index	**CRI Ra**	86
Colour Coordinate CIE 1931	**x**	0.3107	Red Component	**CRI R9**	93
Colour Coordinate CIE 1931	**y**	0.3189	Colour Fidelity	**TM30 R_f**	84
Colour Coordinate CIE 1976	**u'**	0.2003	Colour Gamut	**TM30 R_g**	109
Colour Coordinate CIE 1976	**v'**	0.4625	Television Lighting Consistency Index	**TLCI**	74
Spectral Similarity Index	**SSI[CIE D6706]**	57			

CIE 1931 2° Standard Observer (Wavelength [nm] --> relative Spectral Distribution)

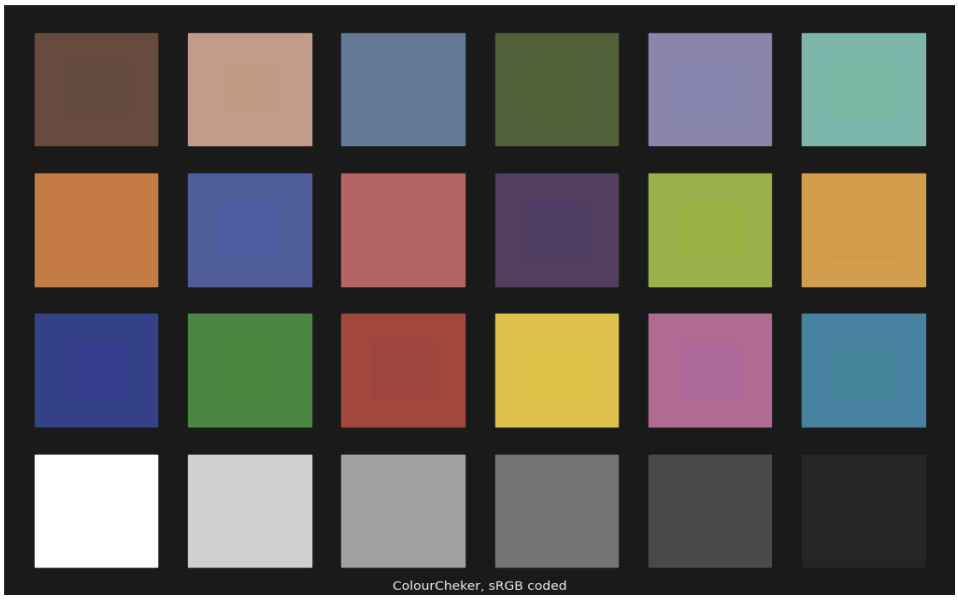


Colour Temperature

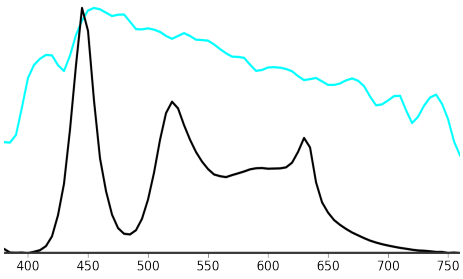


Television Lighting Consistency Index-2012

CCT = D6706 (-0.2) TLCI-2012 : 74 (D6706)



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



Fixture Settings: CCT-5600K; No-Filter

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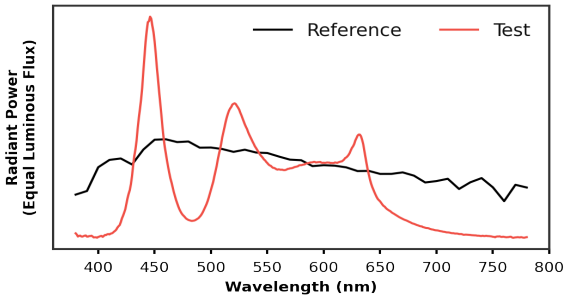
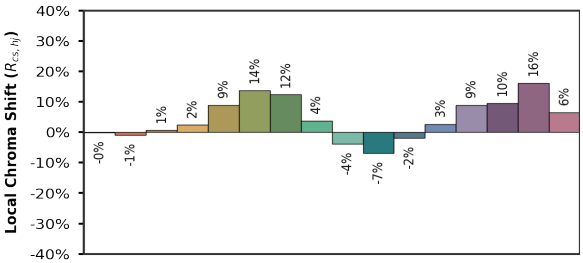
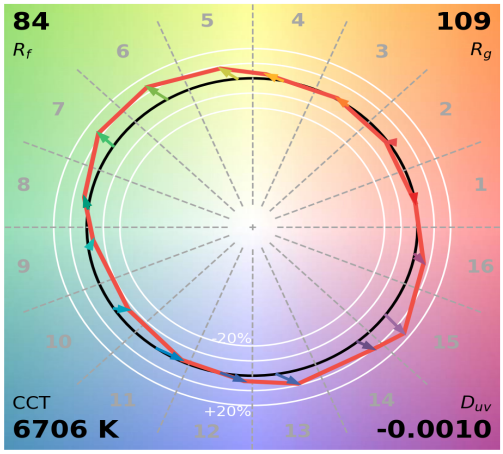
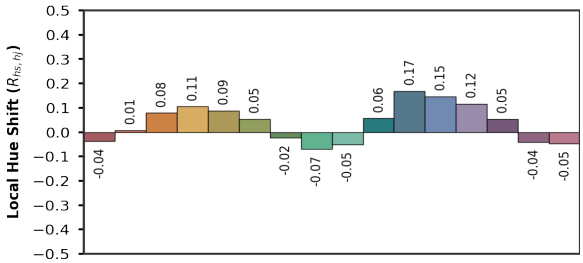
5600K – Colorimetric Report

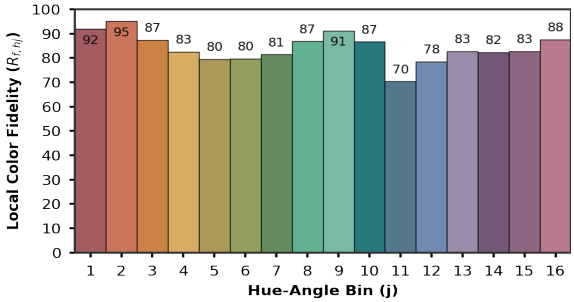
IES TM-30-18 Colour Rendition Report

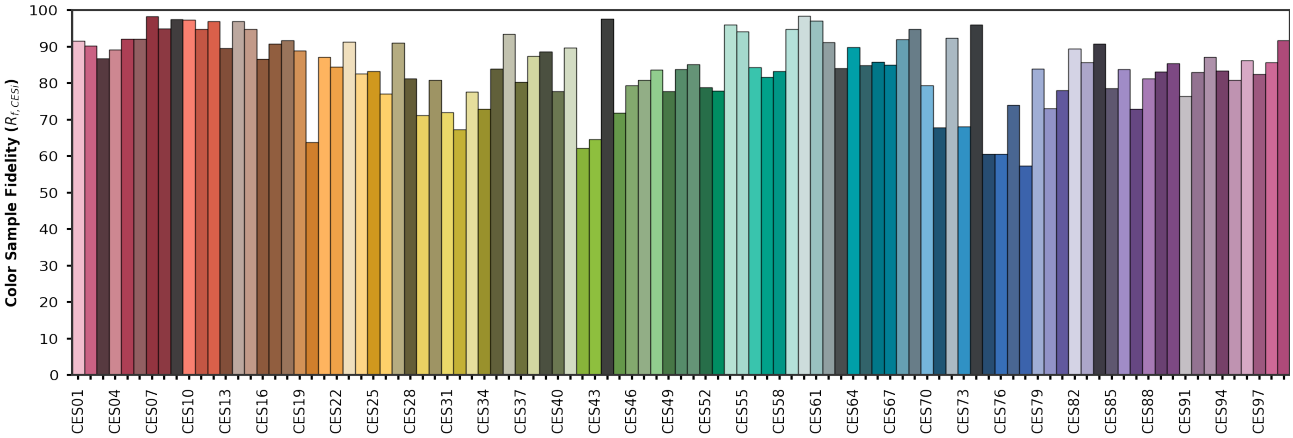












x	0.3107
y	0.3189
u′	0.2003
v′	0.4625

CIE 13.31-1995 (CRI)
R_a **86**
R_9 **93**

Fixture Settings: CCT-5600K; No-Filter

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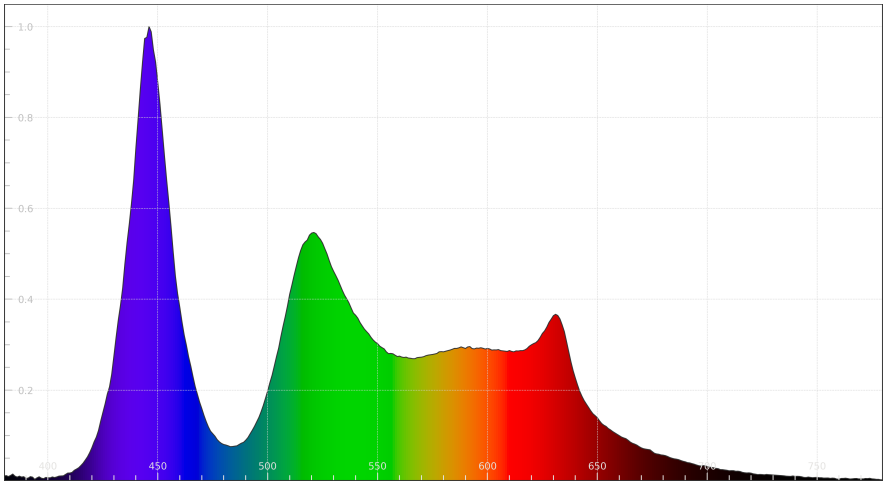
6500K – Colorimetric Report

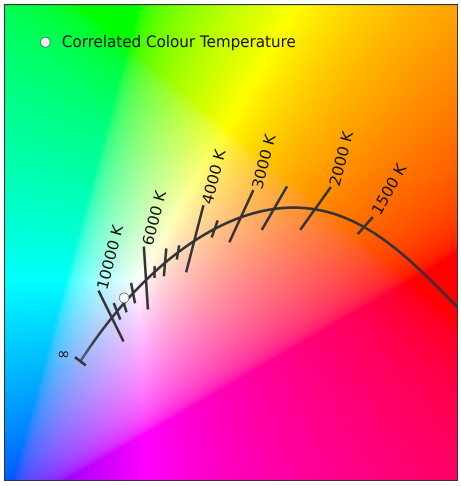
Colorimetric Characteristics

Correlated Colour Temperature [K]	**CCT**	7823	Luminous Flux [lm]	**Lum Flux**	4055
Colour Deviation from Black	**D_{uv}**	-0.0008	Colour Rendering Index	**CRI Ra**	86
Colour Coordinate CIE 1931	**x**	0.2973	Red Component	**CRI R9**	89
Colour Coordinate CIE 1931	**y**	0.3055	Colour Fidelity	**TM30 R_f**	83
Colour Coordinate CIE 1976	**u'**	0.1959	Colour Gamut	**TM30 R_g**	107
Colour Coordinate CIE 1976	**v'**	0.4529	Television Lighting Consistency Index	**TLCI**	77
Spectral Similarity Index	**SSI[CIE D7823]**	55			

CIE 1931 2° Standard Observer (Wavelength [nm] --> relative Spectral Distribution)

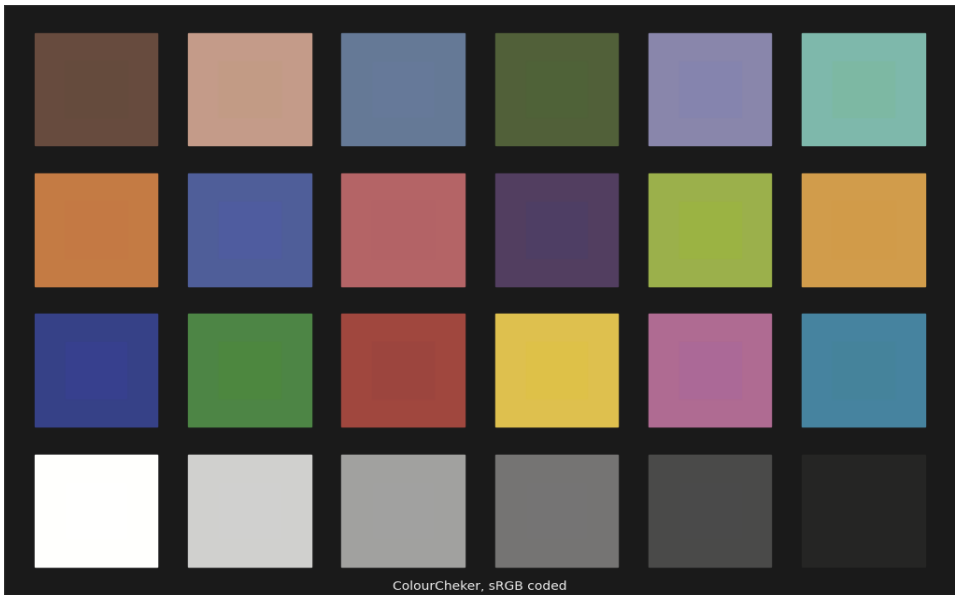


Colour Temperature

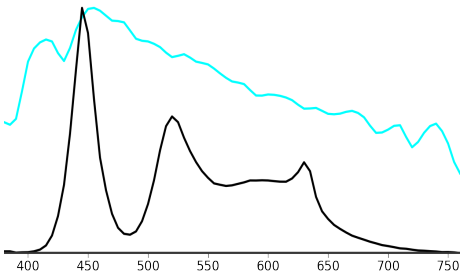


Television Lighting Consistency Index-2012

CCT = D7823 (-0.2) TLCI-2012 : 77 (D7823)



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



Fixture Settings: CCT-6500K; No-Filter

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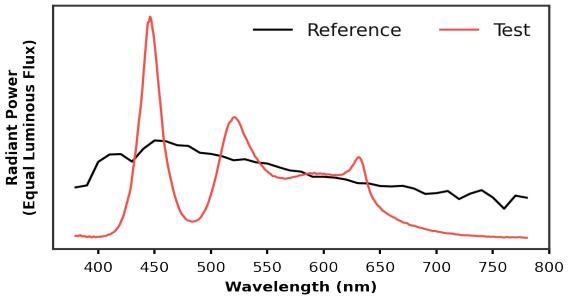
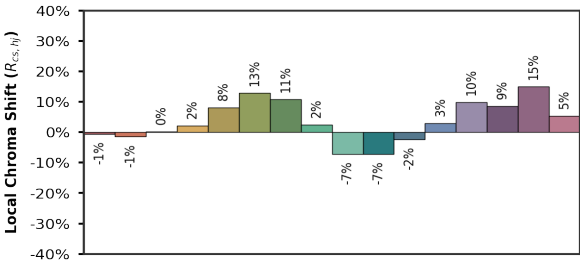
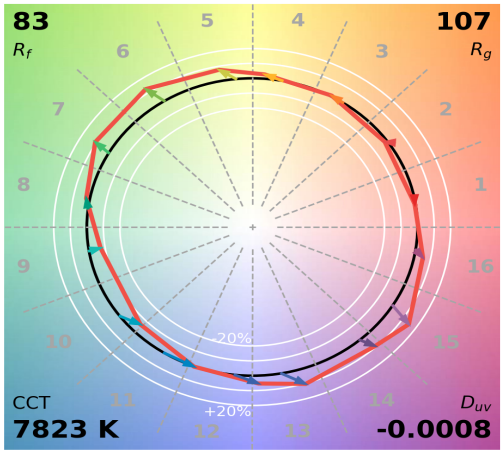
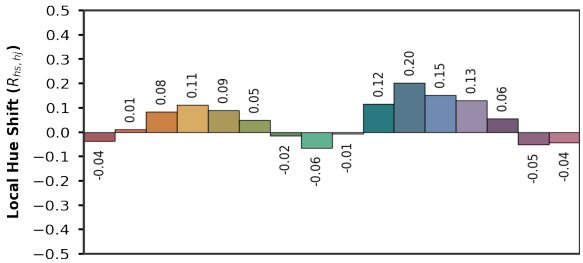
6500K – Colorimetric Report

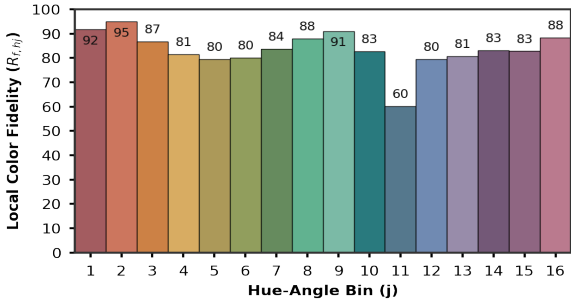
IES TM-30-18 Colour Rendition Report

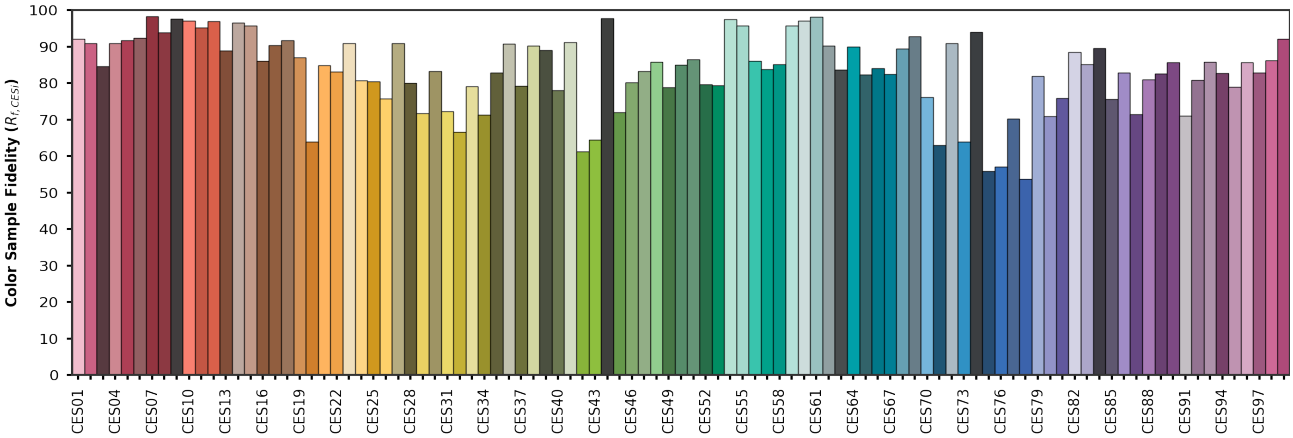












x	0.2973
y	0.3055
u'	0.1959
v'	0.4529

CIE 13.31-1995
(CRI)
R_a **86**
R_9 **89**

Fixture Settings: CCT-6500K; No-Filter

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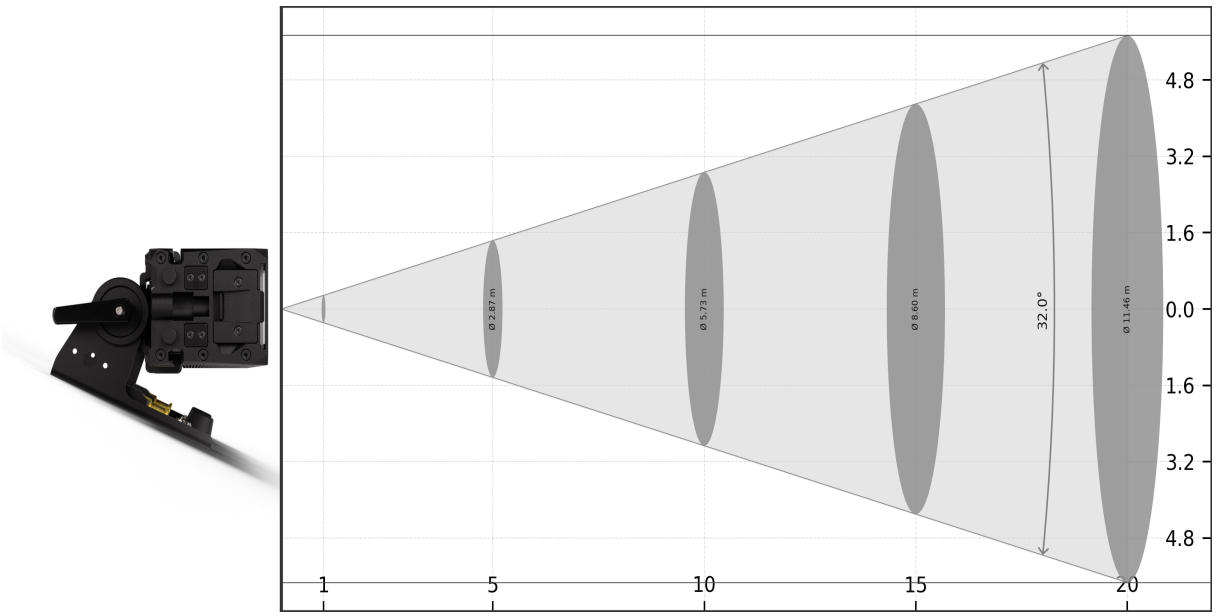
Standard-Filter – Photometric Report

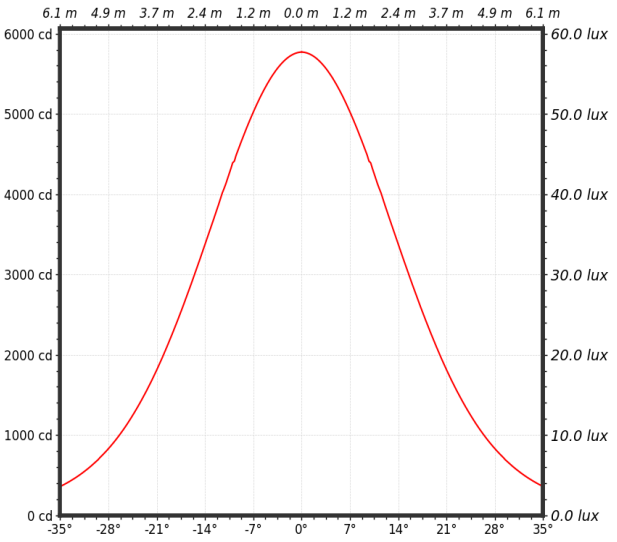
Beam Angle [°]	Field Angle [°]	Luminous flux [lm]	Power [W]	Luminous Efficacy [lm/W]
32.0	62.0	2300	90	25.4

Distance-Diameter-Diagram (Distance [m] --> Beam Opening [m])

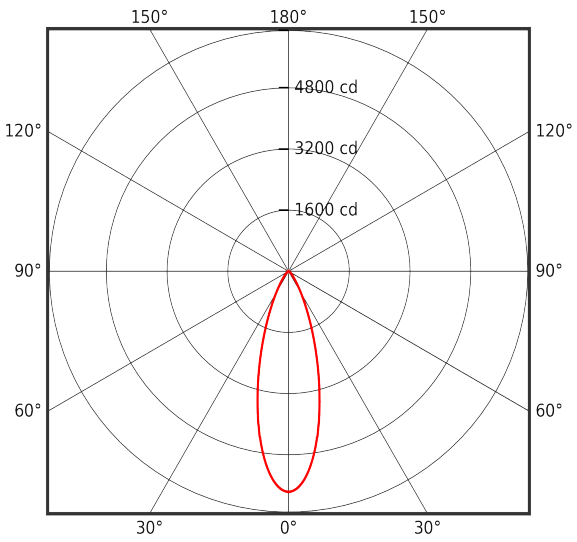


Distance [m]	1	5	10	15	20
Illuminance [lx]	5771	231	58	26	14
Diameter [m]	0.57	2.87	5.73	8.60	11.46

Light Distribution Diagrams / Illuminance



Average Light Distribution / Illuminance over all planes



Fixture Settings: Full-On; Standard-Filter

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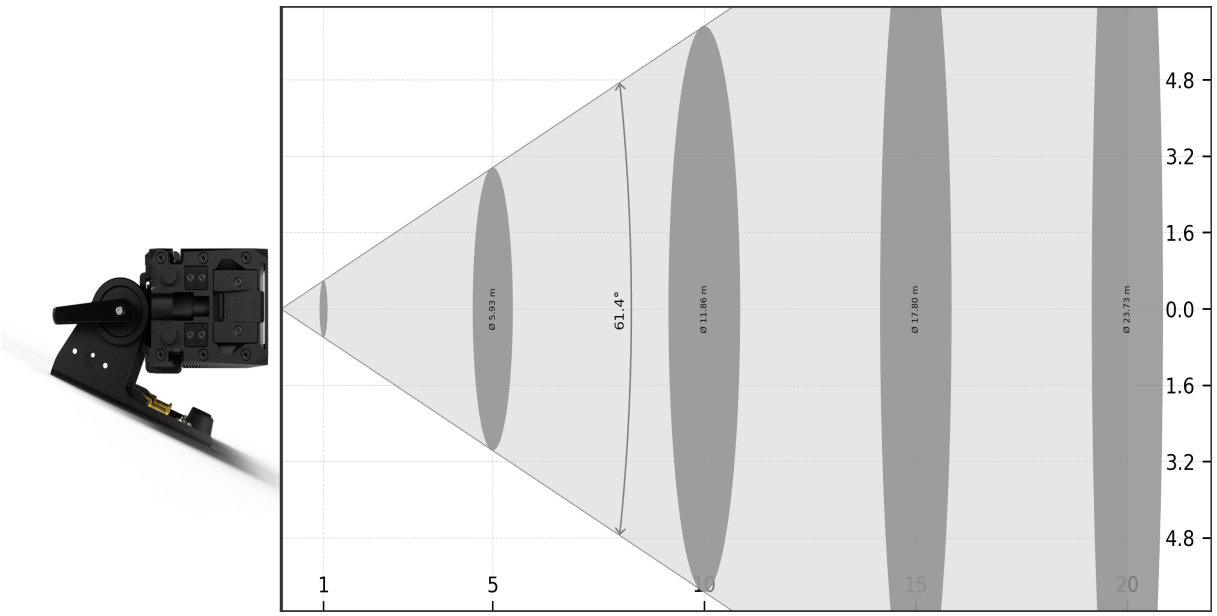
55°-Filter – Photometric Report

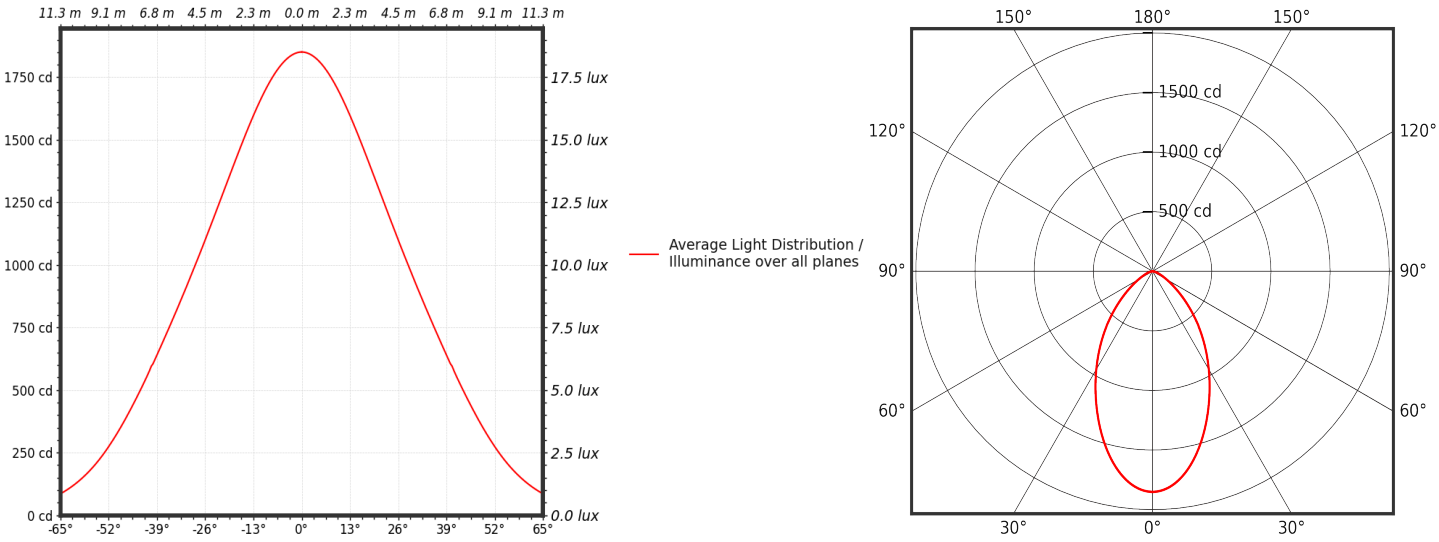
Beam Angle [°]	Field Angle [°]	Luminous flux [lm]	Power [W]	Luminous Efficacy [lm/W]
61.4	113.2	2250	90	24.9

Distance-Diameter-Diagram (Distance [m] --> Beam Opening [m])



Distance [m]	1	5	10	15	20
Illuminance [lx]	1851	74	19	8	5
Diameter [m]	1.19	5.93	11.86	17.80	23.73

Light Distribution Diagrams / Illuminance



Fixture Settings: Full-On; 55°-Filter

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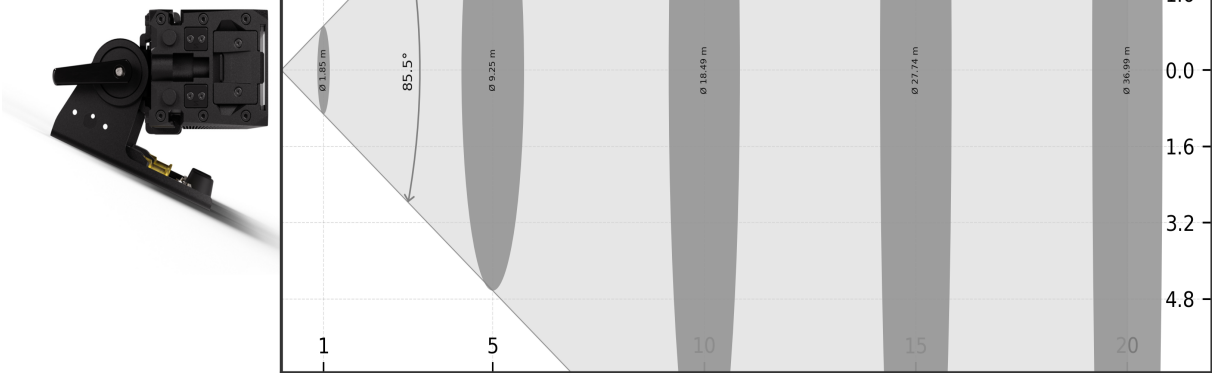
70°-Filter – Photometric Report

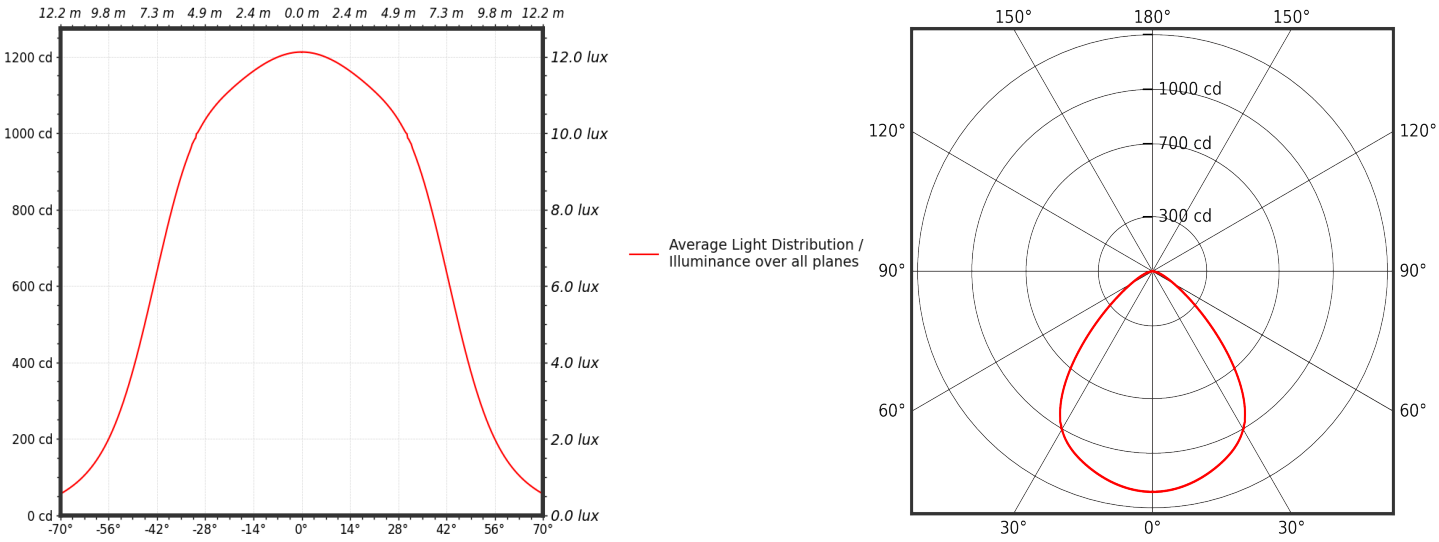
Beam Angle [°]	Field Angle [°]	Luminous flux [lm]	Power [W]	Luminous Efficacy [lm/W]
85.5	122.7	2200	90	24.3

Distance-Diameter-Diagram (Distance [m] --> Beam Opening [m])



Distance [m]	1	5	10	15	20
Illuminance [lx]	1211	48	12	5	3
Diameter [m]	1.85	9.25	18.49	27.74	36.99

Light Distribution Diagrams / Illuminance



Fixture Settings: Full-On; 70°-Filter

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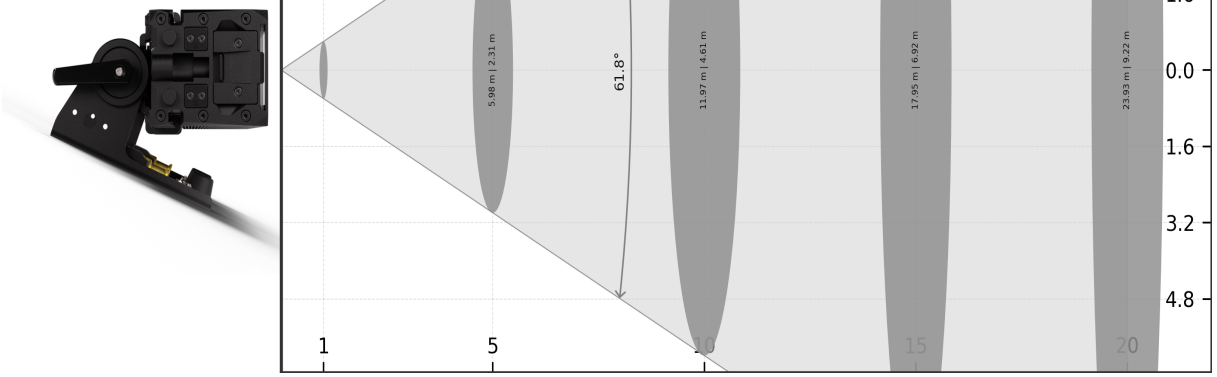
25°x55°-Filter – Photometric Report

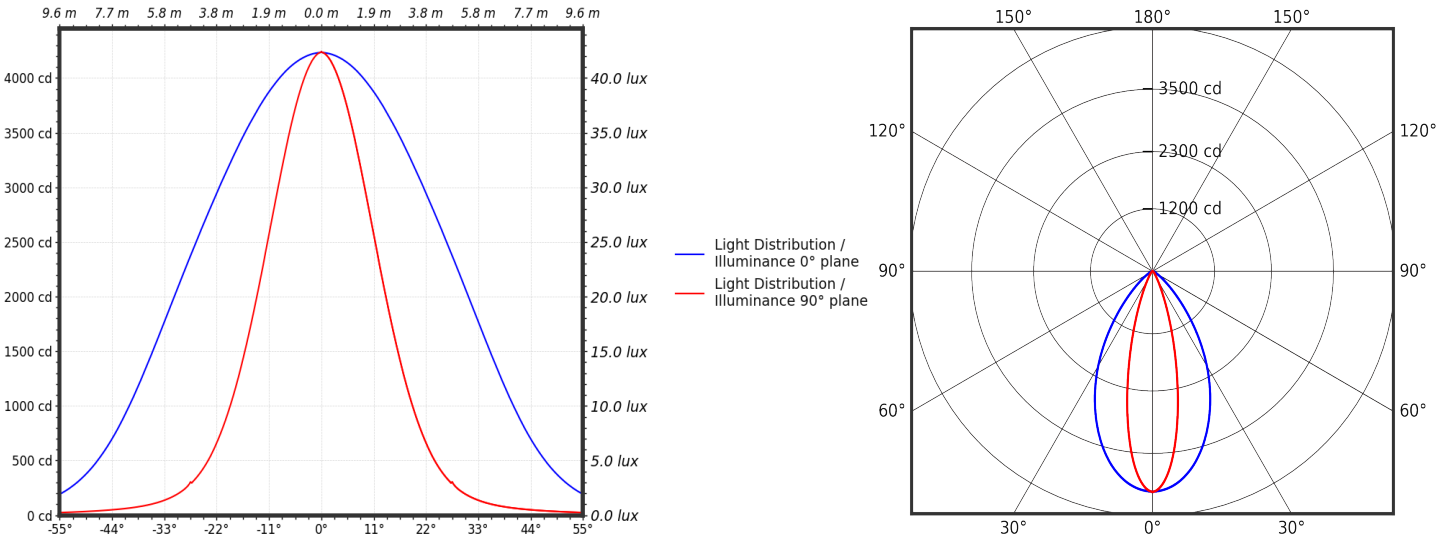
Beam Angle [°]	Field Angle [°]	Luminous flux [lm]	Power [W]	Luminous Efficacy [lm/W]
61.8 | 26.0	97.2 | 49.7	2300	90	25.4

Distance-Diameter-Diagram (Distance [m] --> Beam Opening [m])



Distance [m]	1	5	10	15	20
Illuminance [lx]	4238	170	42	19	11
Diameter [m]	1.20 | 0.46	5.98 | 2.31	11.97 | 4.61	17.95 | 6.92	23.93 | 9.22

Light Distribution Diagrams / Illuminance



Fixture Settings: Full-On; 25°x55°-Filter

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