



# Photometric Test Report



## SUNRISE4

4 X 100 W COB LED Blinder

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## TESTING PROCESS

Prolights has its own optical testing laboratory in order to provide accurate photometric reports for its lighting products. The testing laboratory contains certain variety of precise lighting measurement systems that ensure an optimal reading of all the characteristic parameters of the lighting devices. All measurements are made at a controlled room temperature of 20°C without any external light sources. This photometric report is obtained through the data measured by a high precision measurement system and analyzed by a dedicate software.

### Prolights measurement instrument

Prolights measurement instrument is a complete measurement system for any light source. It's equipped with two-axis goniometer, that enables to measure the full 3D distribution field of the light source. This instrument measures the light intensity, the beam angle and the most significative colors parameters, like color temperature, spectral distribution, CRI, CQS, TM-30 with a very high accuracy rate.

**Please Note:** All measurements are made with light source at operating temperature. Before starting the measurement, the instrument analyzes the process of the light source during the heating phase. The measuring process of all the parameters begins only when the light emission is stable, that is with a variation of less than 0.5% in a 15 minutes time frame.

### Prolights measurement software

The software provides user friendly interface for the operator who does the measurements, and it also analyzes and processes all the collected data by the instrument. With this software it is possible to see the measured data in real-time and it is possible to examine all the measured data and graphics afterwards as well. All information is collected in a specific Prolights template, and the software creates also IES and LDT files, which are widely used to transfer the photometric data, and to develop lighting system.

Additionally, the fixtures are rechecked using various hand-held instruments like Sekonic C-700 and Gossen Mavospec Base, this is done to ensure, that the data in the photometric report are as accurate as possible.



Total lumen output:

22594 lm

Peak candela output:

23920 cd

Light quality:

CRI: 71,6

Color temperature:

3035 K

**PRODUCT NAME:**

SUNRISE4

**MEASUREMENT CONDITIONS:**

Beam angle:

Native

Target:

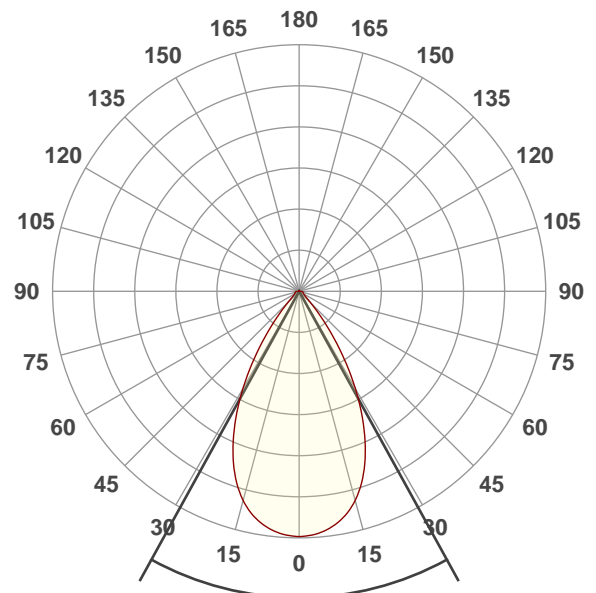
Full On

Operator:

Paolo Carvone

Date and time:

12/08/2020 14:29:10

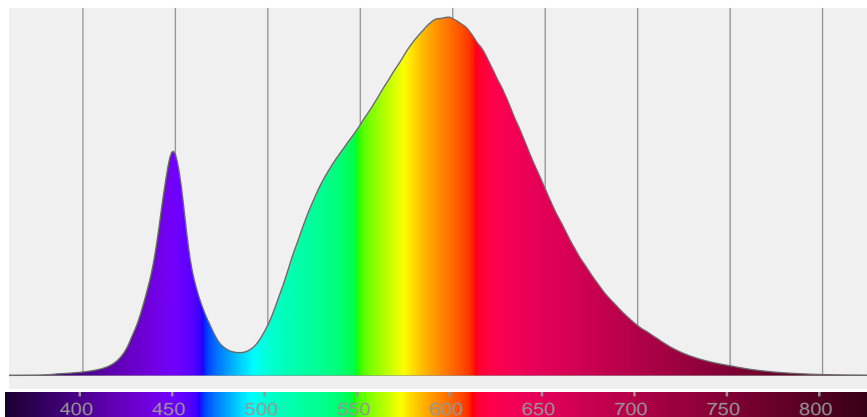


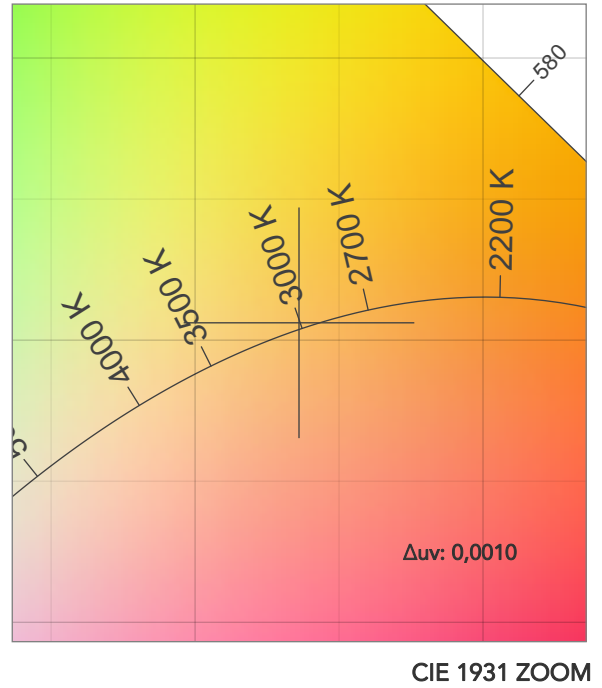
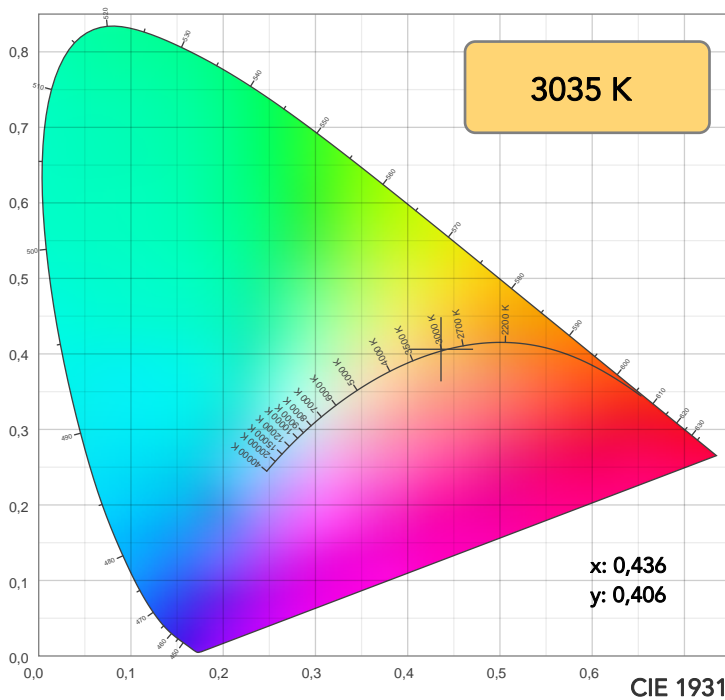
Beam angle 50%: 57,7°

Field angle 10%: 85,2°

Cut off angle 2.5%: 112,1°

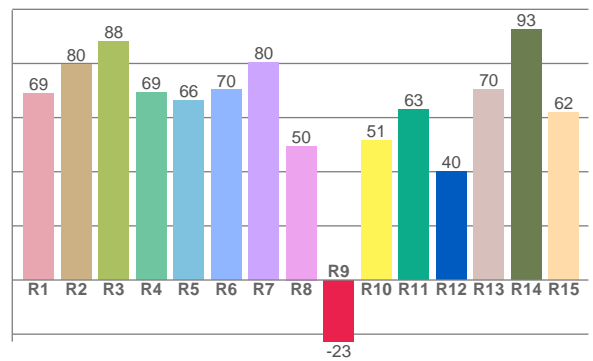
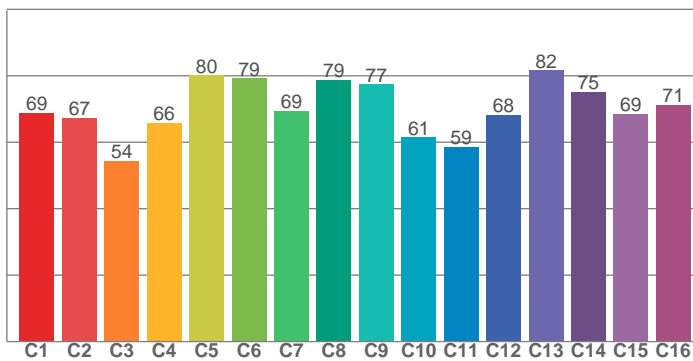
**Spectra**





TM30: 70,0

CRI: 71,6 (R1-R8)



CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
68,9	79,7	88,1	69,3	66,4	70,2	80,3	49,5	-22,7	51,4	62,9	40,2	70,5	92,7	62,0

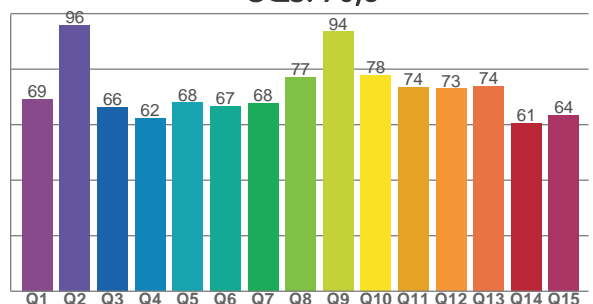
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
68,9	67,3	54,3	65,9	80,1	79,3	69,5	78,7	77,4	61,5	58,7	68,3	81,6	75,2	68,6	71,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
69,2	95,9	66,4	62,3	68,0	66,8	67,8	77,2	93,5	77,9	73,6	73,0	73,9	60,6	63,5

CQS: 70,8



## COLOR PARAMETERS

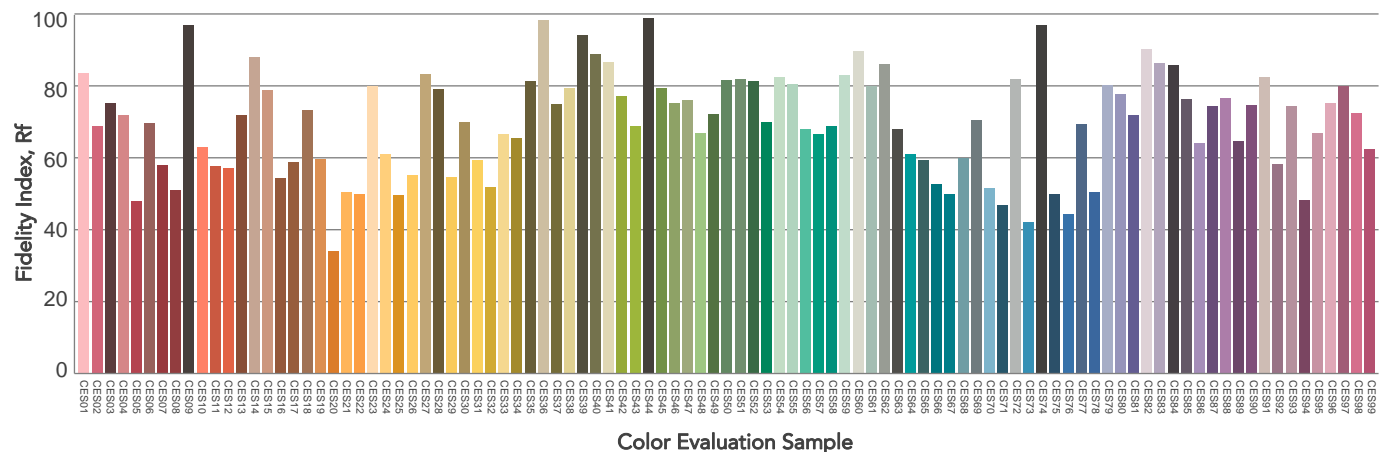
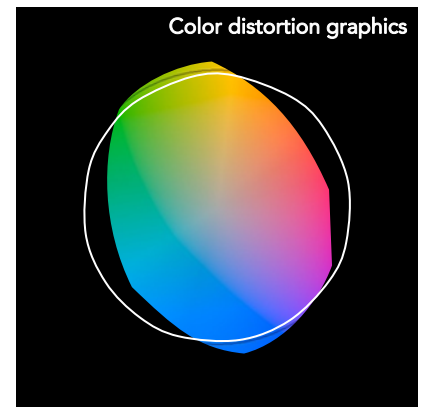
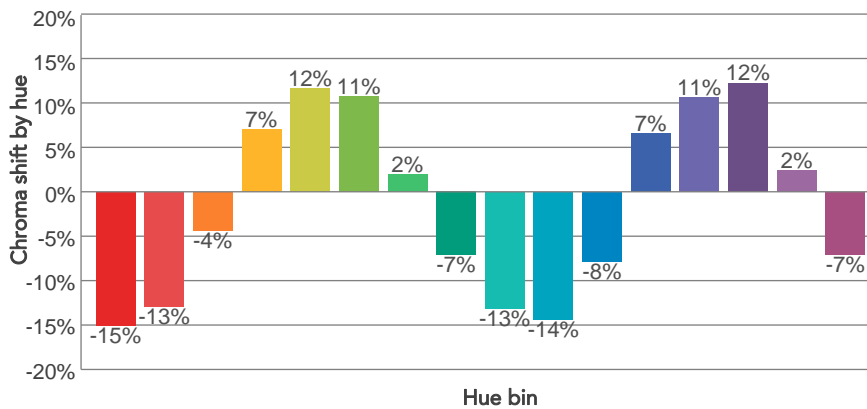
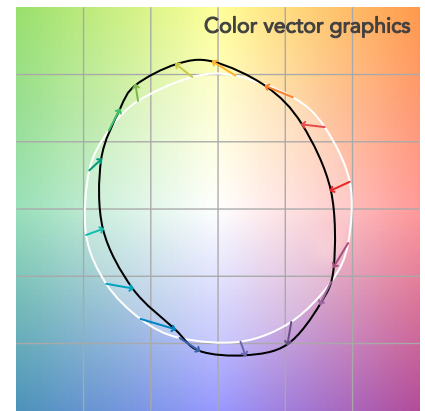
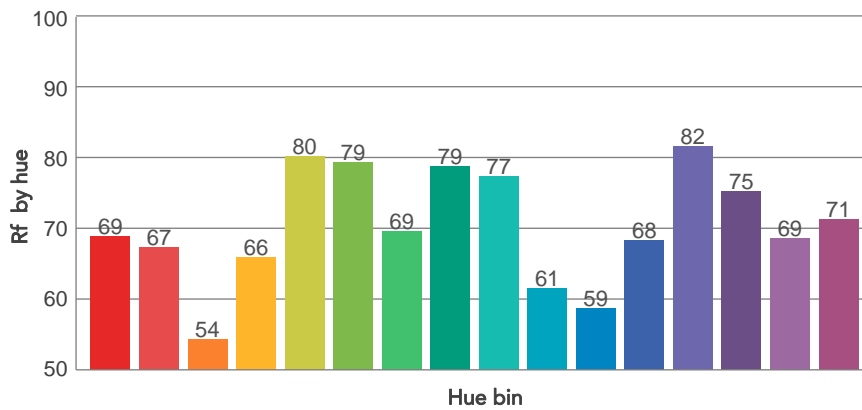
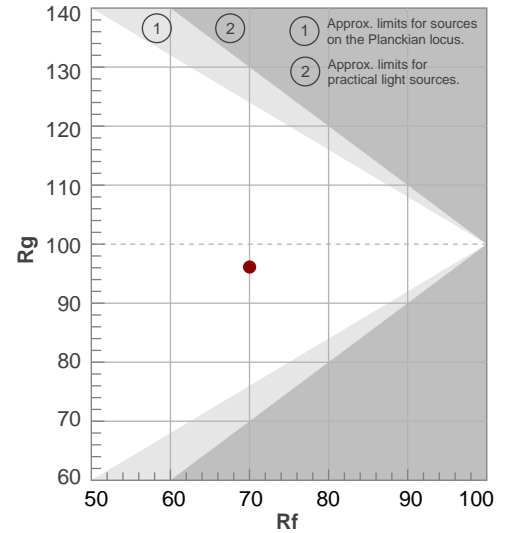
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	$\Delta uv$
3035 K	71,6	-22,7	70,0	96,1	70,8	45	0,436	0,406	0,0010

# TM30 DETAILS

**Rf 70,0**  
Fidelity index Rf

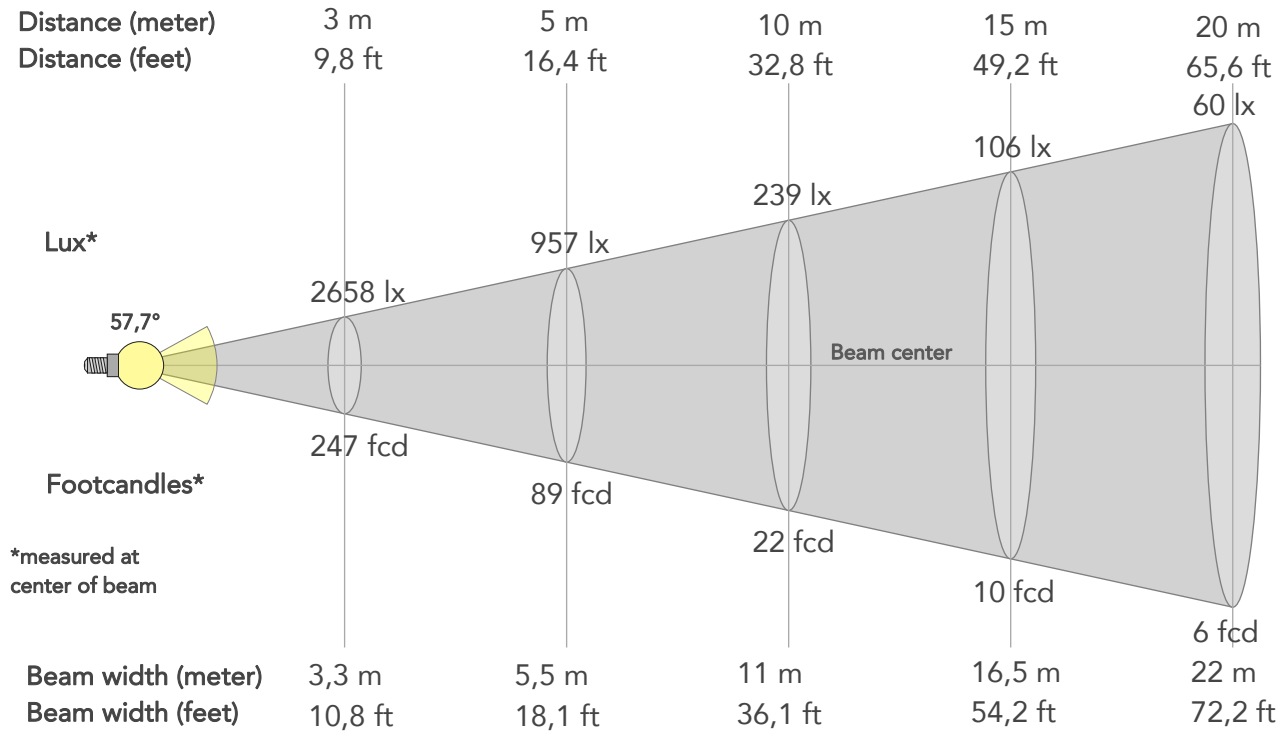
**Rg 96,1**  
Gammut index

		Graphic shifts (%)	
Hue Bin	R <sub>f</sub>	Chroma	Hue
1	69	-15%	-4%
2	67	-13%	11%
3	54	-4%	21%
4	66	7%	19%
5	80	12%	10%
6	79	11%	-5%
7	69	2%	-17%
8	79	-7%	-10%
9	77	-13%	-2%
10	61	-14%	14%
11	59	-8%	25%
12	68	7%	16%
13	82	11%	2%
14	75	12%	-12%
15	69	2%	-18%
16	71	-7%	-19%



## BEAM DETAILS

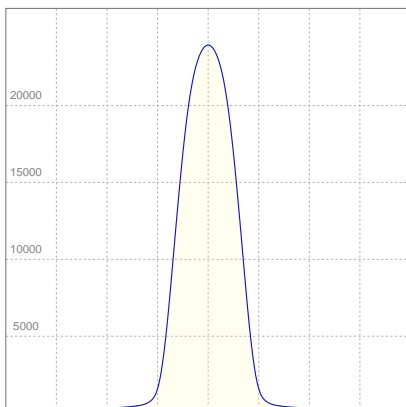
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
57,7°	85,2°	112,1°	93,7%	89,2%



### BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	23920lx	5980lx	2658lx	1495lx	957lx	425lx	239lx	106lx	60lx	38lx	27lx	15lx	10lx
Footcand.	2222fcd	556fcd	247fcd	139fcd	89fcd	40fcd	22fcd	10fcd	6fcd	4fcd	2fcd	1fcd	1fcd
Beam wid.	1,1m	2,2m	3,3m	4,4m	5,5m	8,3m	11m	16,5m	22m	27,5m	33m	44m	55m
Beam wid.	3,6ft	7,3ft	10,8ft	14,4ft	18,1ft	27,1ft	36,1ft	54,2ft	72,2ft	90,3ft	108,3ft	144,4ft	180,6ft

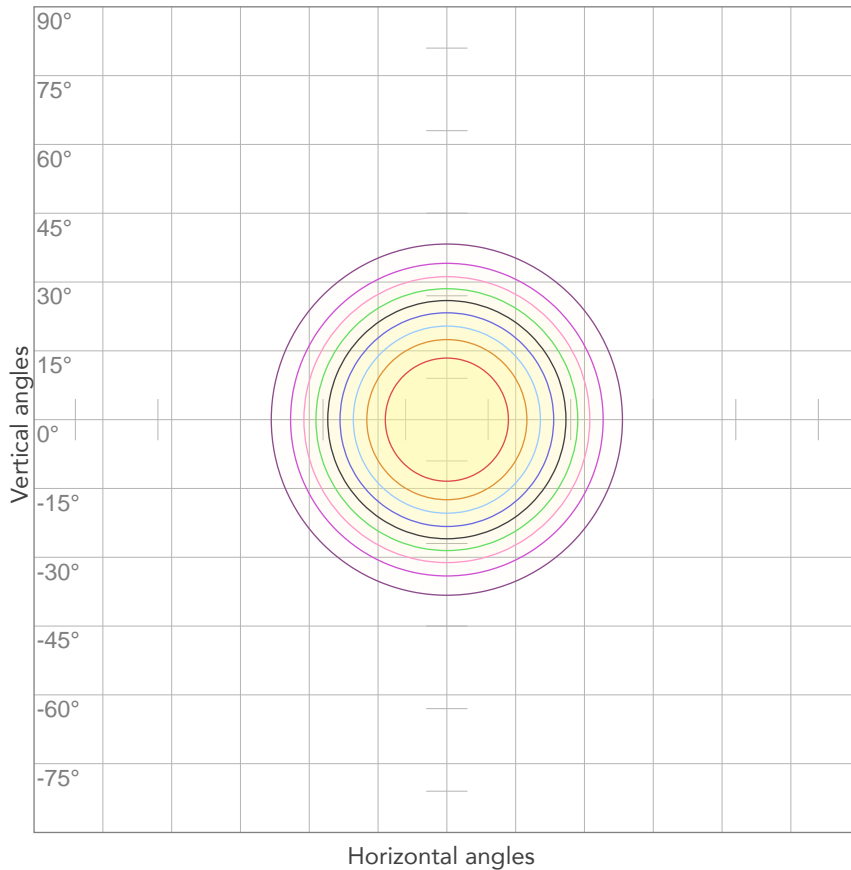
### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
224V	1,51A	323,5W	70lm/W

## ISO CANDELA DIAGRAM



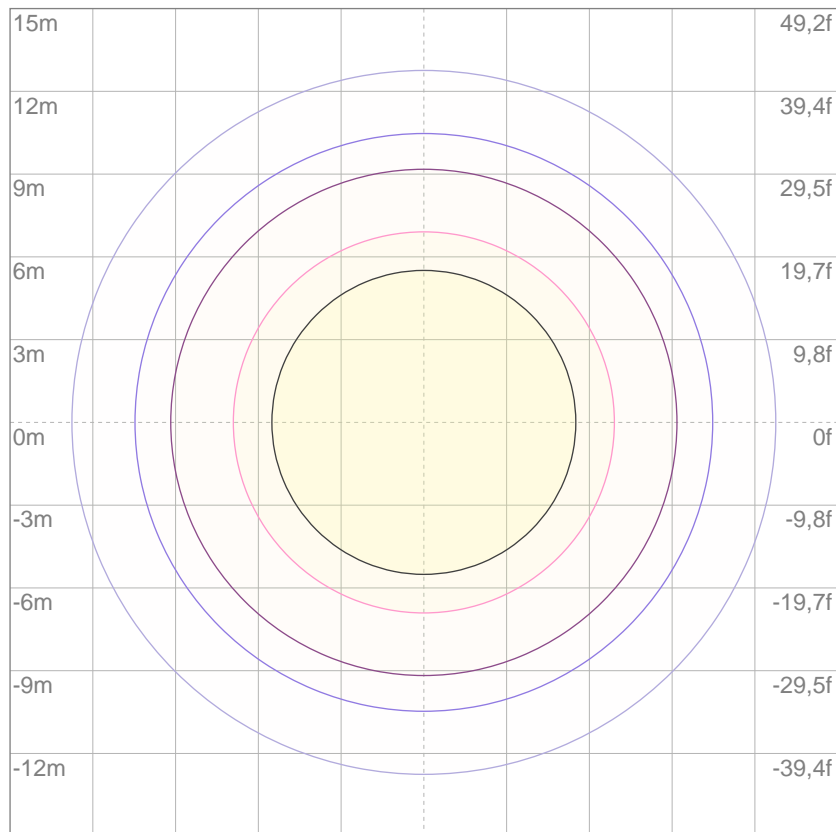
10%	2392 cd
20%	4784 cd
30%	7176 cd
40%	9568 cd
50%	11960 cd
60%	14352 cd
70%	16744 cd
80%	19136 cd

### Conditions:

Number of c-planes: 2

Candela at center: 23920 cd

## ISO LUX DIAGRAM



3%	7,18 lx
5%	12,0 lx
10%	23,9 lx
30%	71,8 lx
50%	120 lx

### Conditions:

Number of c-planes: 2

Lux at center: 239 lx

*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*