PixBar SMD Short IP G2



PixBar SMD Short IP G2 (CLPBSMDSIPG2)

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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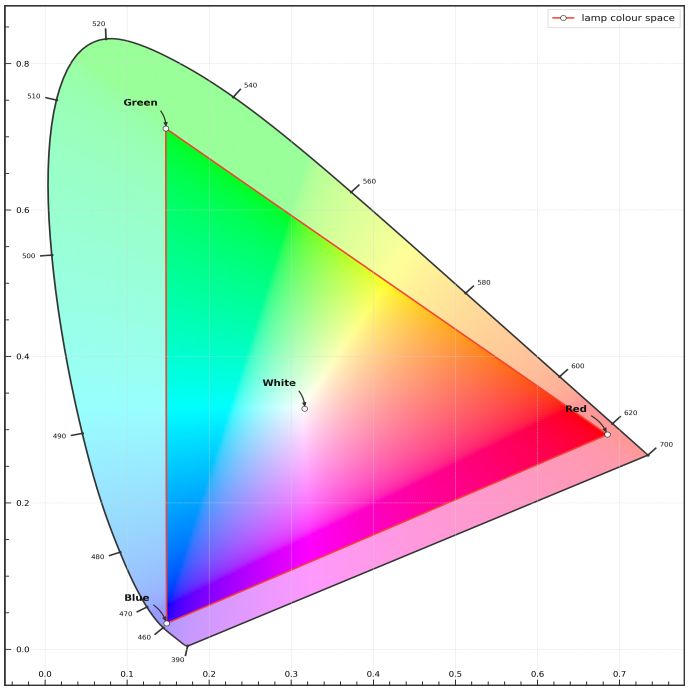
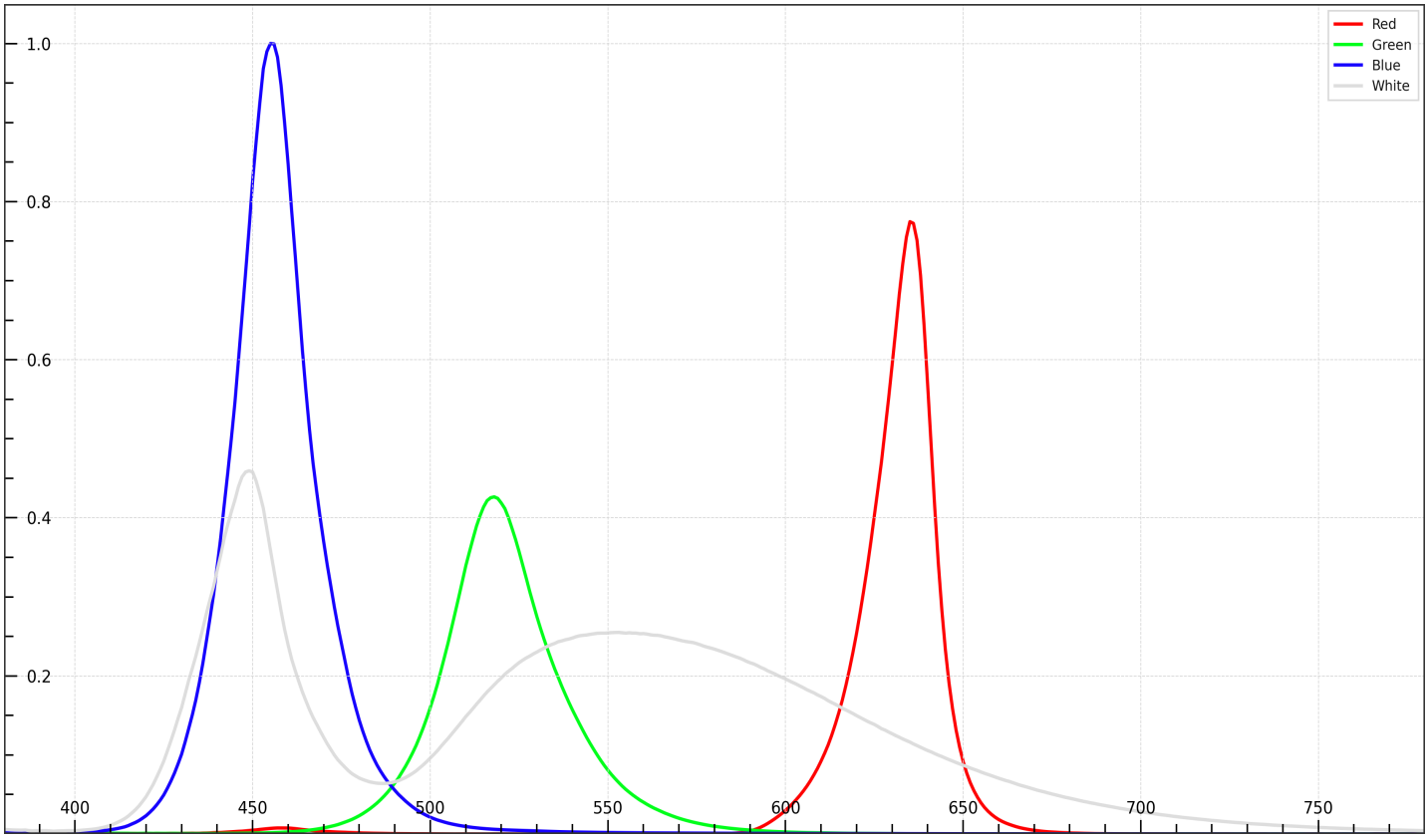
Overview

LED Colours	Lum flux [lm]	x	y
Red	1512	0.6853	0.2934
Green	3314	0.1472	0.7114
Blue	569	0.1481	0.0355
White	7536	0.3164	0.3288

CIE 1931 Chromaticity Diagram - 2° Standard Observer



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



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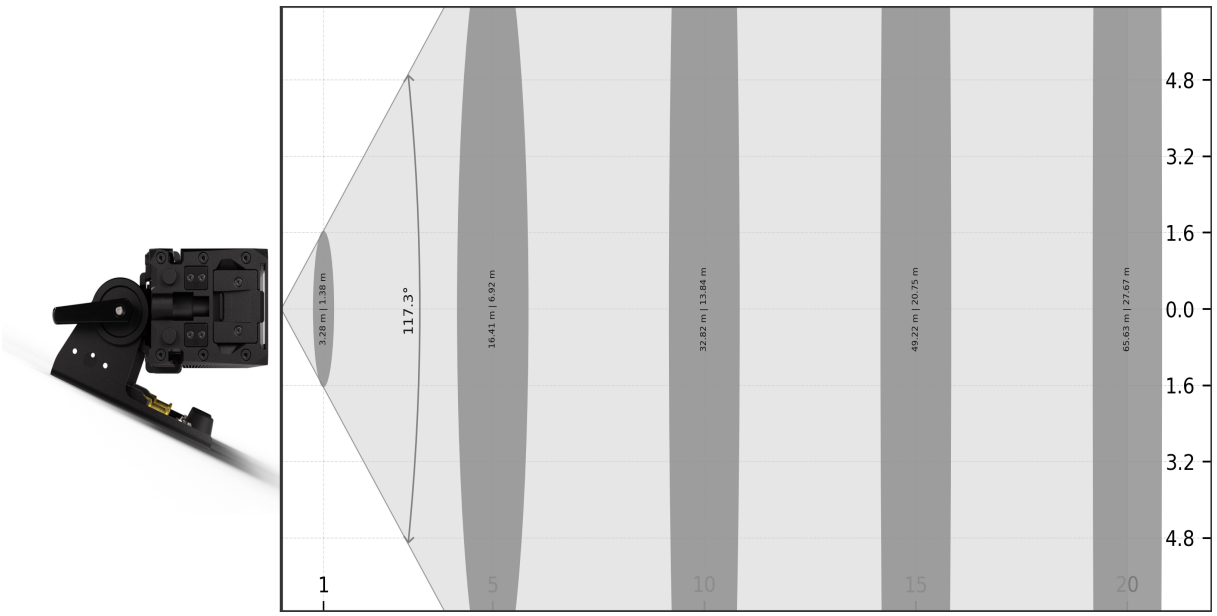
Full-on – Photometric Report

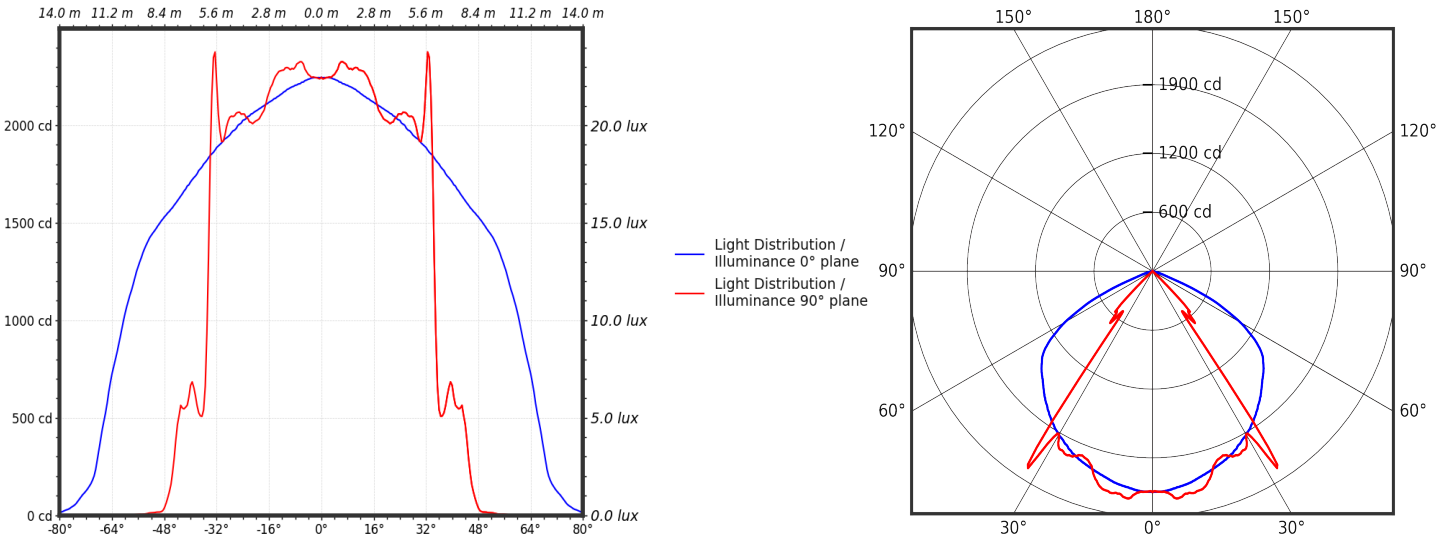
Beam Angle [°]	Field Angle [°]	Luminous flux [lm]	Power [W]	Luminous Efficacy [lm/W]
117.3 | 69.4	138.3 | 90.7	4000	83	48.1

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



Distance [m]	1	5	10	15	20
Illuminance [lx]	2245	90	22	10	6
Diameter [m]	3.28 | 1.38	16.41 | 6.92	32.82 | 13.84	49.22 | 20.75	65.63 | 27.67

Light Distribution Diagrams / Illuminance



Fixture Settings: Full-On; No-Filter

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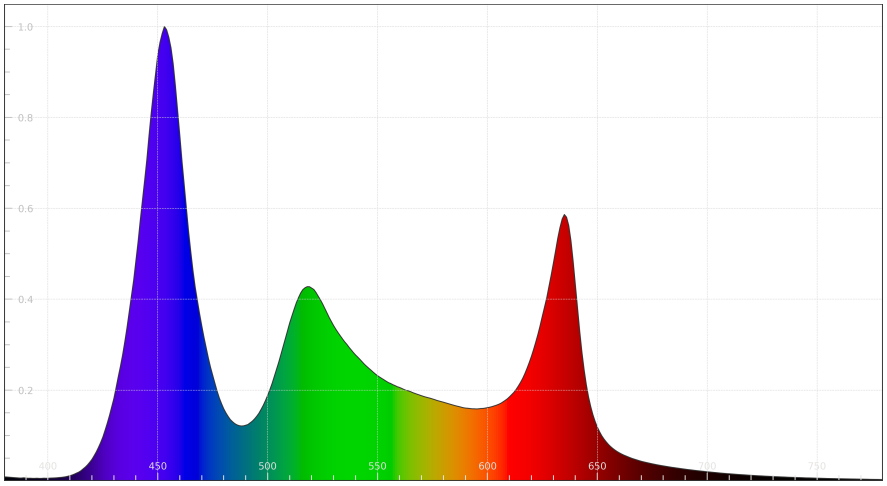
Full-on – Colorimetric Report

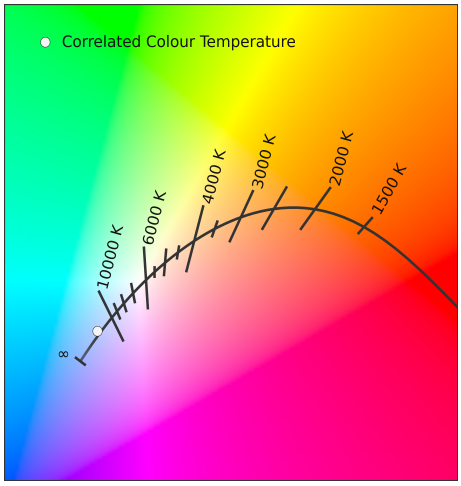
Colorimetric Characteristics

Correlated Colour Temperature [K]	**CCT**	14138	Luminous Flux [lm]	**Lum Flux**	4000
Colour Deviation from Black	**D_{uv}**	-0.0130	Colour Rendering Index	**CRI Ra**	74
Colour Coordinate CIE 1931	**x**	0.2749	Red Component	**CRI R9**	-59
Colour Coordinate CIE 1931	**y**	0.2578	Colour Fidelity	**TM30 R_f**	80
Colour Coordinate CIE 1976	**u'**	0.1984	Colour Gamut	**TM30 R_g**	113
Colour Coordinate CIE 1976	**v'**	0.4185	Television Lighting Consistency Index	**TLCI**	74
Spectral Similarity Index	**SSI[CIE D14138]**	45			

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

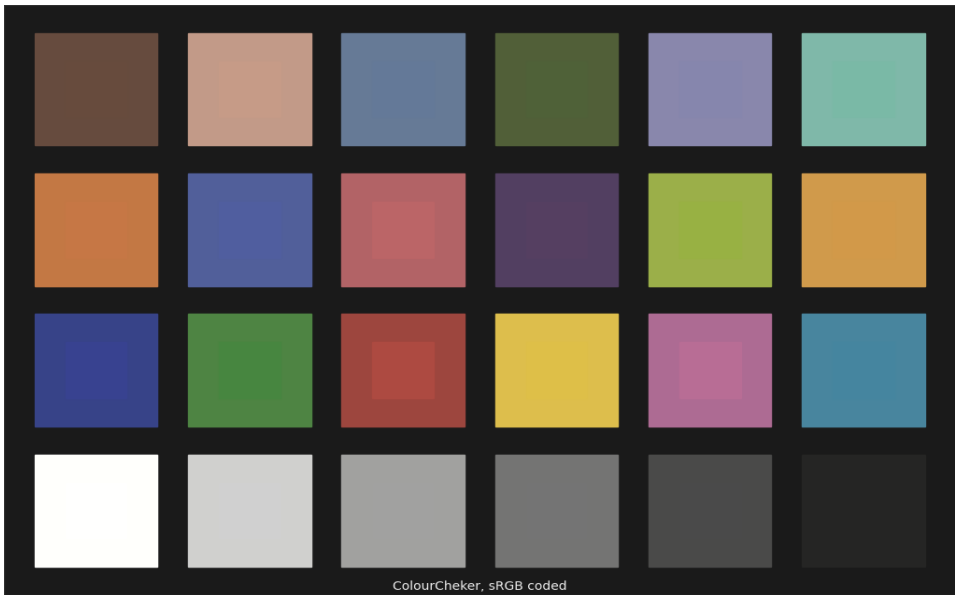


Colour Temperature

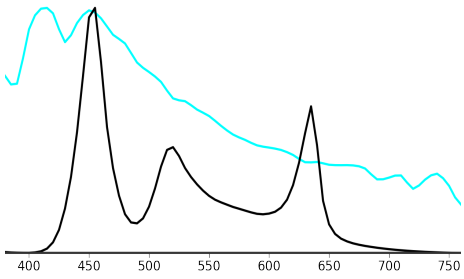


Television Lighting Consistency Index-2012

CCT = D14138 (-2.4) TLCI-2012 : 74 (D14138)



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



Fixture Settings: Full-On; No-Filter

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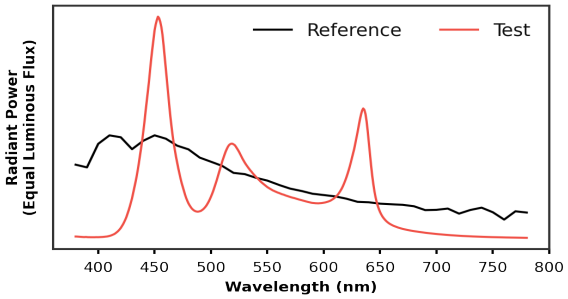
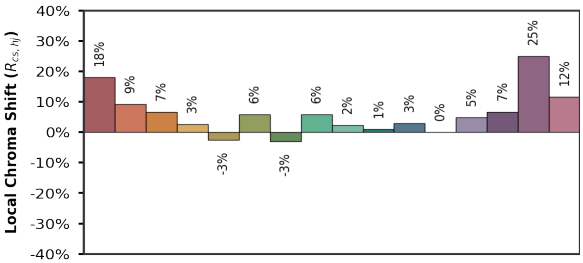
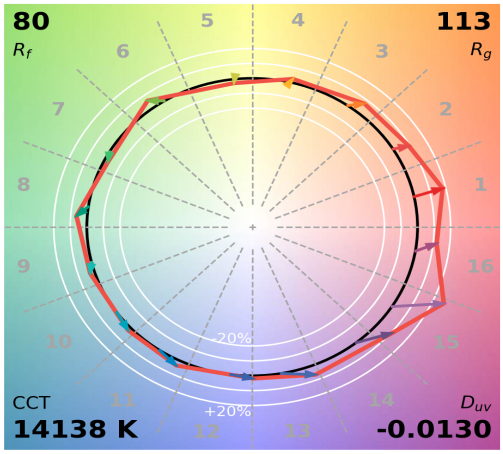
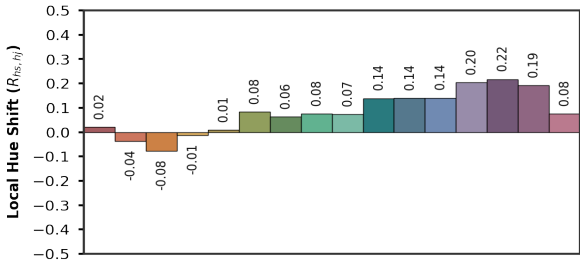
Full-on – Colorimetric Report

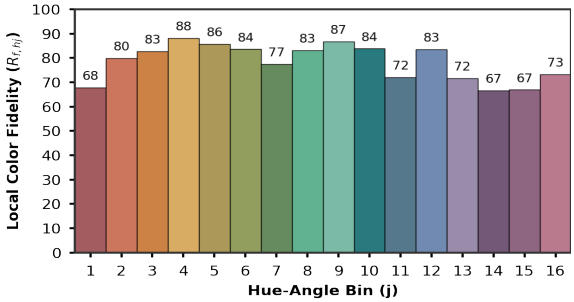
IES TM-30-18 Colour Rendition Report

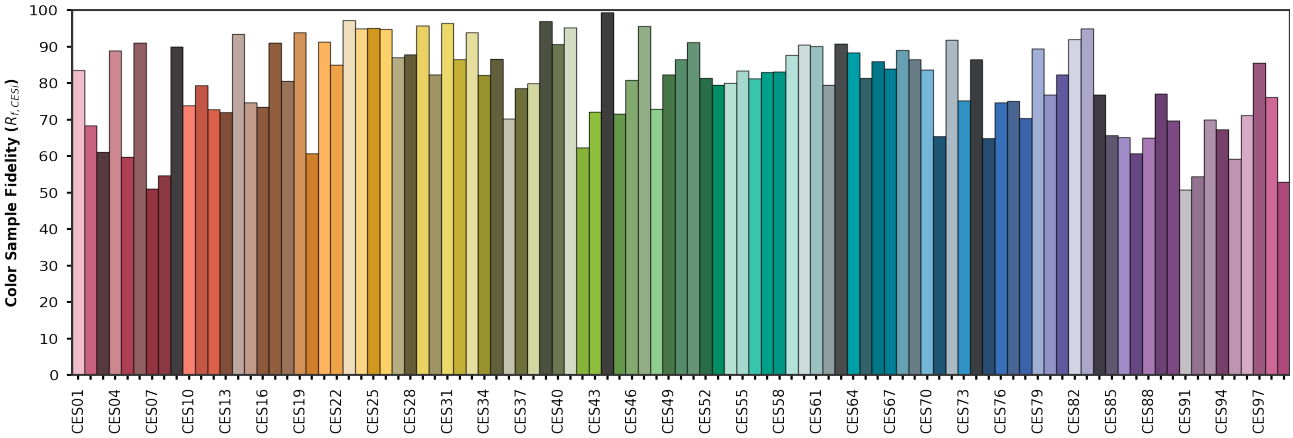












x	0.2749
y	0.2578
u'	0.1984
v'	0.4185

CIE 13.31-1995 (CRI)
R_a **74**
R_9 **-59**

Fixture Settings: Full-On; No-Filter

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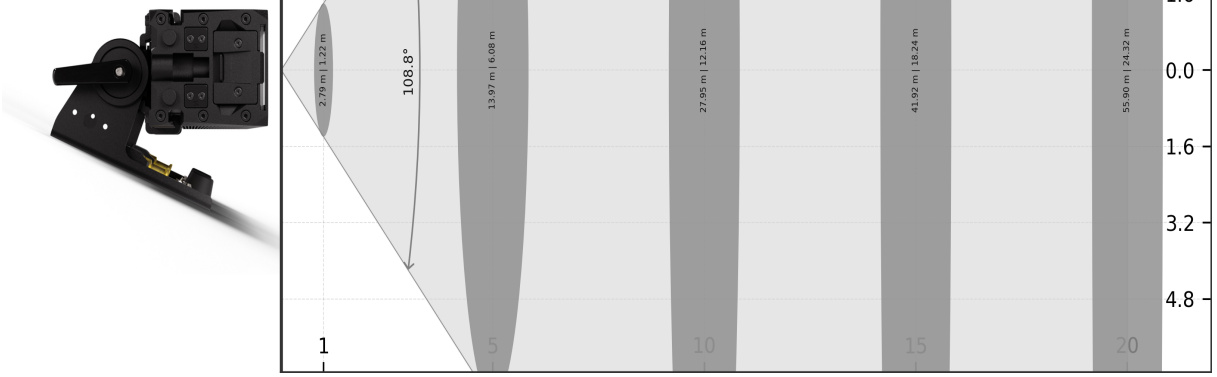
White-Center-LEDs – Photometric Report

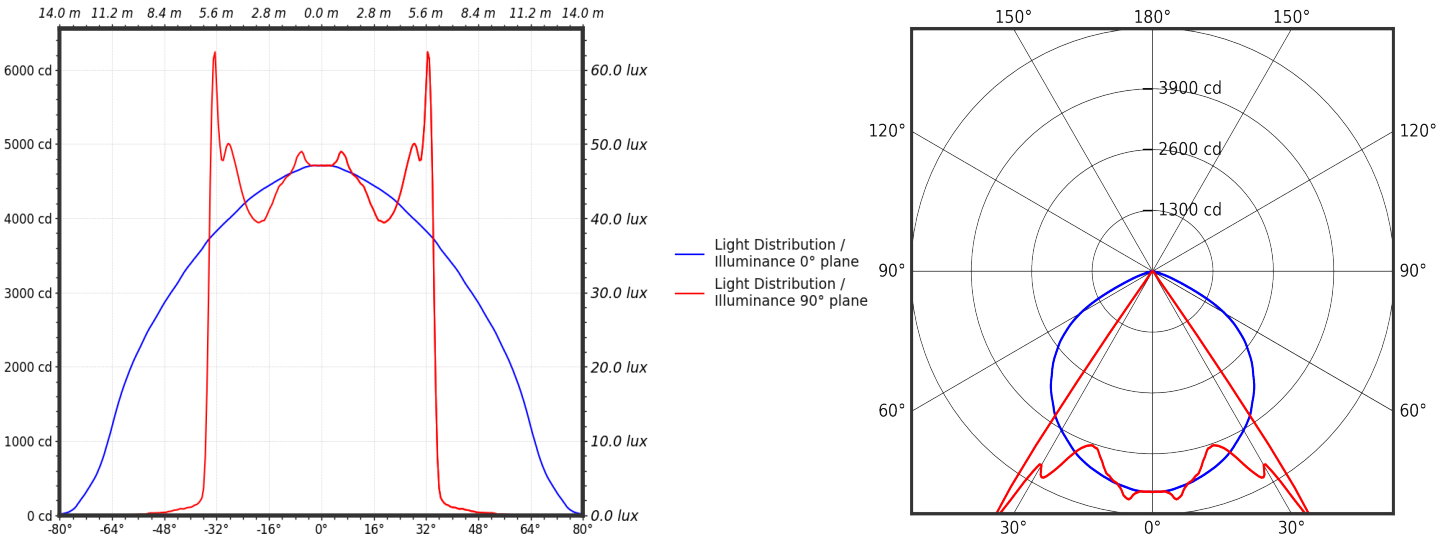
Beam Angle [°]	Field Angle [°]	Luminous flux [lm]	Power [W]	Luminous Efficacy [lm/W]
108.8 | 62.6	139.4 | 71.4	7500	83	90.1

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



Distance [m]	1	5	10	15	20
Illuminance [lx]	4713	189	47	21	12
Diameter [m]	2.79 | 1.22	13.97 | 6.08	27.95 | 12.16	41.92 | 18.24	55.90 | 24.32

Light Distribution Diagrams / Illuminance



Fixture Settings: White-Center-LEDs; No-Filter

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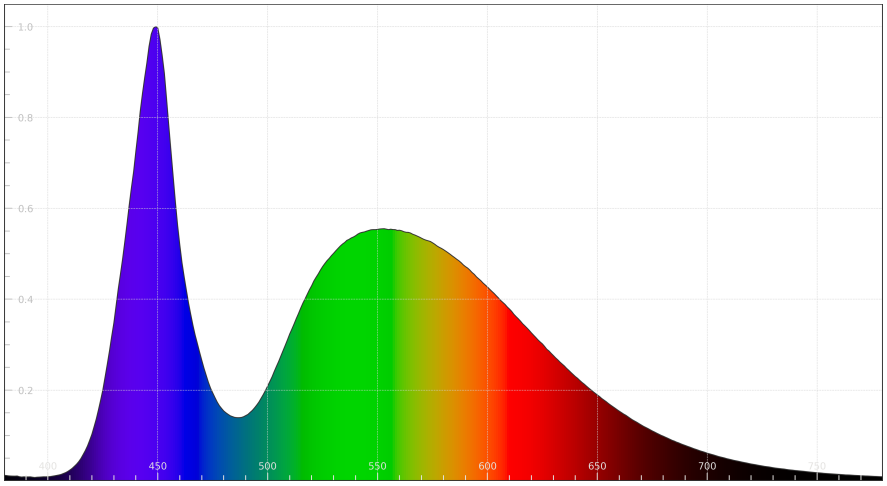
White-Center-LEDs – Colorimetric Report

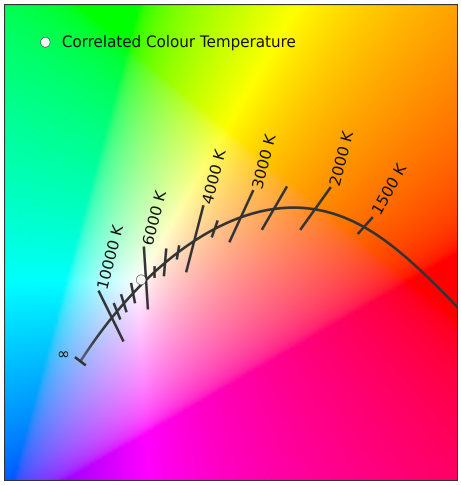
Colorimetric Characteristics

Correlated Colour Temperature [K]	**CCT**	6309	Luminous Flux [lm]	**Lum Flux**	7500
Colour Deviation from Black	**D_{uv}**	0.0013	Colour Rendering Index	**CRI Ra**	73
Colour Coordinate CIE 1931	**x**	0.3164	Red Component	**CRI R9**	-16
Colour Coordinate CIE 1931	**y**	0.3288	Colour Fidelity	**TM30 R_f**	74
Colour Coordinate CIE 1976	**u'**	0.2004	Colour Gamut	**TM30 R_g**	95
Colour Coordinate CIE 1976	**v'**	0.4688	Television Lighting Consistency Index	**TLCI**	49
Spectral Similarity Index	**SSI[CIE D6309]**	59			

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

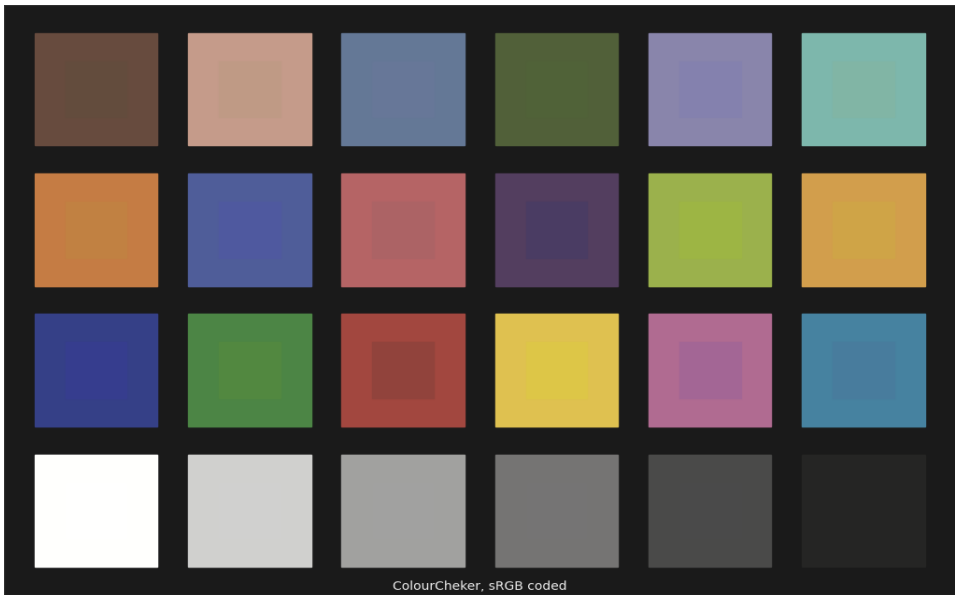


Colour Temperature

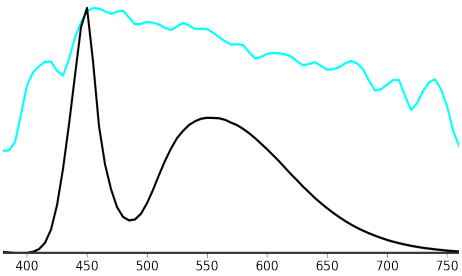


Television Lighting Consistency Index-2012

CCT = D6309 (0.2) TLCI-2012 : 49 (D6309)



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



Fixture Settings: White-Center-LEDs; No-Filter

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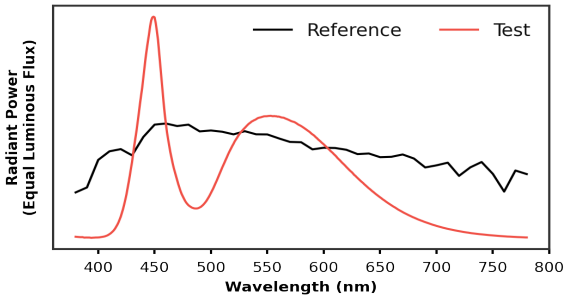
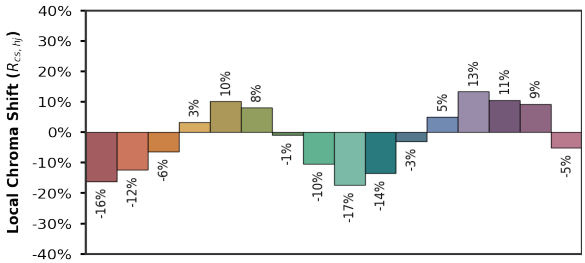
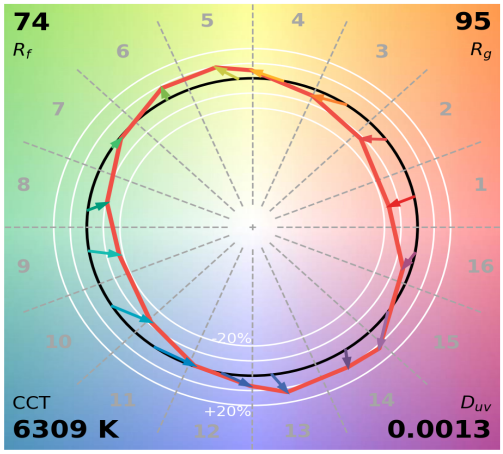
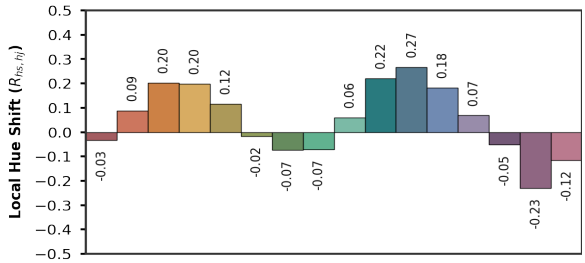
White-Center-LEDs – Colorimetric Report

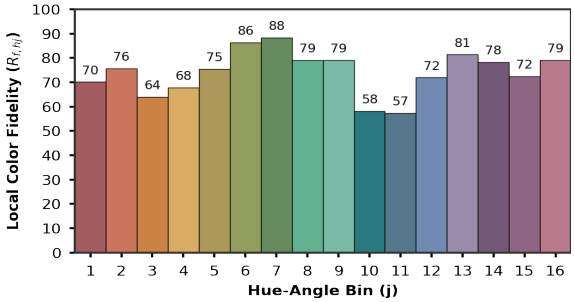
IES TM-30-18 Colour Rendition Report

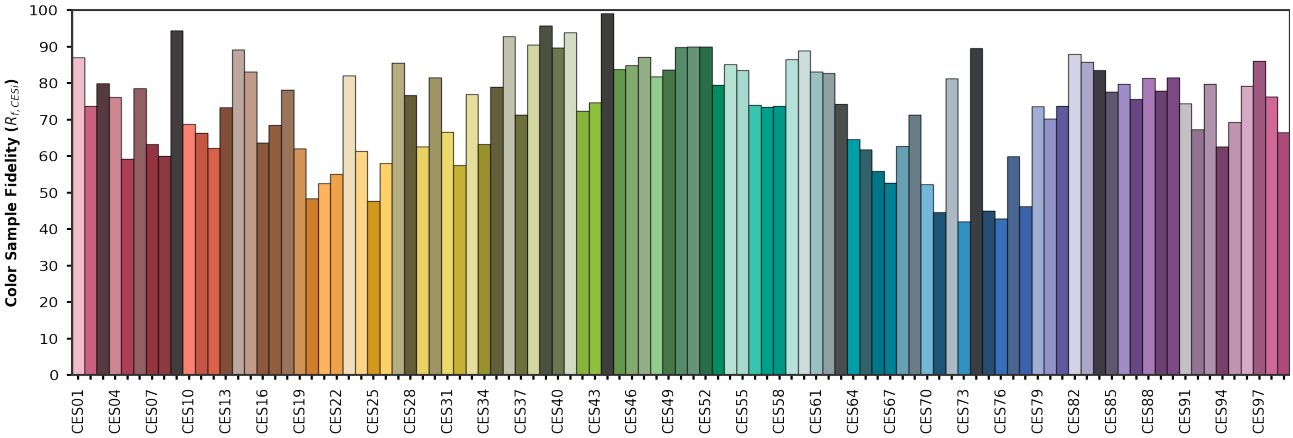












x	0.3164
y	0.3288
u'	0.2004
v'	0.4688

CIE 13.31-1995
(CRI)
R_a **73**
R_9 **-16**

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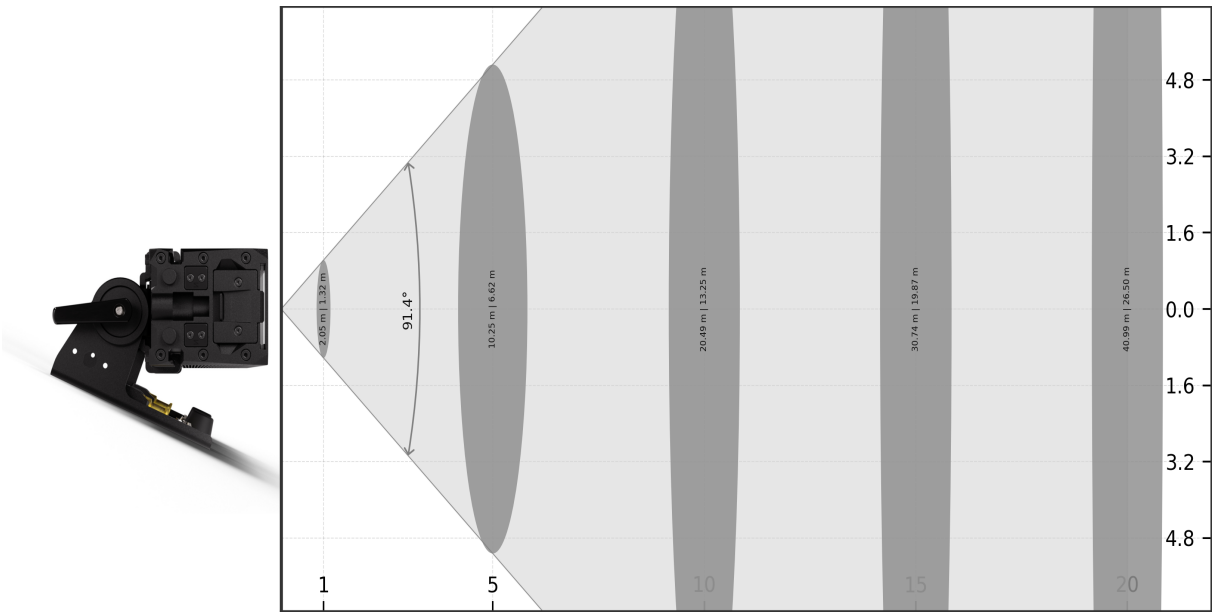
Standard-Filter – Photometric Report

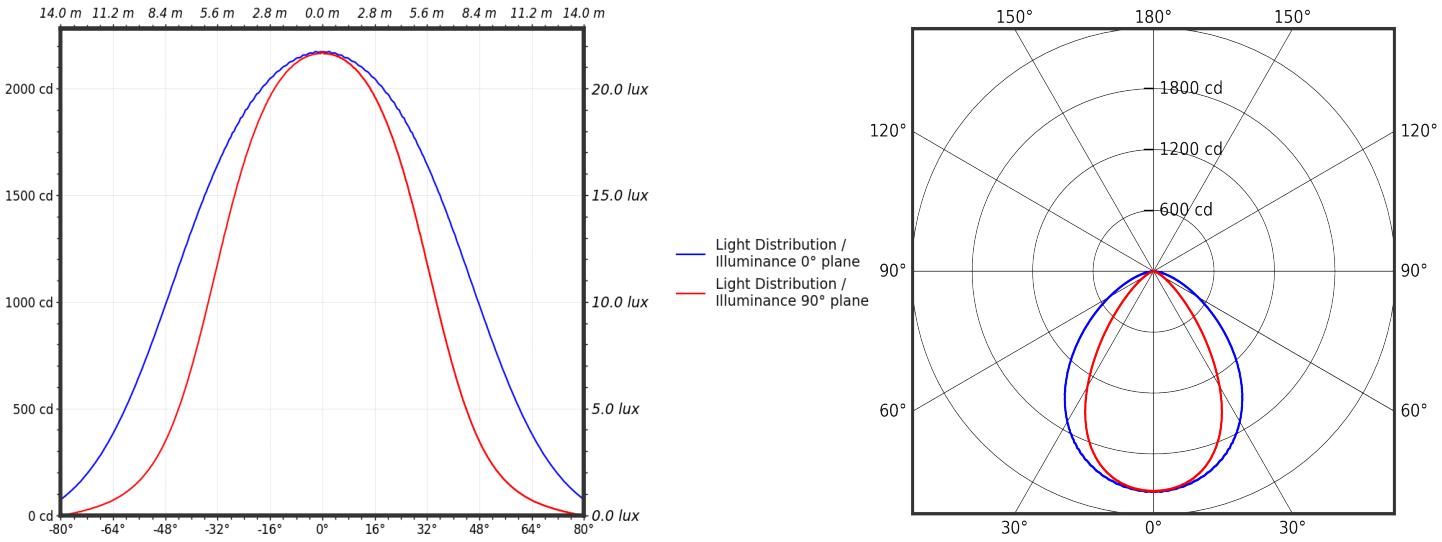
Beam Angle [°]	Field Angle [°]	Luminous flux [lm]	Power [W]	Luminous Efficacy [lm/W]
91.4 | 67.0	141.6 | 105.8	3500	83	42.1

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



Distance [m]	1	5	10	15	20
Illuminance [lx]	2171	87	22	10	5
Diameter [m]	2.05 | 1.32	10.25 | 6.62	20.49 | 13.25	30.74 | 19.87	40.99 | 26.50

Light Distribution Diagrams / Illuminance



Fixture Settings: Full-On; Standard-Filter

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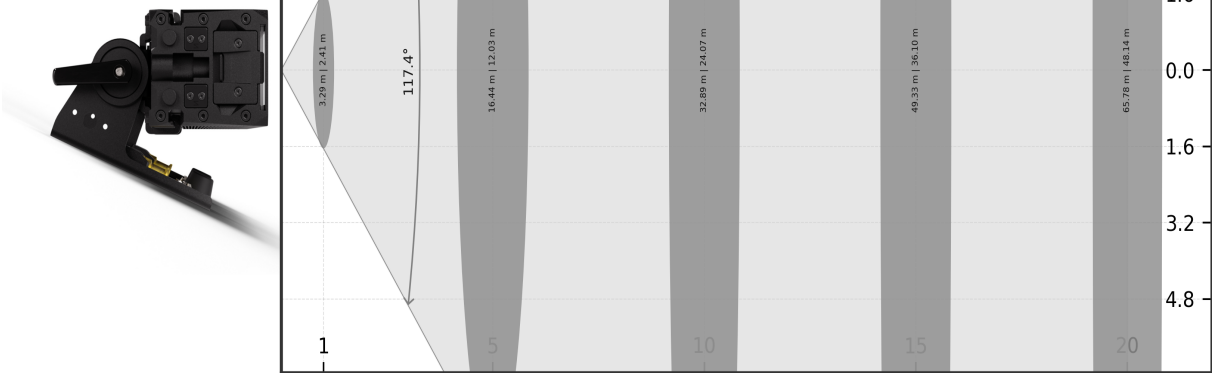
55°-Filter – Photometric Report

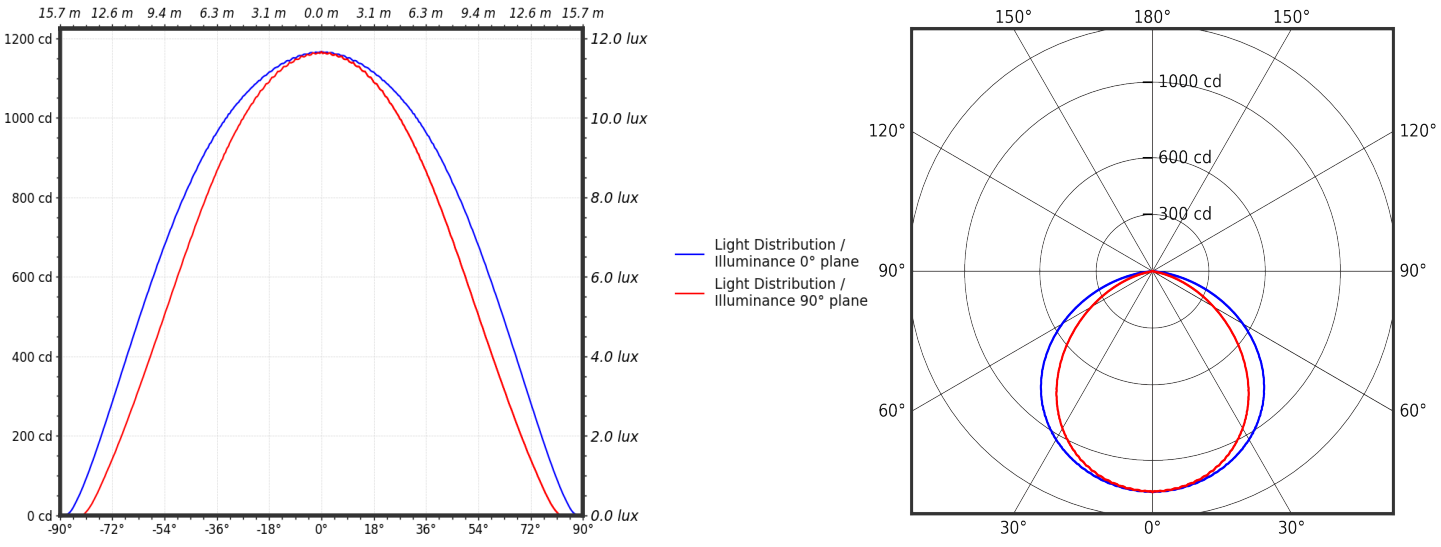
Beam Angle [°]	Field Angle [°]	Luminous flux [lm]	Power [W]	Luminous Efficacy [lm/W]
117.4 | 100.6	159.4 | 146.8	3100	83	37.3

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



Distance [m]	1	5	10	15	20
Illuminance [lx]	1166	47	12	5	3
Diameter [m]	3.29 | 2.41	16.44 | 12.03	32.89 | 24.07	49.33 | 36.10	65.78 | 48.14

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]
125.7 | 115.5	161.4 | 151.1	3000	83	36.1

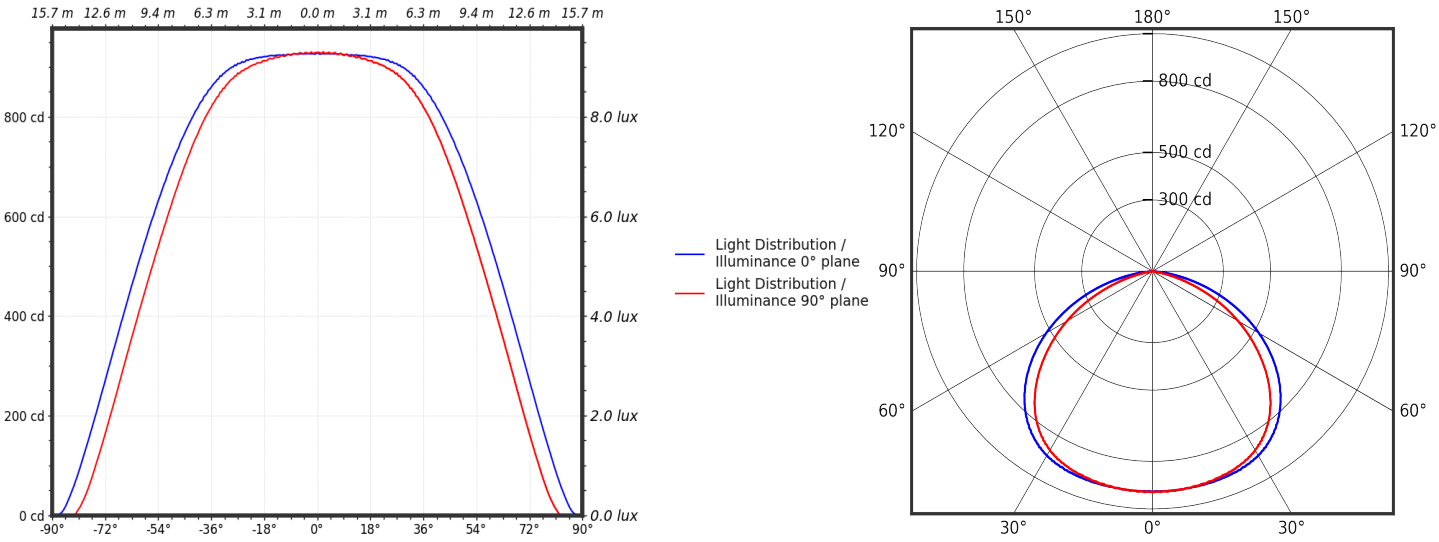
Distance-Diameter-Diagram (Distance [m] --> Beam Opening [m])





Distance [m]	1	5	10	15	20
Illuminance [lx]	928	37	9	4	2
Diameter [m]	3.90 | 3.17	19.48 | 15.85	38.97 | 31.69	58.45 | 47.54	77.94 | 63.38

Light Distribution Diagrams / Illuminance



Fixture Settings: Full-On; 70°-Filter

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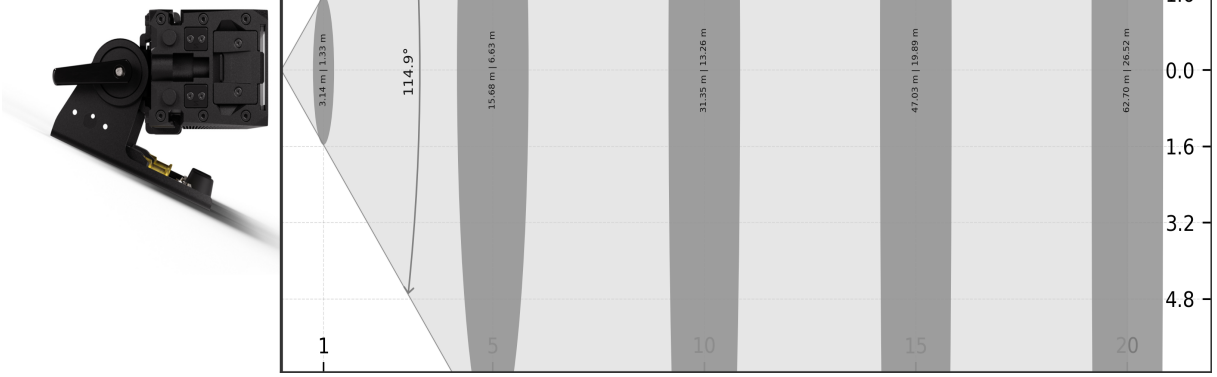
25°x55°-Filter – Photometric Report

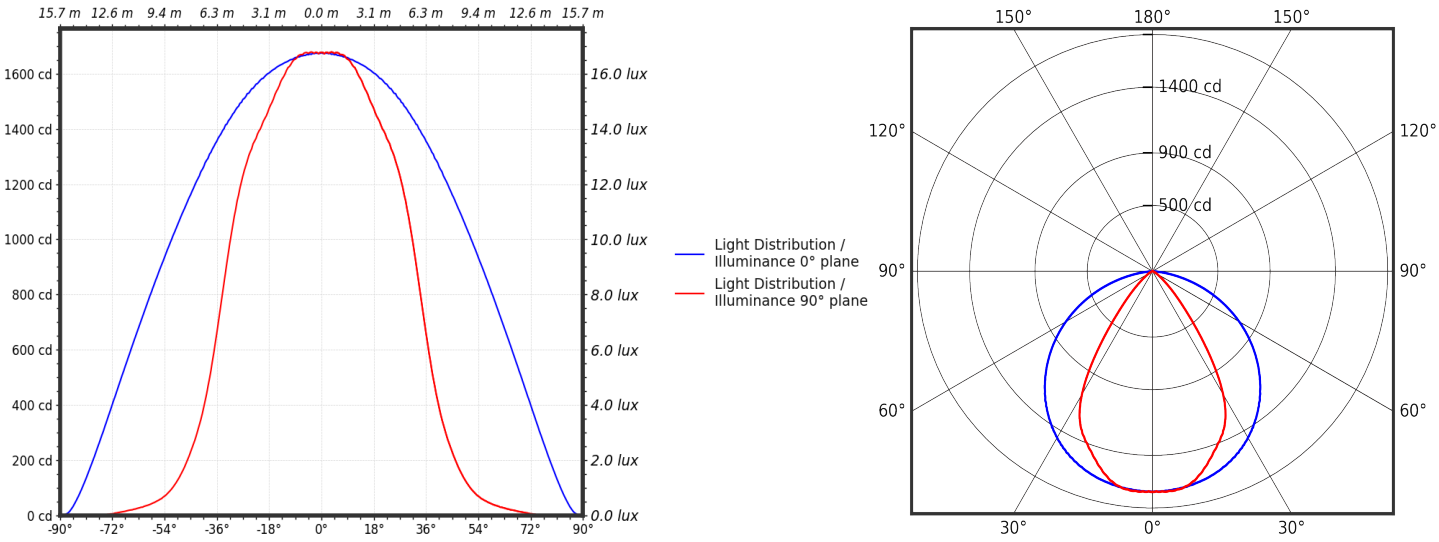
Beam Angle [°]	Field Angle [°]	Luminous flux [lm]	Power [W]	Luminous Efficacy [lm/W]
114.9 | 67.1	159.4 | 94.8	3300	83	39.7

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



Distance [m]	1	5	10	15	20
Illuminance [lx]	1677	67	17	7	4
Diameter [m]	3.14 | 1.33	15.68 | 6.63	31.35 | 13.26	47.03 | 19.89	62.70 | 26.52

Light Distribution Diagrams / Illuminance



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

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