

DURA® LINE 100

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

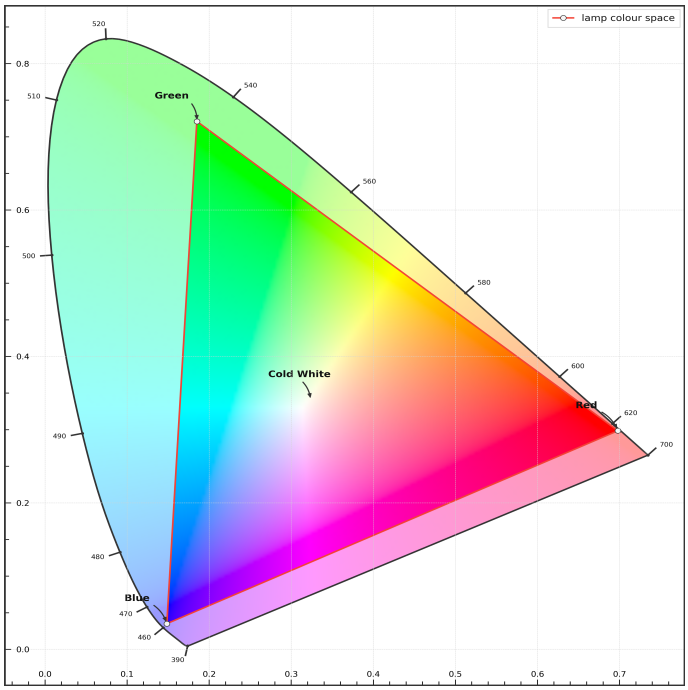
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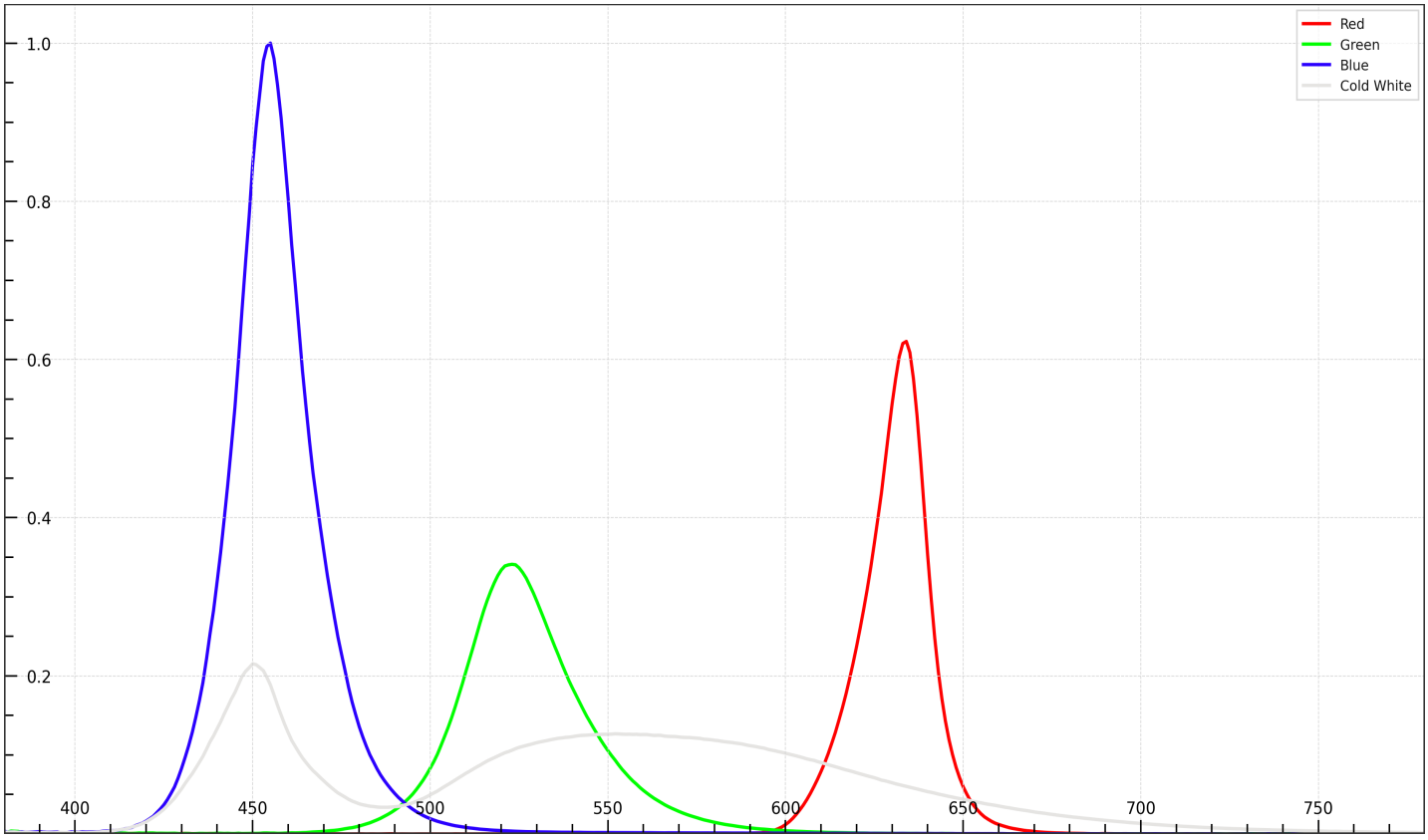
Overview

LED Colours	Lum flux [lm]	x	y
Red	148	0.6980	0.2986
Green	423	0.1850	0.7211
Blue	74	0.1484	0.0351
Cold White	463	0.3235	0.3410

CIE 1931 Chromaticity Diagram - 2° Standard Observer



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



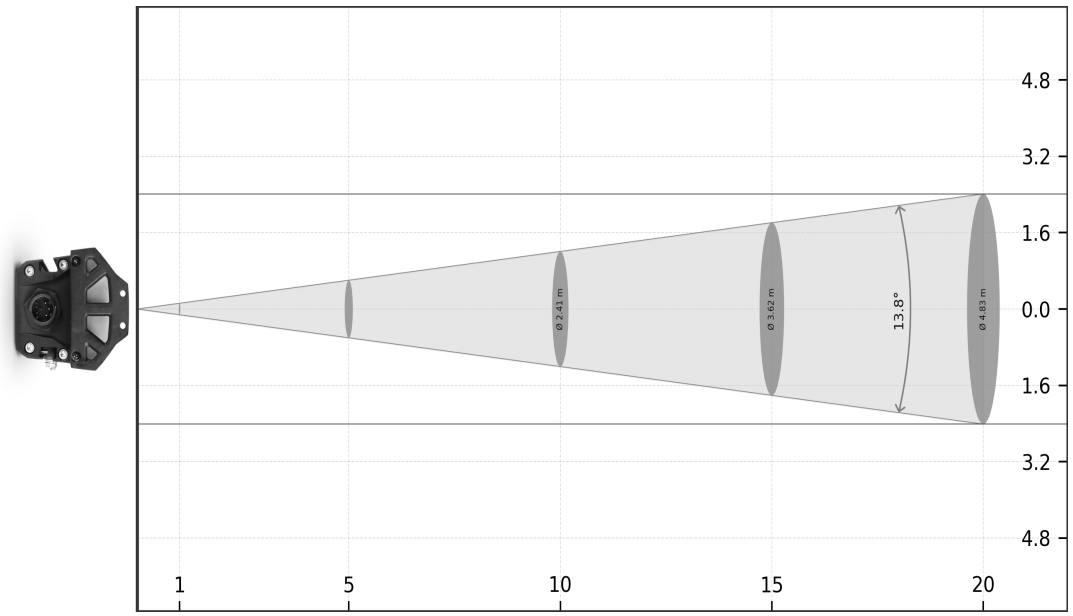
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Without Filter – Photometric Report

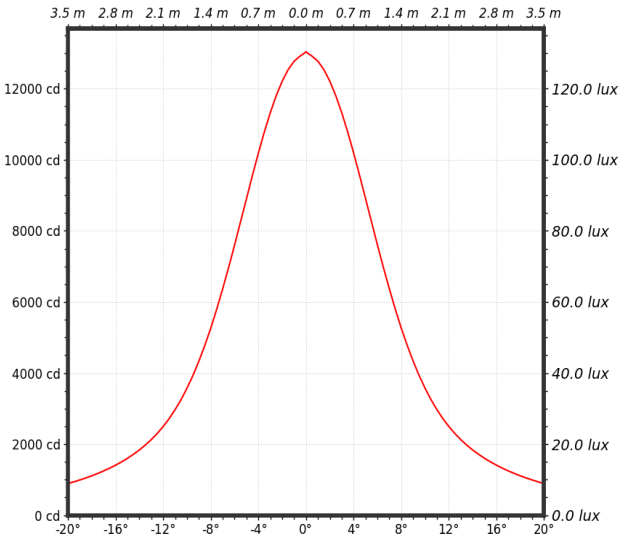
Beam Angle [°]	Field Angle [°]	Luminous flux [lm]	Power [W]	Luminous Efficacy [lm/W]
13.8	33.2	1347	50	26.9

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

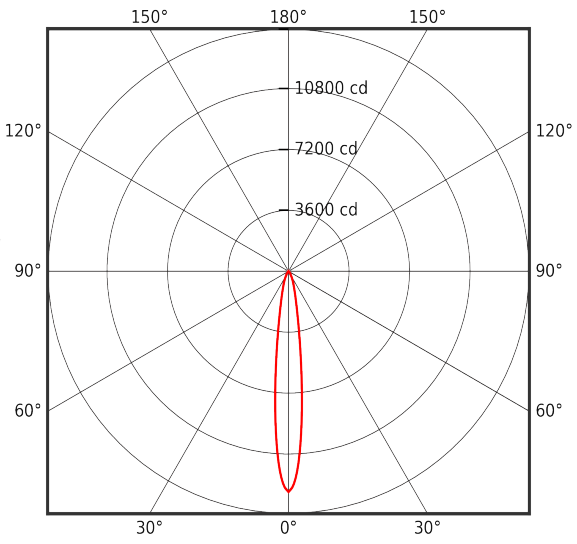


Distance [m]	1	5	10	15	20
Illuminance [lx]	13033	521	130	58	33
Diameter [m]	0.24	1.21	2.41	3.62	4.83

Light Distribution Diagrams / Illuminance



Average Light Distribution / Illuminance over all planes



Fixture Settings: Stand Alone Dimmer and RGBW at 100%; PWM at 3,6KHz, Calibration at Factory, Powermode at ConstantPower

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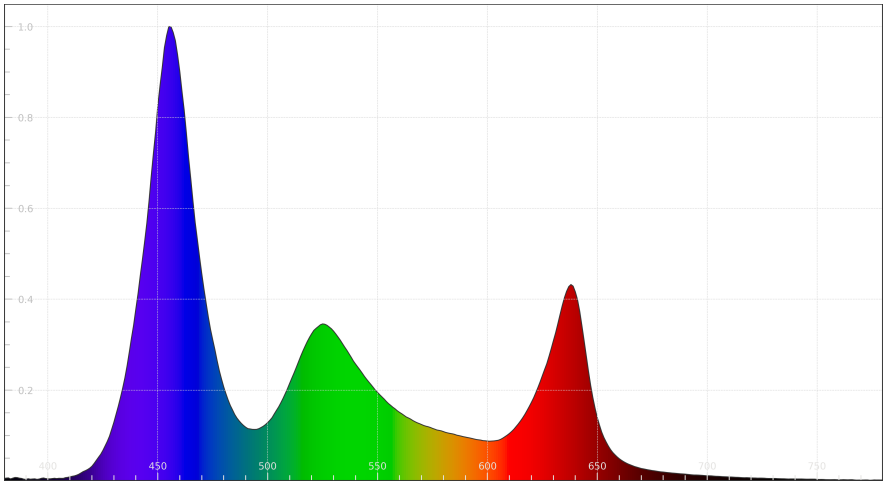
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Without Filter – Colorimetric Report

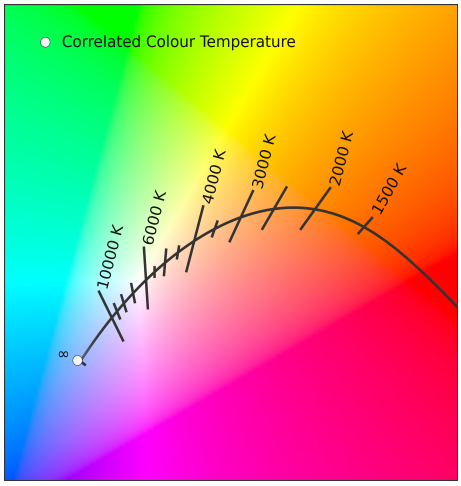
Colorimetric Characteristics

Correlated Colour Temperature [K]	**CCT**	134955	Luminous Flux [lm]	**Lum Flux**	1347
Colour Deviation from Black	**D_{uv}**	-0.0074	Colour Rendering Index	**CRI Ra**	78
Colour Coordinate CIE 1931	**x**	0.2457	Red Component	**CRI R9**	-78
Colour Coordinate CIE 1931	**y**	0.2292	Colour Fidelity	**TM30 R_f**	77
Colour Coordinate CIE 1976	**u'**	0.1869	Colour Gamut	**TM30 R_g**	108
Colour Coordinate CIE 1976	**v'**	0.3922	Television Lighting Consistency Index	**TLCI**	3
Spectral Similarity Index	**SSI[CIE D134955]**	38			

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

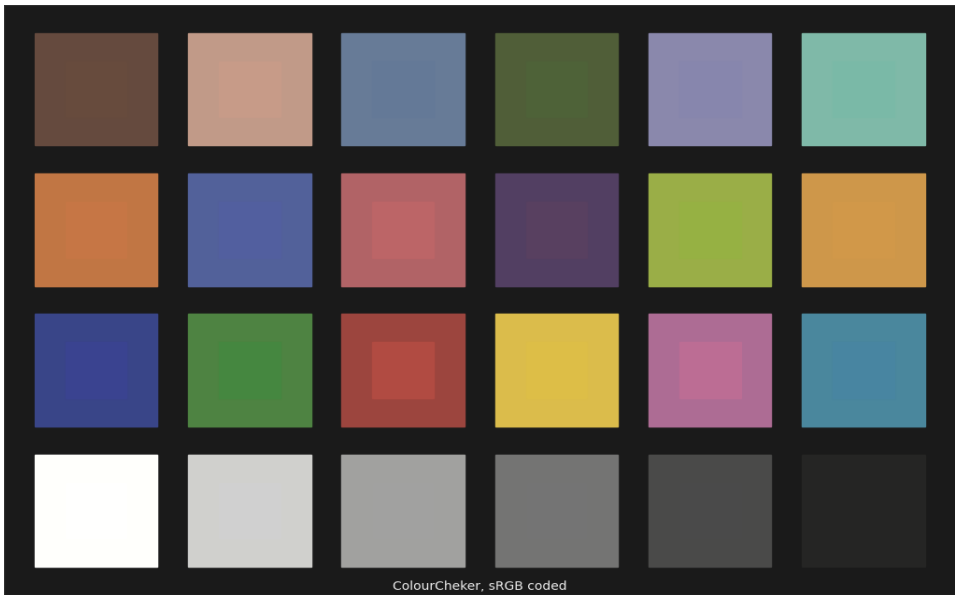


Colour Temperature

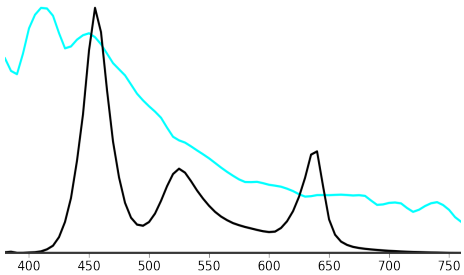


Television Lighting Consistency Index-2012

CCT = D134955 (-1.4) TLCI-2012 : 3 (D134955)



Sector	Lightness	Chroma	Hue
R	------	---	0
R/Y	-	-	0
Y	-	-	-
Y/G	-	--	---
G	-	---	--
G/C	0	-	0
C	0	-	12*+
C/B	0	-	24*+
B	0	--	-
B/M	0	-	--
M	0	0	---
M/R	----	--	-----

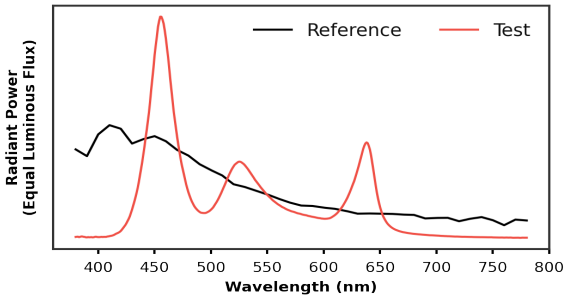


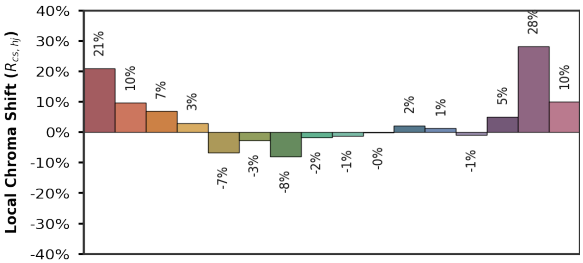
Fixture Settings: Stand Alone Dimmer and RGBW at 100%; PWM at 3,6KHz, Calibration at Factory, Powermode at ConstantPower

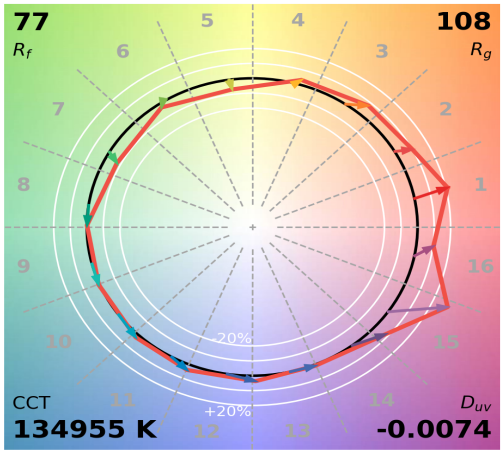
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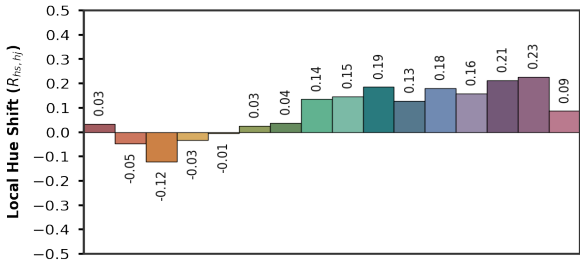
Without Filter – Colorimetric Report

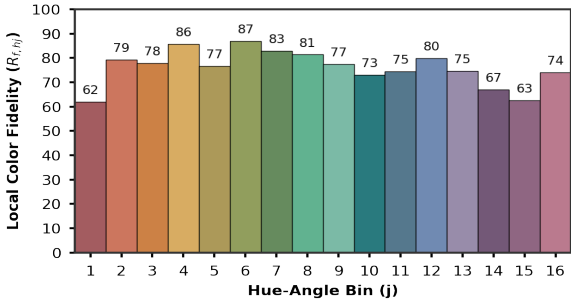
IES TM-30-18 Colour Rendition Report

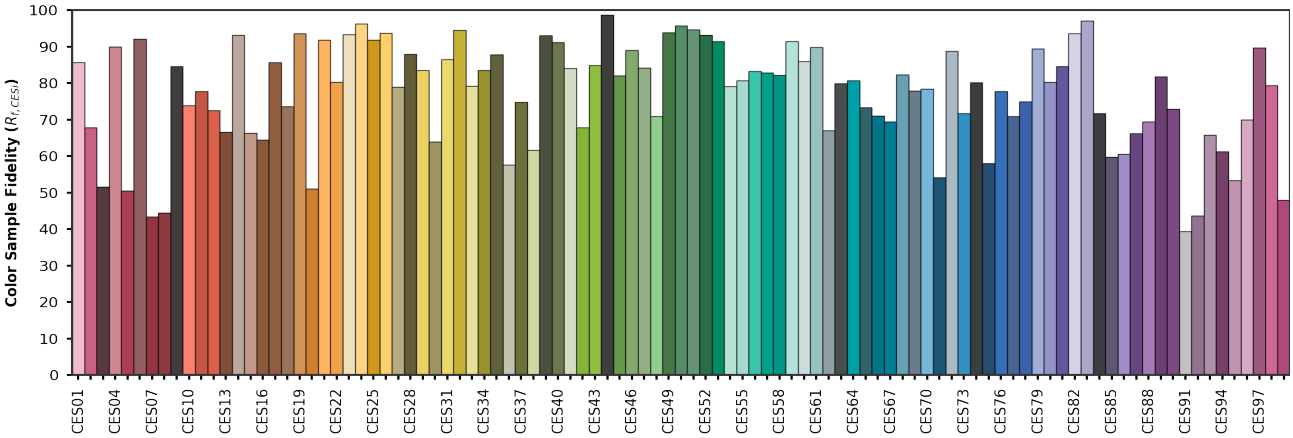












x	0.2457
y	0.2292
u′	0.1869
v′	0.3922

CIE 13.31-1995 (CRI)
R_a **78**
R_9 **-78**

Fixture Settings: Stand Alone Dimmer and RGBW at 100%; PWM at 3,6KHz, Calibration at Factory, Powermode at ConstantPower

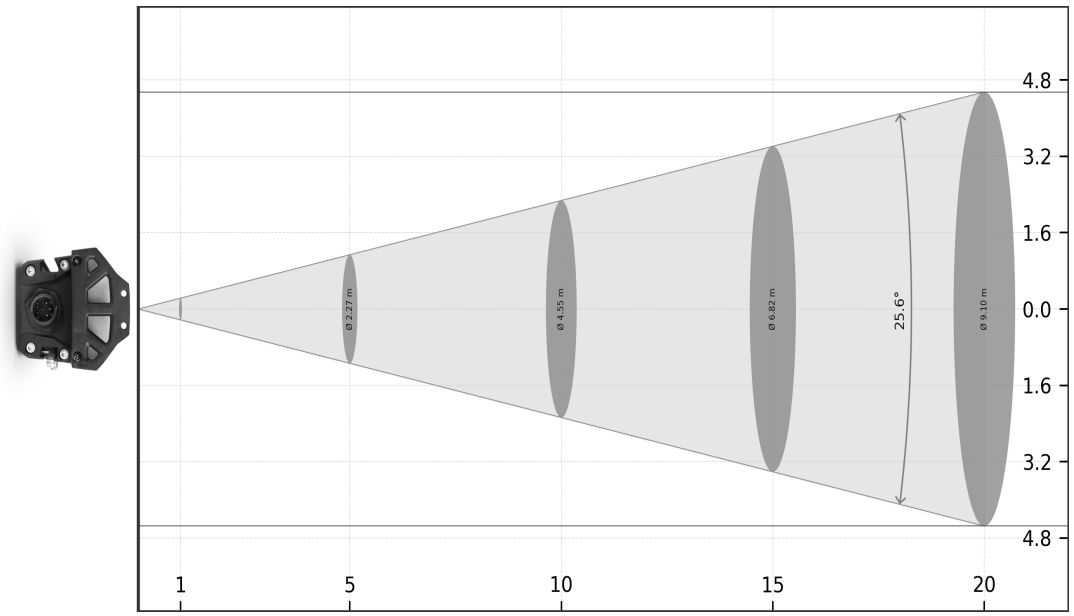
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With 20° Filter – Photometric Report

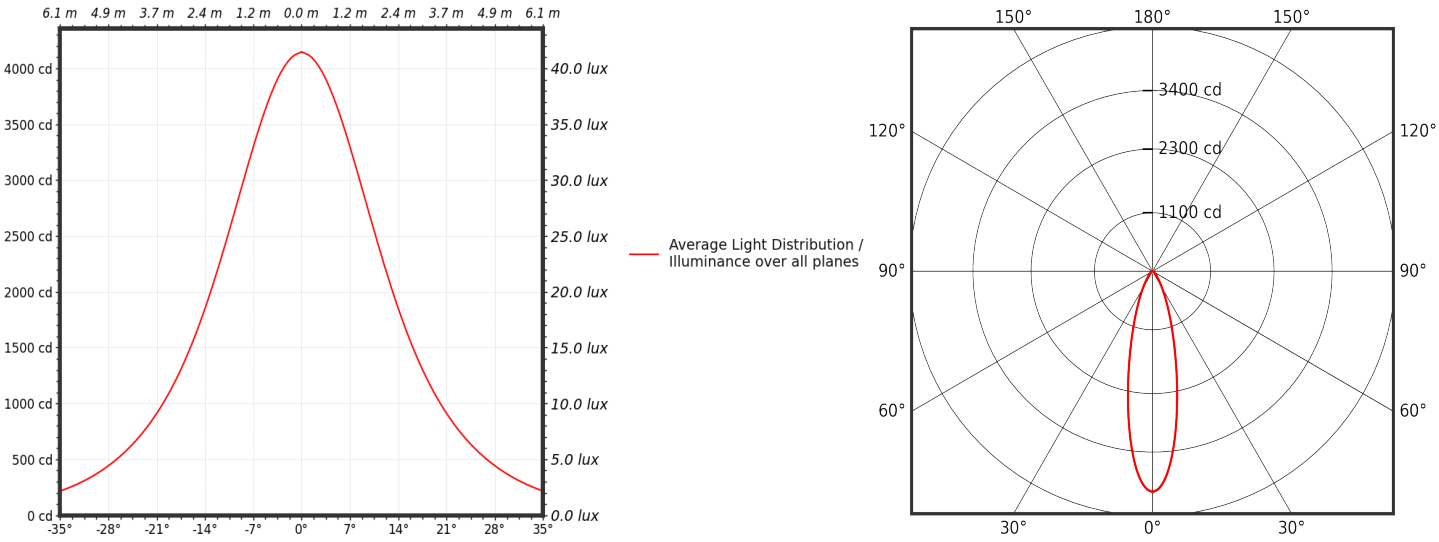
Beam Angle [°]	Field Angle [°]	Luminous flux [lm]	Power [W]	Luminous Efficacy [lm/W]
25.6	57.3	1314	50	26.3

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



Distance [m]	1	5	10	15	20
Illuminance [lx]	4147	166	41	18	10
Diameter [m]	0.45	2.27	4.55	6.82	9.10

Light Distribution Diagrams / Illuminance



Fixture Settings: Stand Alone Dimmer and RGBW at 100%; PWM at 3,6KHz, Calibration at Factory, Powermode at ConstantPower

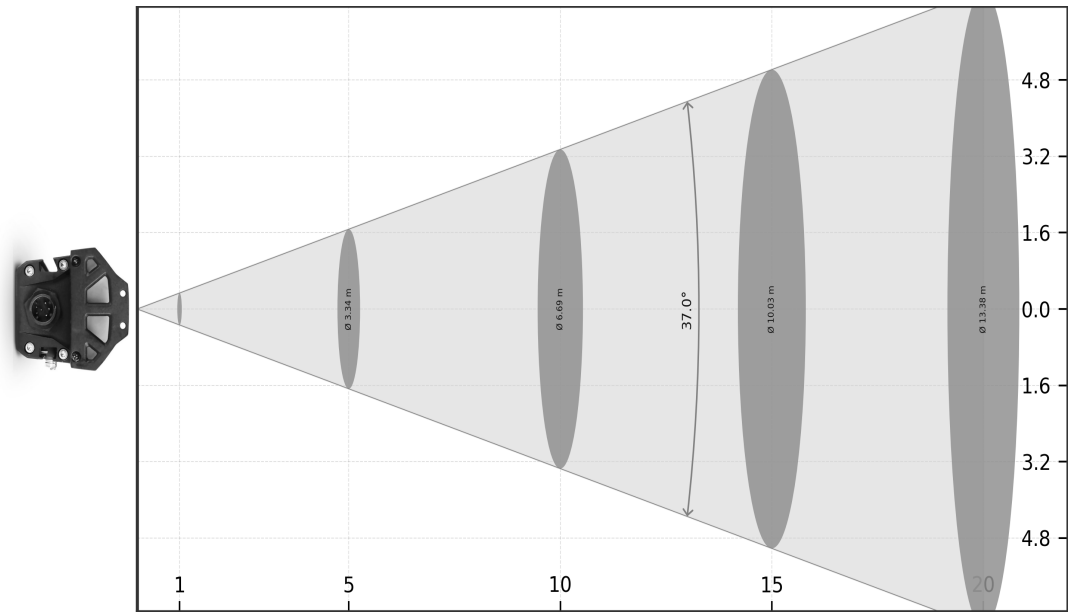
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With 40° Filter – Photometric Report

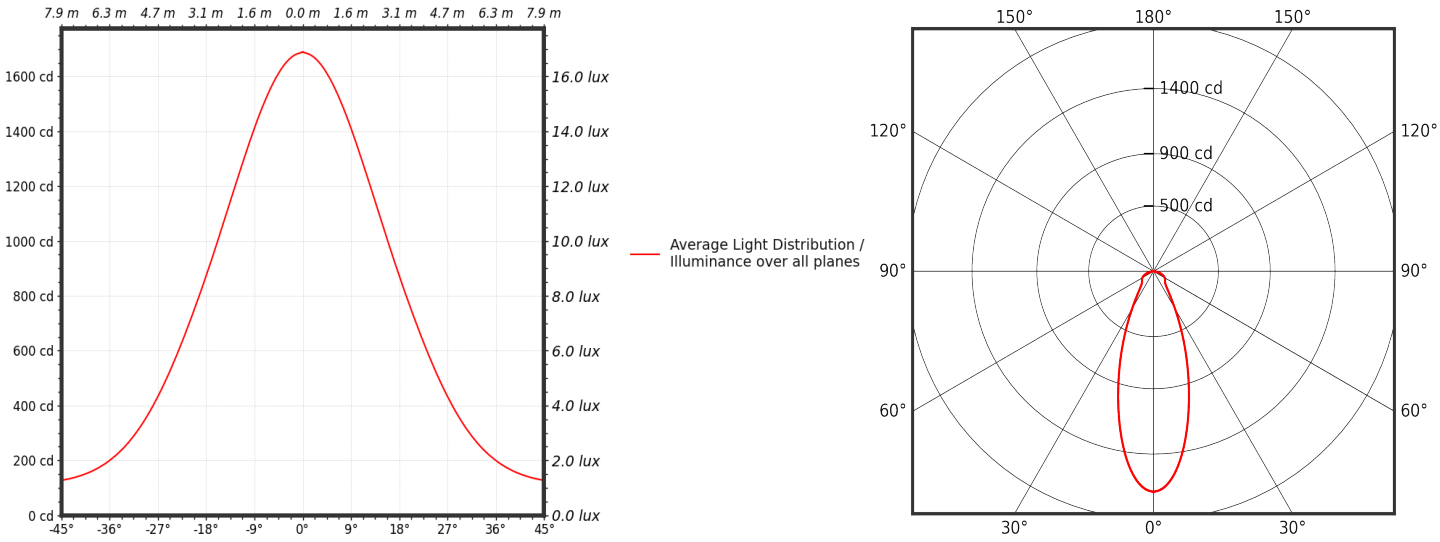
Beam Angle [°]	Field Angle [°]	Luminous flux [lm]	Power [W]	Luminous Efficacy [lm/W]
37.0	76.8	1138	50	22.8

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



Distance [m]	1	5	10	15	20
Illuminance [lx]	1689	68	17	8	4
Diameter [m]	0.67	3.34	6.69	10.03	13.38

Light Distribution Diagrams / Illuminance



Fixture Settings: Stand Alone Dimmer and RGBW at 100%; PWM at 3,6KHz, Calibration at Factory, Powermode at ConstantPower

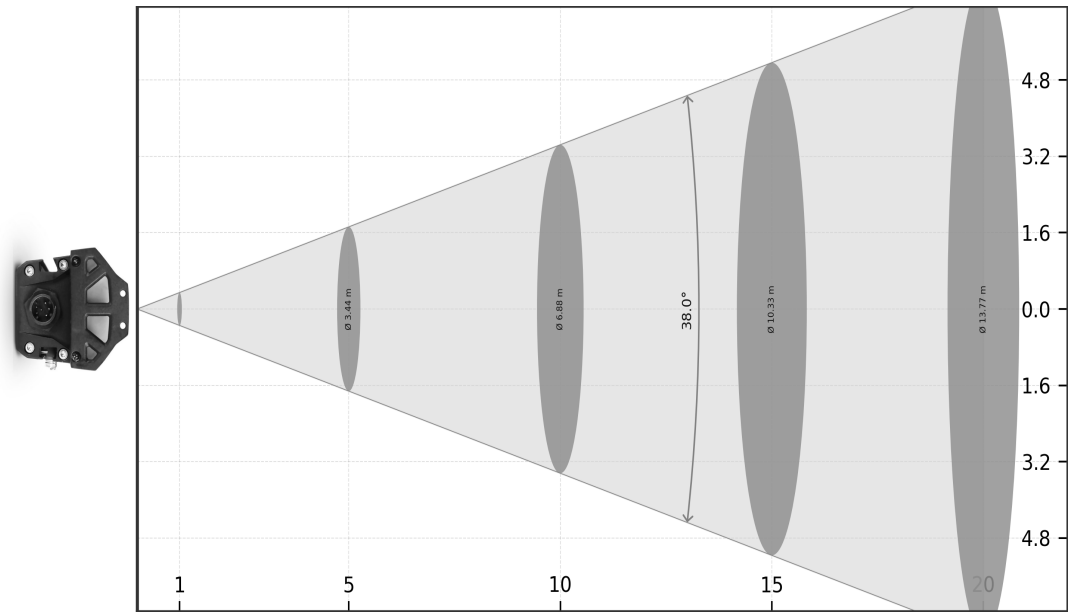
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With 60° Filter – Photometric Report

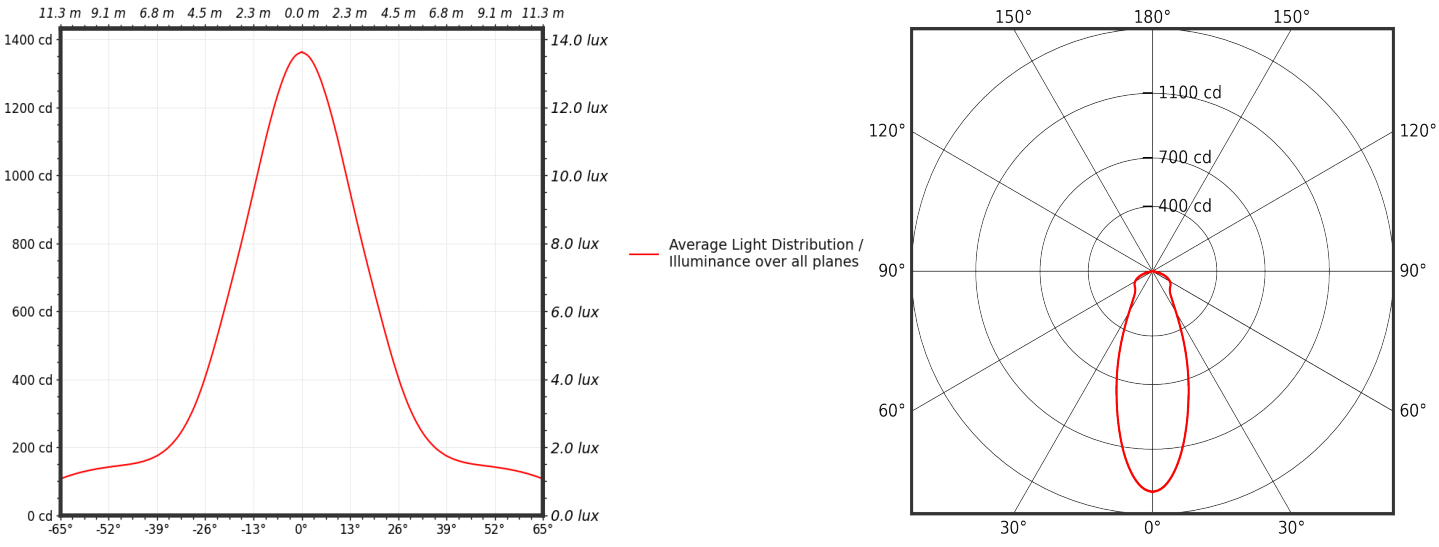
Beam Angle [°]	Field Angle [°]	Luminous flux [lm]	Power [W]	Luminous Efficacy [lm/W]
38.0	110.3	1090	50	21.8

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



Distance [m]	1	5	10	15	20
Illuminance [lx]	1363	55	14	6	3
Diameter [m]	0.69	3.44	6.88	10.33	13.77

Light Distribution Diagrams / Illuminance



Fixture Settings: Stand Alone Dimmer and RGBW at 100%; PWM at 3,6KHz, Calibration at Factory, Powermode at ConstantPower

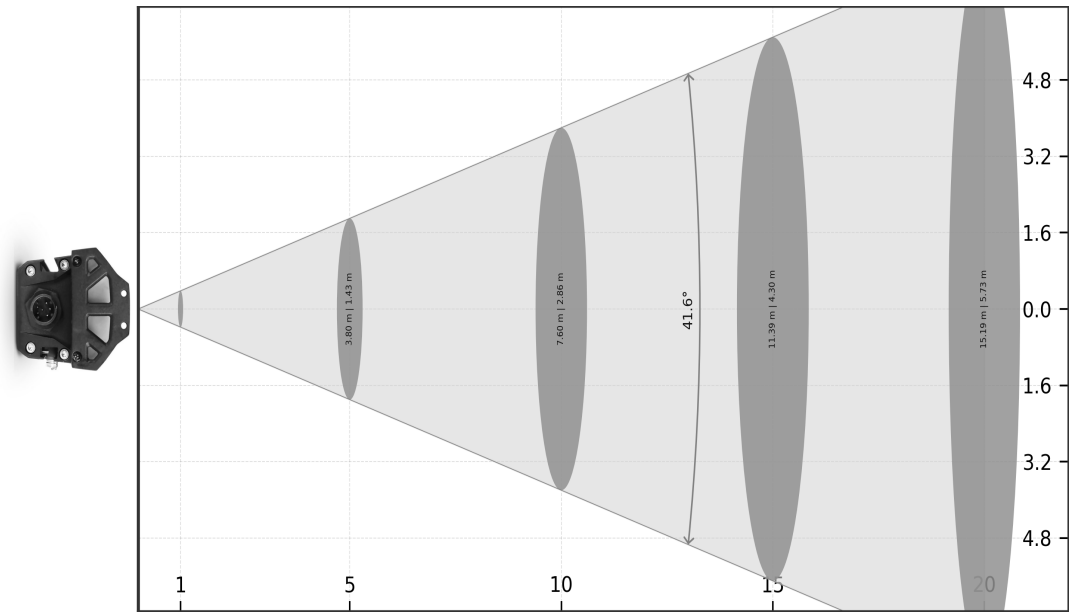
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With 60° x 10° Filter – Photometric Report

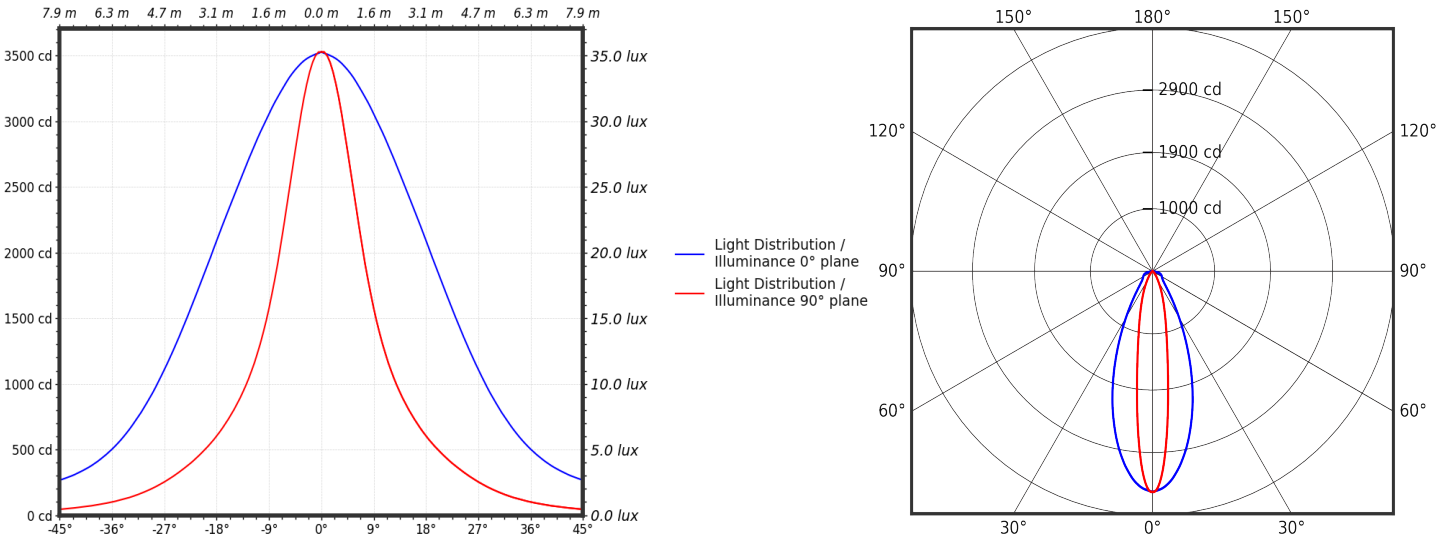
Beam Angle [°]	Field Angle [°]	Luminous flux [lm]	Power [W]	Luminous Efficacy [lm/W]
41.6 | 16.3	81.0 | 47.4	1200	50	24.0

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



Distance [m]	1	5	10	15	20
Illuminance [lx]	3528	141	35	16	9
Diameter [m]	0.76 | 0.29	3.80 | 1.43	7.60 | 2.86	11.39 | 4.30	15.19 | 5.73

Light Distribution Diagrams / Illuminance



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