

# Photometric Test Report



## ECLFWVW PRL14

High quality Variable White LED ellipsoidal,  
with linear CCT 2.700K – 5.600K

## CONTENTS

Table of contents	2
Testing process	3
Presets	
Full On	4
Cold White	9
Warm White	14

## 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:

7415 lm

Peak candela output:

185828 cd

Light quality:

CRI: 95,0

Color temperature:

3967 K

**PRODUCT NAME:**

ECLFWWW

**MEASURAMENT CONDITIONS:**

Beam angle:

PRL14

Target:

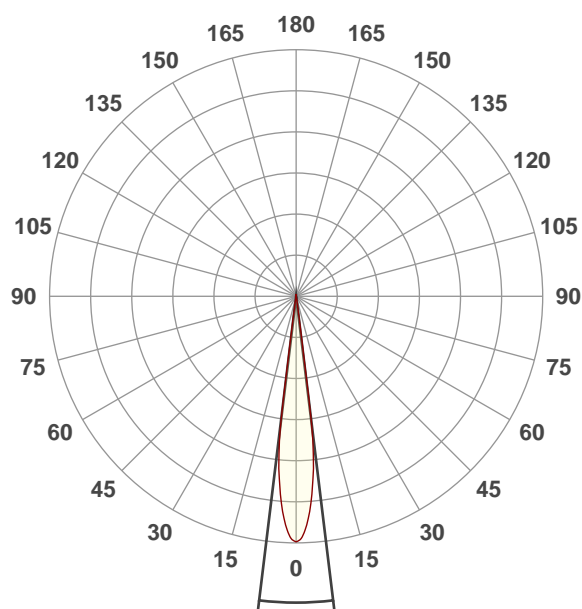
Full On

Operator:

Paolo Carvone

Date and time:

11/06/2021 13:09:34

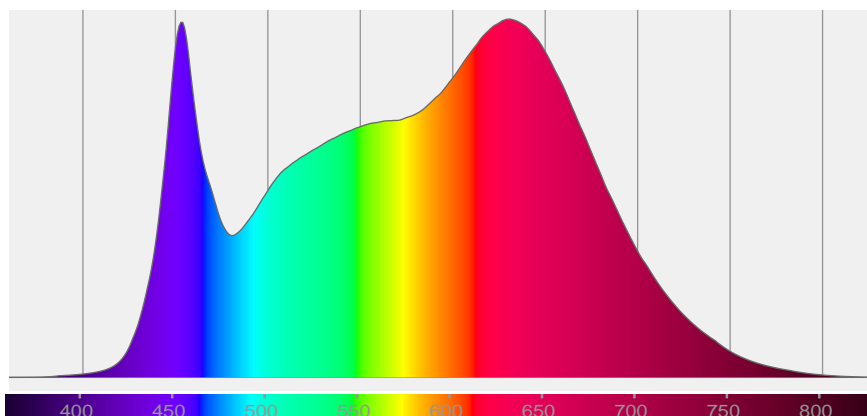


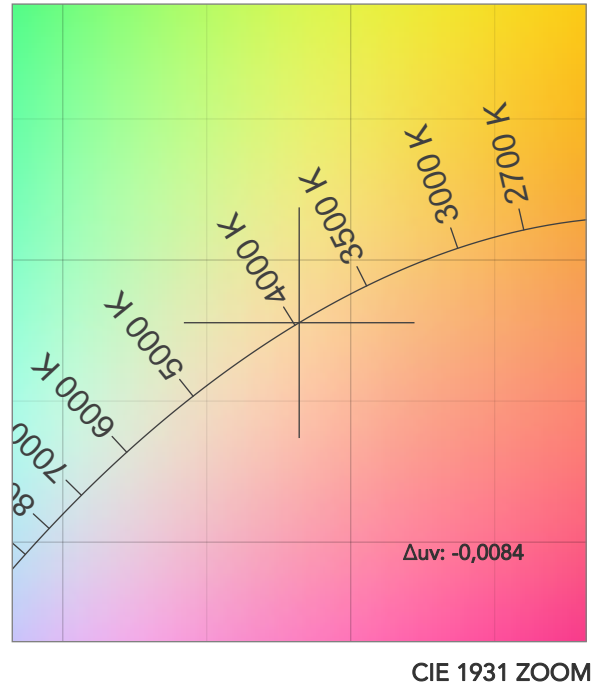
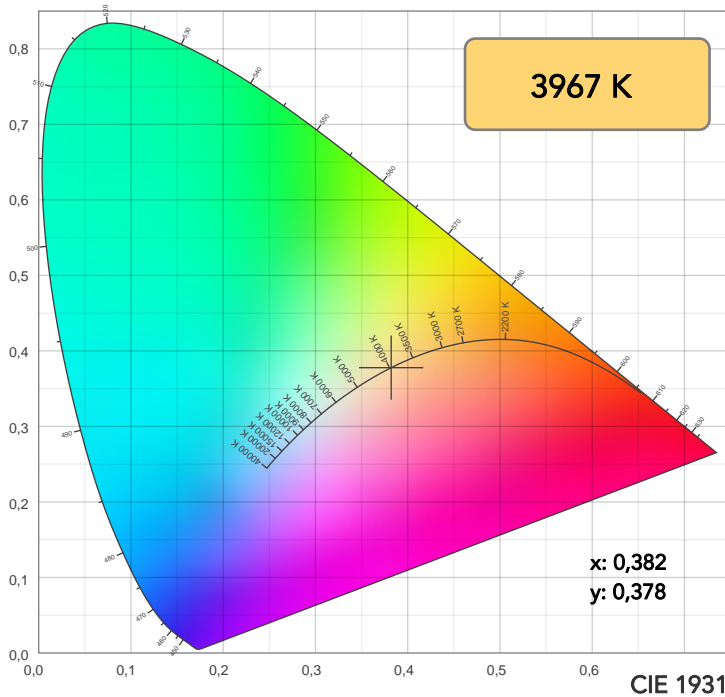
Beam angle 50%: 13,9°

Field angle 10%: 15,7°

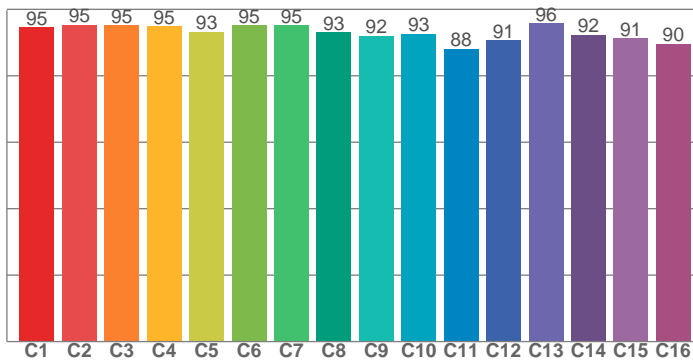
Cut off angle 2.5%: 17,1°

**Spectra**

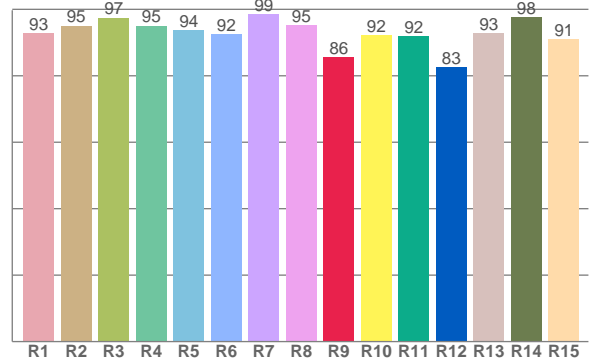




TM30: 93,1



CRI: 95,0 (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
92,8	95,1	97,5	95,0	93,6	92,5	98,5	95,1	85,6	92,2	91,9	82,5	92,8	97,7	91,0

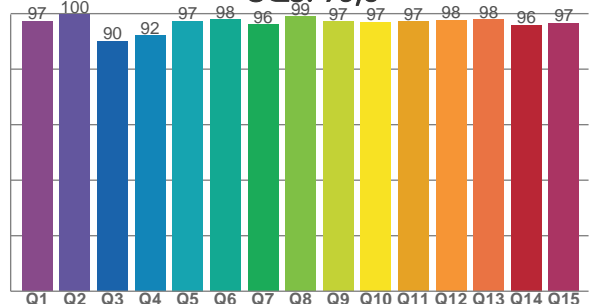
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
94,6	95,3	95,1	94,9	93,3	95,2	95,2	93,1	92,1	92,6	88,2	90,6	95,8	92,3	91,3	89,6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
97,2	99,6	90,0	92,0	97,4	97,9	96,1	98,9	97,1	97,0	97,2	97,7	97,9	95,9	96,5

CQS: 95,8



## COLOR PARAMETERS

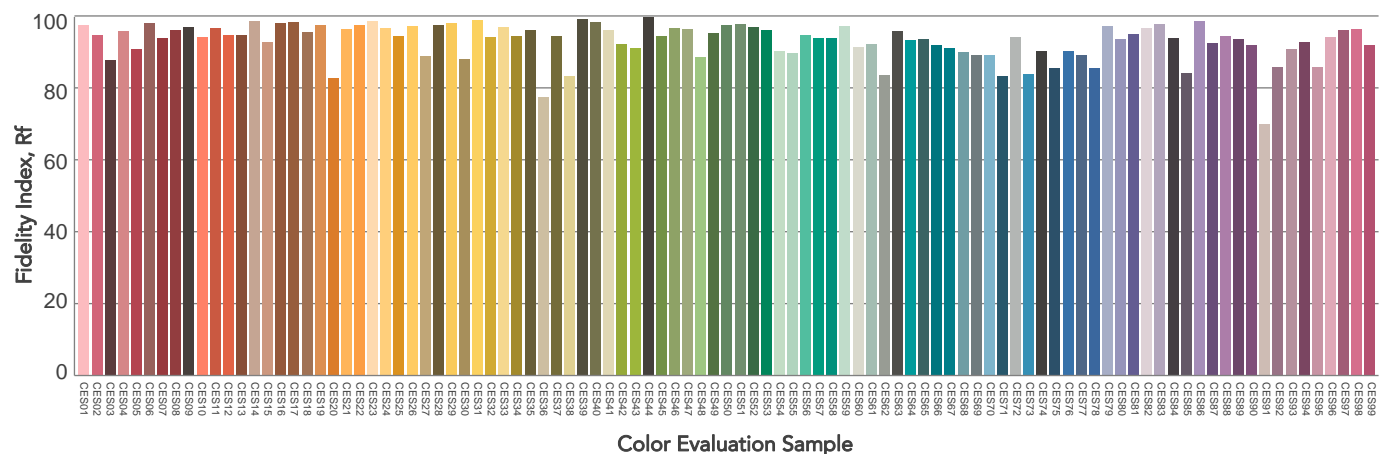
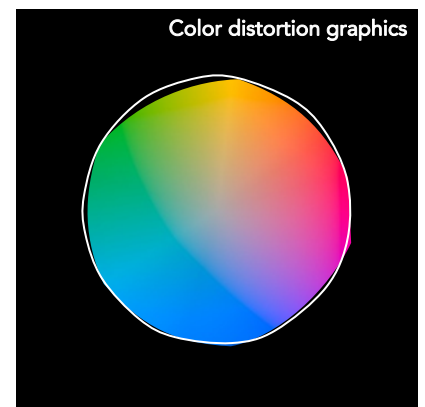
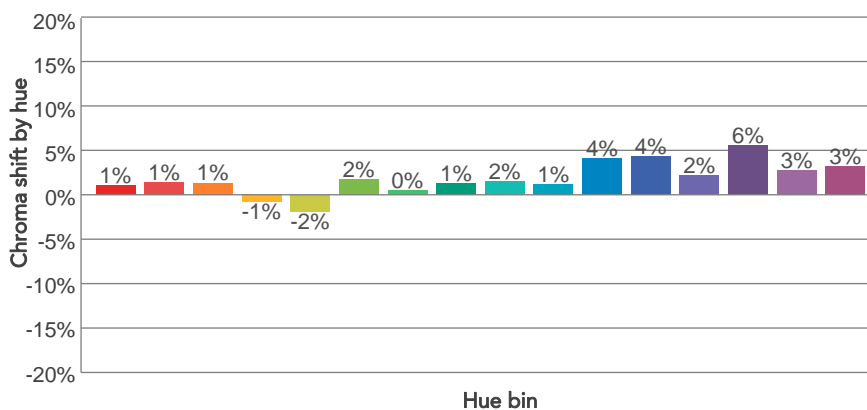
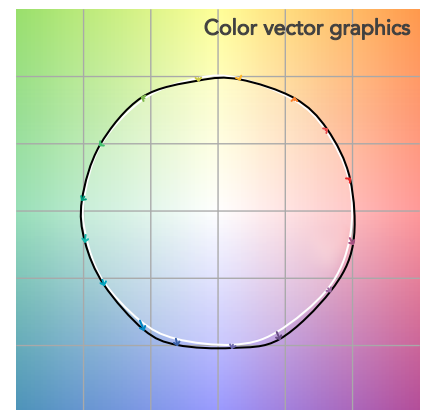
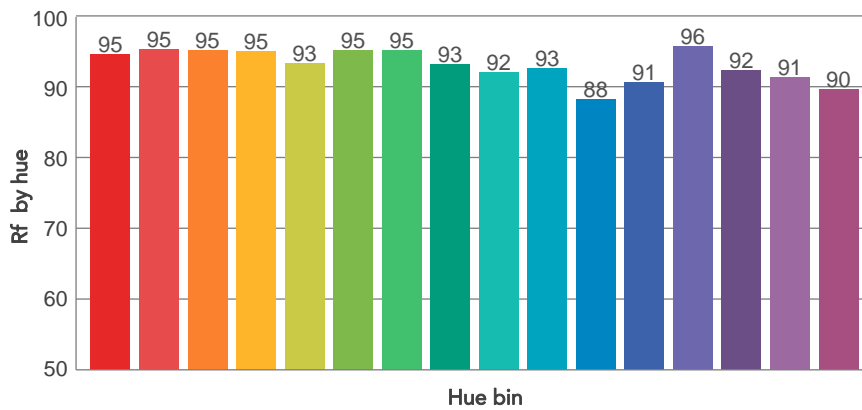
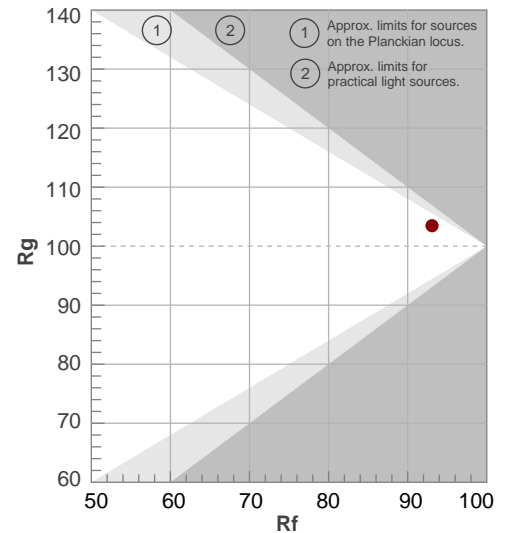
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
3967 K	95,0	85,6	93,1	103,5	95,8	98	0,382	0,378	-0,0084

# TM30 DETAILS

**Rf 93,1**  
Fidelity index Rf

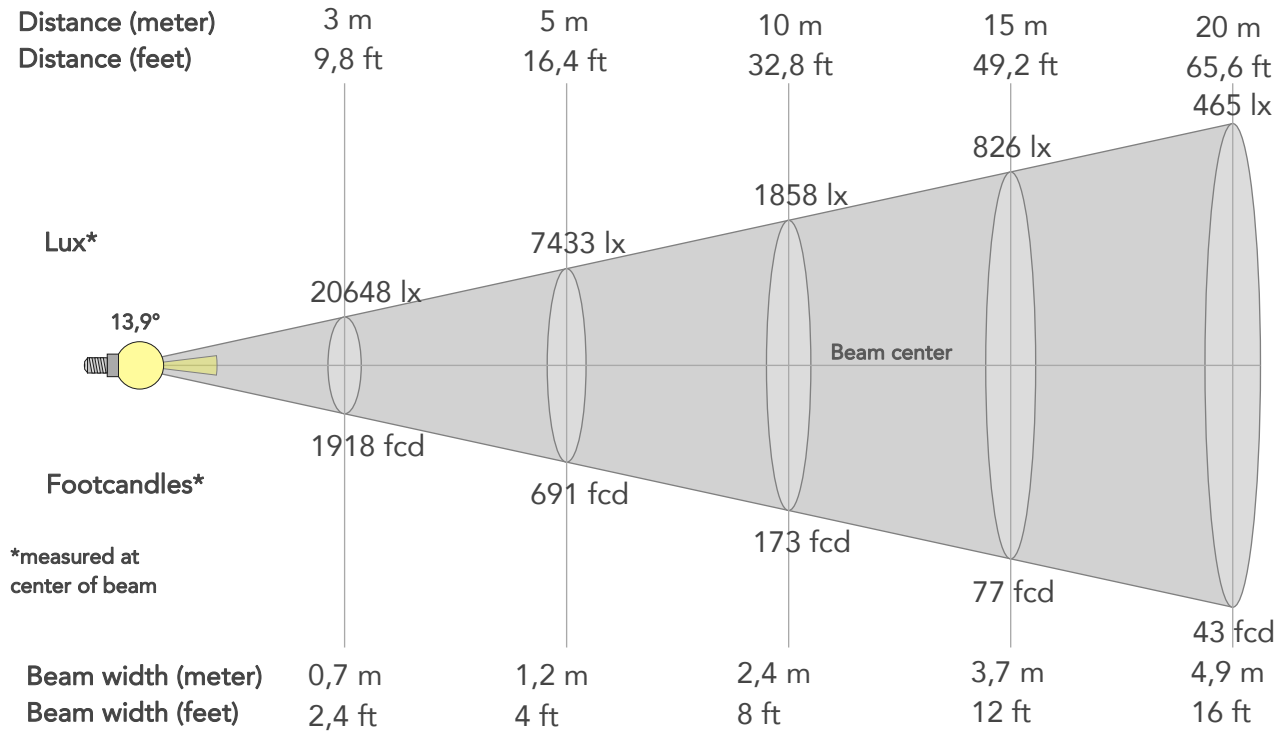
**Rg 103,5**  
Gammut index

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	95	1%	1%
2	95	1%	0%
3	95	1%	1%
4	95	-1%	-1%
5	93	-2%	0%
6	95	2%	1%
7	95	0%	2%
8	93	1%	3%
9	92	2%	5%
10	93	1%	4%
11	88	4%	6%
12	91	4%	2%
13	96	2%	-1%
14	92	6%	-1%
15	91	3%	-1%
16	90	3%	-4%



## BEAM DETAILS

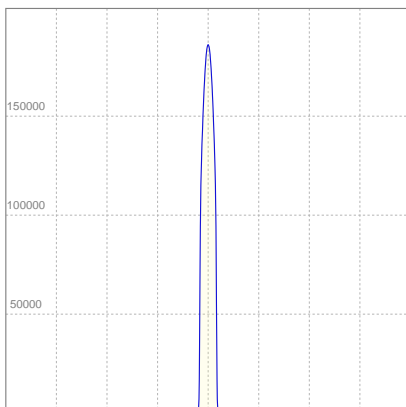
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
13,9°	15,7°	17,1°	100,0%	100,0%



### 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	185828lx	46457lx	20648lx	11614lx	7433lx	3304lx	1858lx	826lx	465lx	297lx	206lx	116lx	74lx
Footcand.	17264fcd	4316fcd	1918fcd	1079fcd	691fcd	307fcd	173fcd	77fcd	43fcd	28fcd	19fcd	11fcd	7fcd
Beam wid.	0,2m	0,5m	0,7m	1m	1,2m	1,8m	2,4m	3,7m	4,9m	6,1m	7,3m	9,7m	12,2m
Beam wid.	0,8ft	1,6ft	2,4ft	3,2ft	4ft	6ft	8ft	12ft	16ft	20ft	23,9ft	31,9ft	39,9ft

### LINEAR DISTRIBUTION DIAGRAM

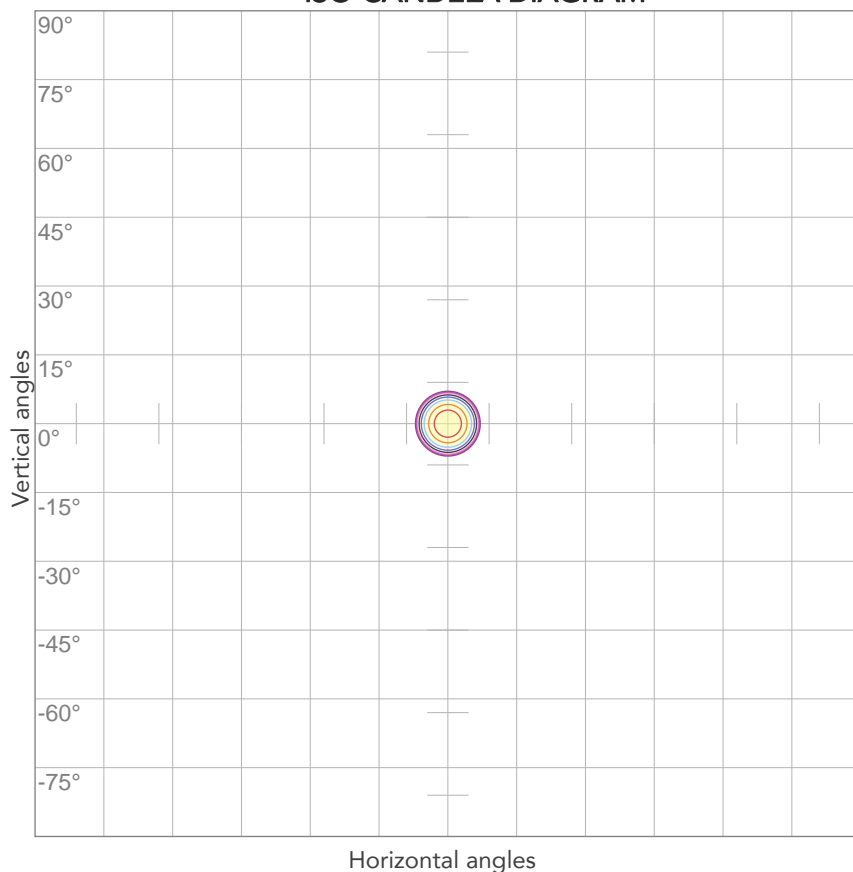


### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
227V	1,20A	262,4W	28lm/W

Power Fc
0,97

## ISO CANDELA DIAGRAM



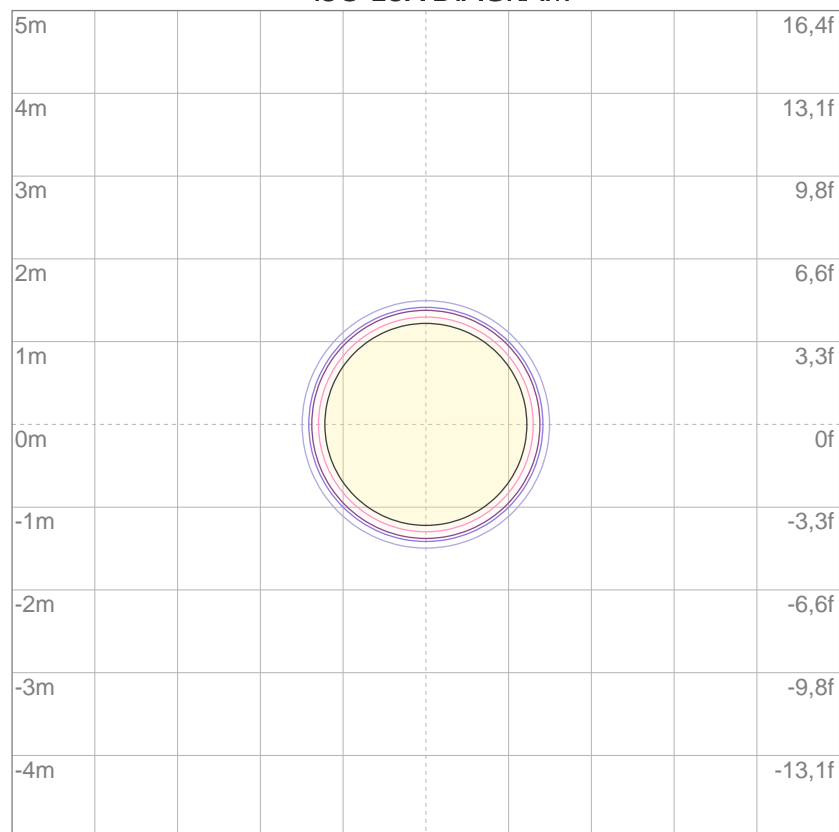
10%	18583 cd
20%	37166 cd
30%	55748 cd
40%	74331 cd
50%	92914 cd
60%	111497 cd
70%	130080 cd
80%	148662 cd

### Conditions:

Number of c-planes: 2

Candela at center: 185828 cd

## ISO LUX DIAGRAM



3%	55,7 lx
5%	92,9 lx
10%	186 lx
30%	557 lx
50%	929 lx

### Conditions:

Number of c-planes: 2

Lux at center: 1858 lx

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





Total lumen output:

4052 lm

Peak candela output:

101822 cd

Light quality:

CRI: 96,9

Color temperature:

5613 K

PRODUCT NAME:

ECLFWWW

MEASURAMENT CONDITIONS:

Beam angle:

PRL14

Target:

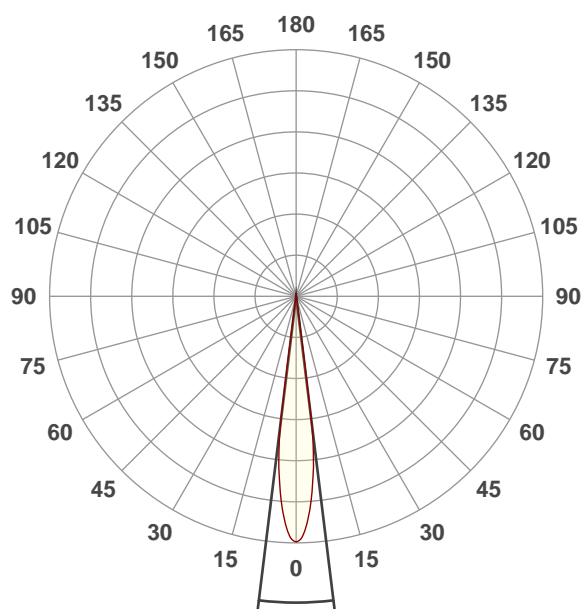
Cold White

Operator:

Paolo Carvone

Date and time:

11/06/2021 13:12:39

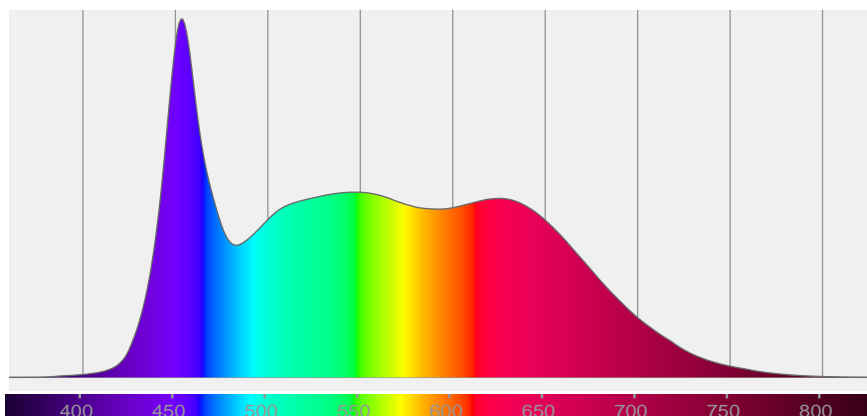


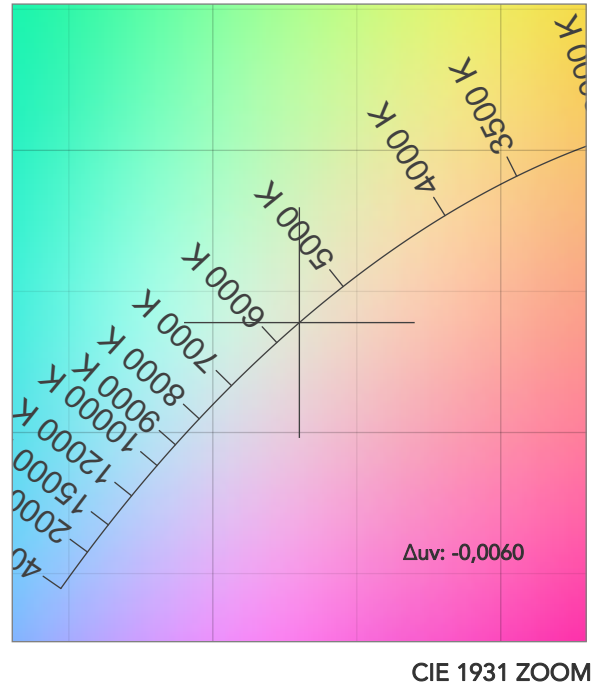
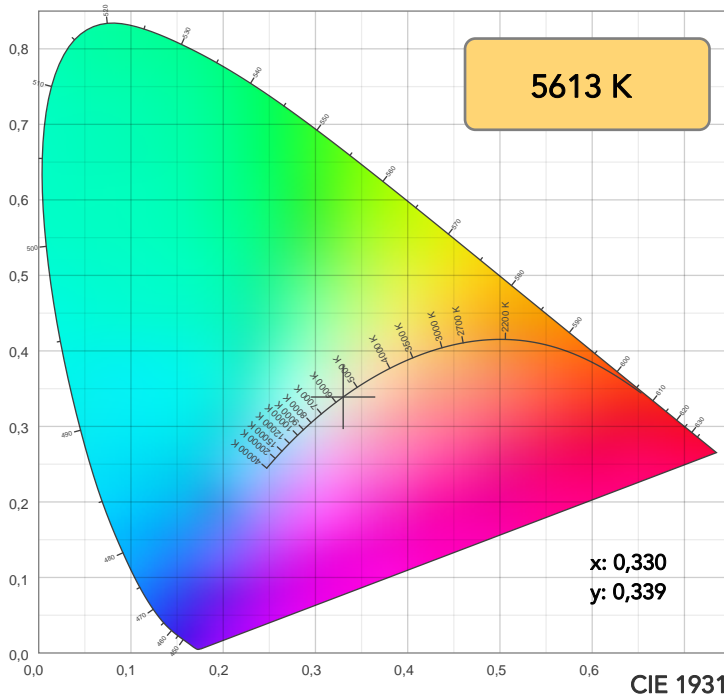
Beam angle 50%: 14°

Field angle 10%: 15,6°

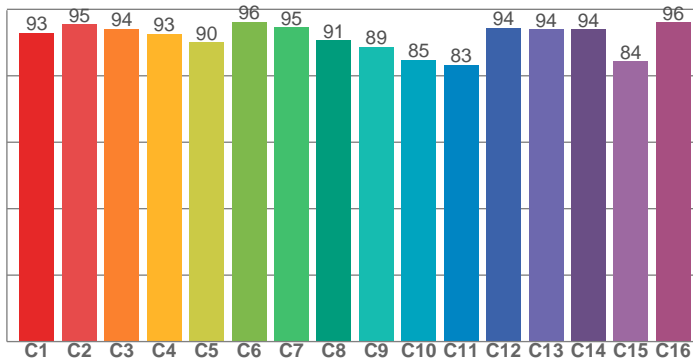
Cut off angle 2.5%: 16,8°

Spectra

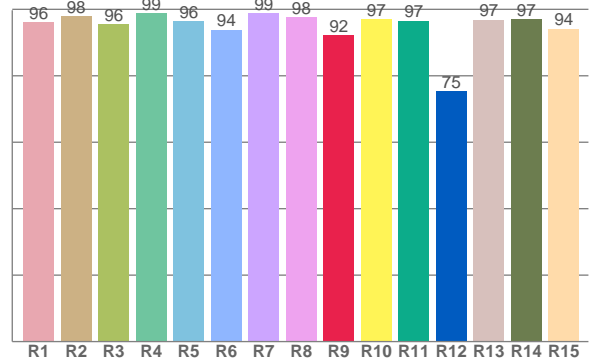




TM30: 91,4



CRI: 96,9 (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
96,1	97,9	95,5	98,8	96,4	93,8	98,8	97,6	92,3	97,0	96,6	75,3	96,9	97,1	94,2

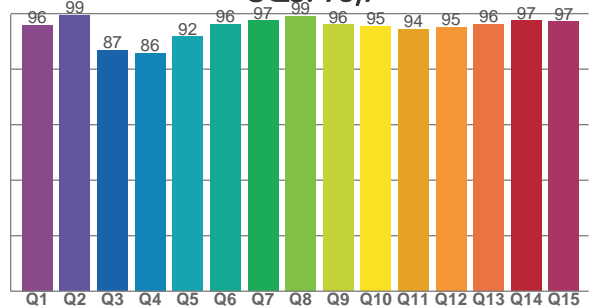
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
92,9	95,5	94,1	92,7	90,0	96,3	94,6	90,7	88,7	84,9	83,3	94,4	93,9	94,0	84,3	96,1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
95,9	99,4	86,8	85,8	91,7	96,2	97,5	99,2	96,1	95,4	94,5	95,2	96,2	97,4	97,2

CQS: 93,7



## COLOR PARAMETERS

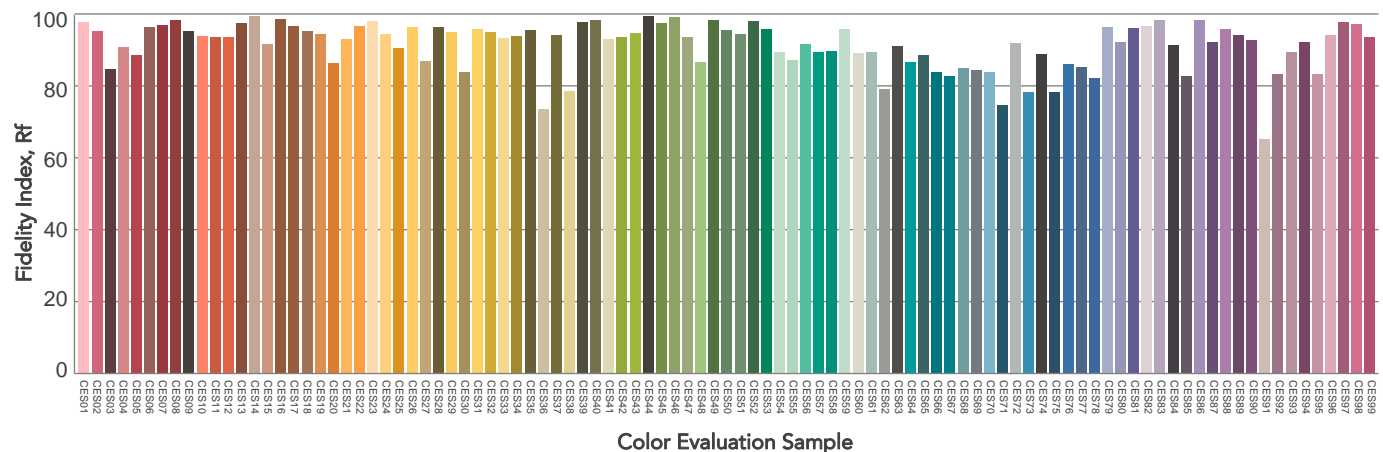
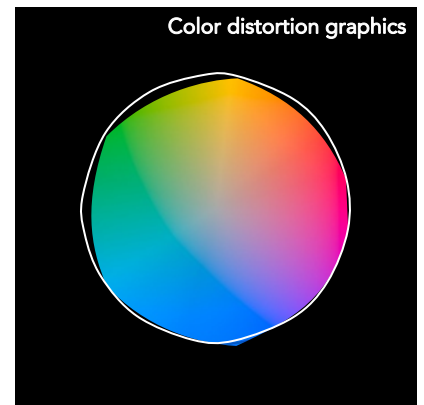
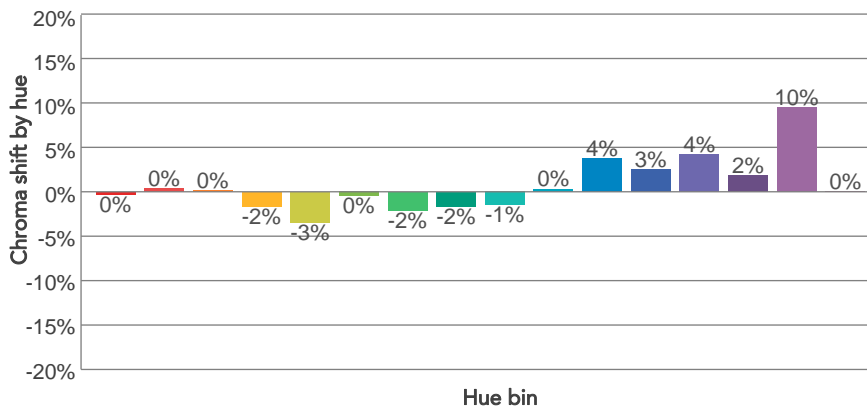
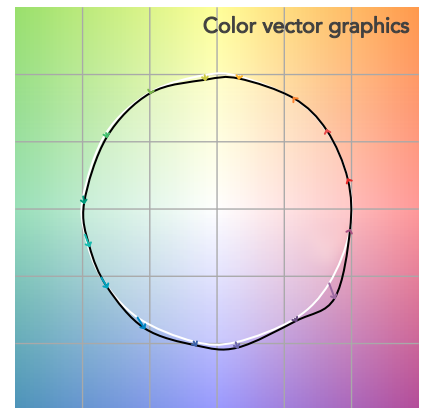
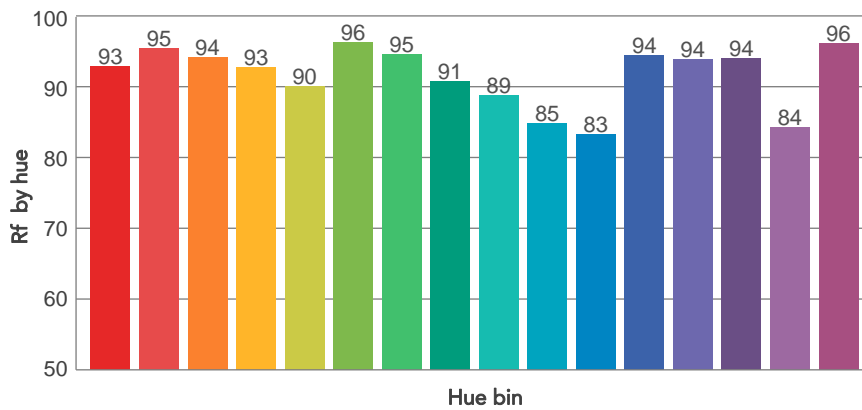
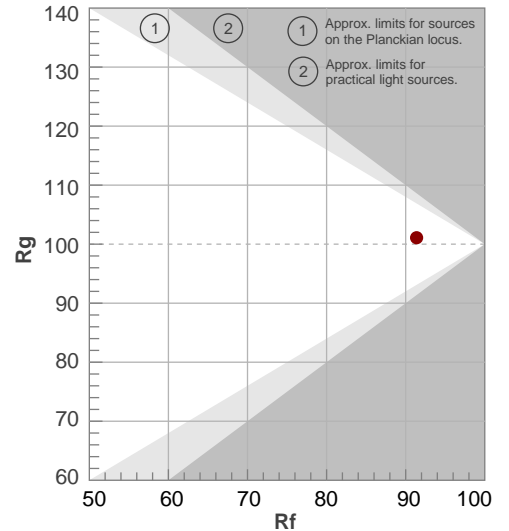
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	$\Delta uv$
5613 K	96,9	92,3	91,4	101,1	93,7	98	0,330	0,339	-0,0060

# TM30 DETAILS

**Rf 91,4**  
Fidelity index Rf

**Rg 101,1**  
Gammut index

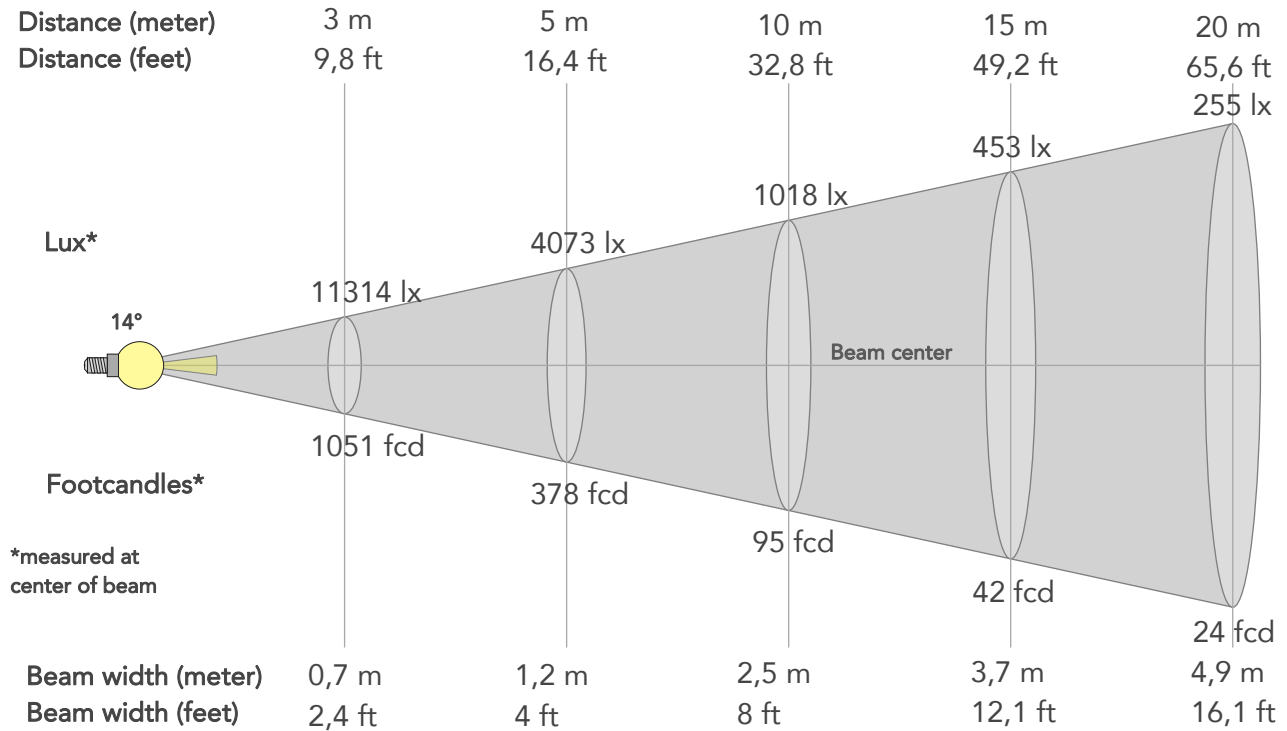
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	93	0%	1%
2	95	0%	1%
3	94	0%	1%
4	93	-2%	0%
5	90	-3%	0%
6	96	0%	0%
7	95	-2%	2%
8	91	-2%	5%
9	89	-1%	9%
10	85	0%	9%
11	83	4%	9%
12	94	3%	2%
13	94	4%	1%
14	94	2%	0%
15	84	10%	-7%
16	96	0%	1%



# BEAM DETAILS



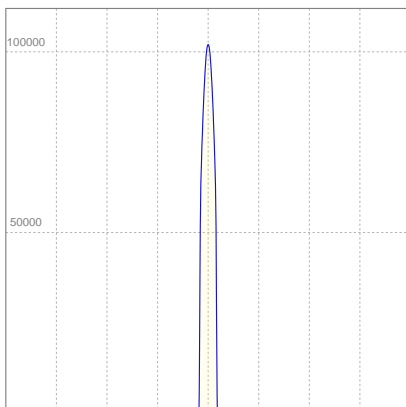
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
14°	15,6°	16,8°	100,0%	100,0%



## 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	101822lx	25456lx	11314lx	6364lx	4073lx	1810lx	1018lx	453lx	255lx	163lx	113lx	64lx	41lx
Footcand.	9460fcd	2365fcd	1051fcd	591fcd	378fcd	168fcd	95fcd	42fcd	24fcd	15fcd	11fcd	6fcd	4fcd
Beam wid.	0,2m	0,5m	0,7m	1m	1,2m	1,8m	2,5m	3,7m	4,9m	6,1m	7,4m	9,8m	12,3m
Beam wid.	0,8ft	1,6ft	2,4ft	3,2ft	4ft	6ft	8ft	12,1ft	16,1ft	20,1ft	24,1ft	32,2ft	40,2ft

## LINEAR DISTRIBUTION DIAGRAM

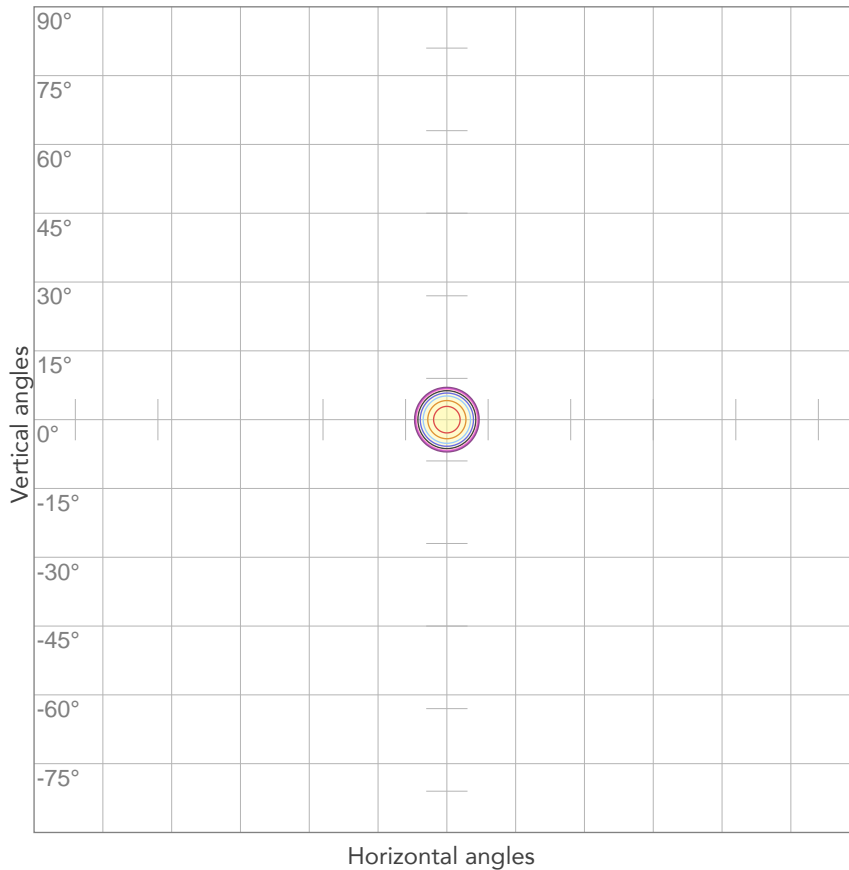


## ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
227V	0,620A	130,7W	31lm/W

Power Fc
0,97

## ISO CANDELA DIAGRAM



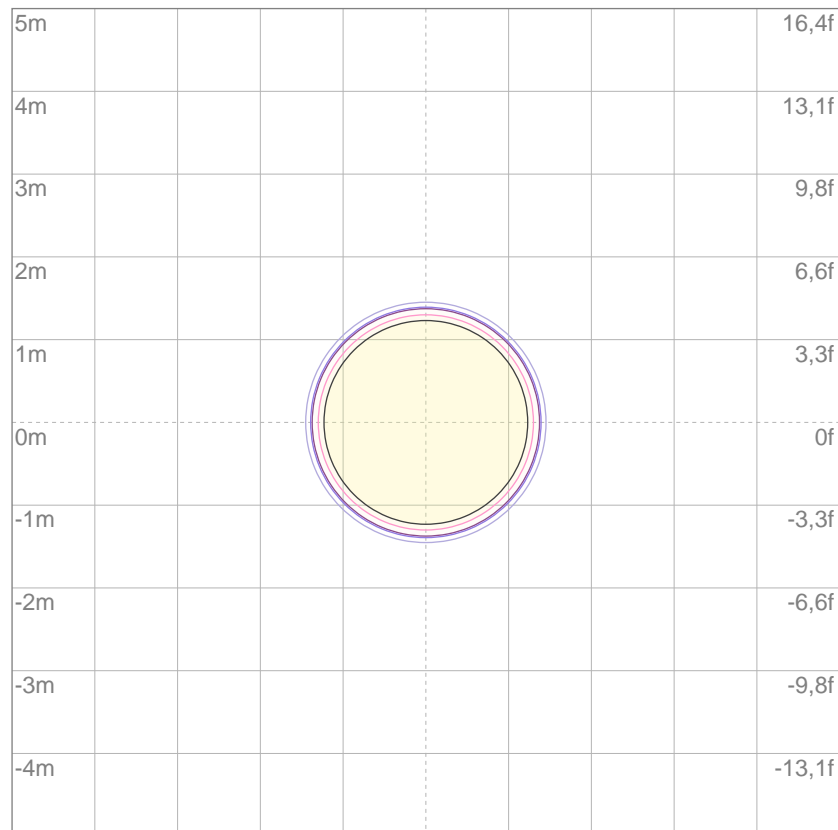
10%	10182 cd
20%	20364 cd
30%	30547 cd
40%	40729 cd
50%	50911 cd
60%	61093 cd
70%	71275 cd
80%	81458 cd

### Conditions:

Number of c-planes: 2

Candela at center: 101822 cd

## ISO LUX DIAGRAM



3%	30,5 lx
5%	50,9 lx
10%	102 lx
30%	305 lx
50%	509 lx

### Conditions:

Number of c-planes: 2

Lux at center: 1018 lx

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



Total lumen output:

3407 lm

Peak candela output:

85344 cd

Light quality:

CRI: 96,6

Color temperature:

2712 K

PRODUCT NAME:

ECLFWWW

MEASURAMENT CONDITIONS:

Beam angle:

PRL14

Target:

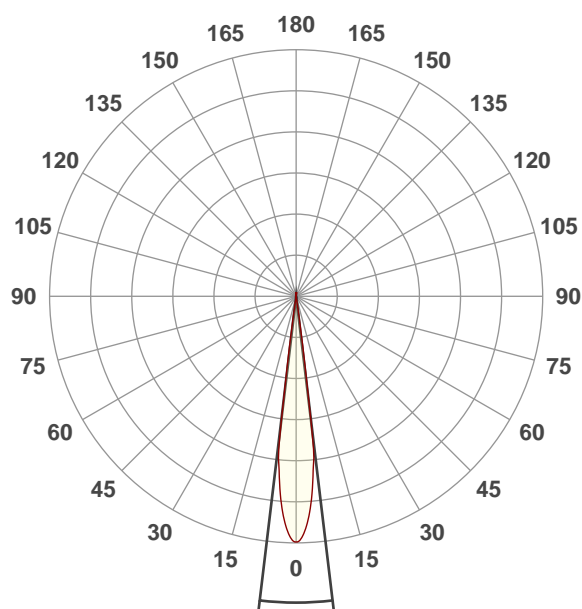
Warm White

Operator:

Paolo Carvone

Date and time:

11/06/2021 13:10:59

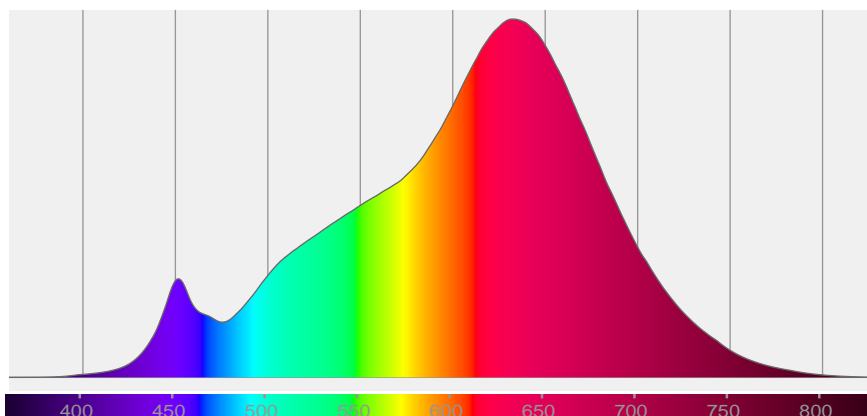


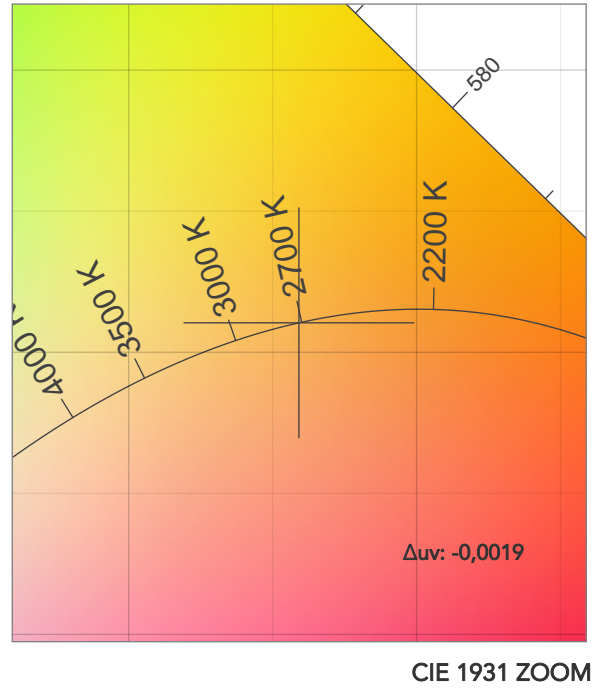
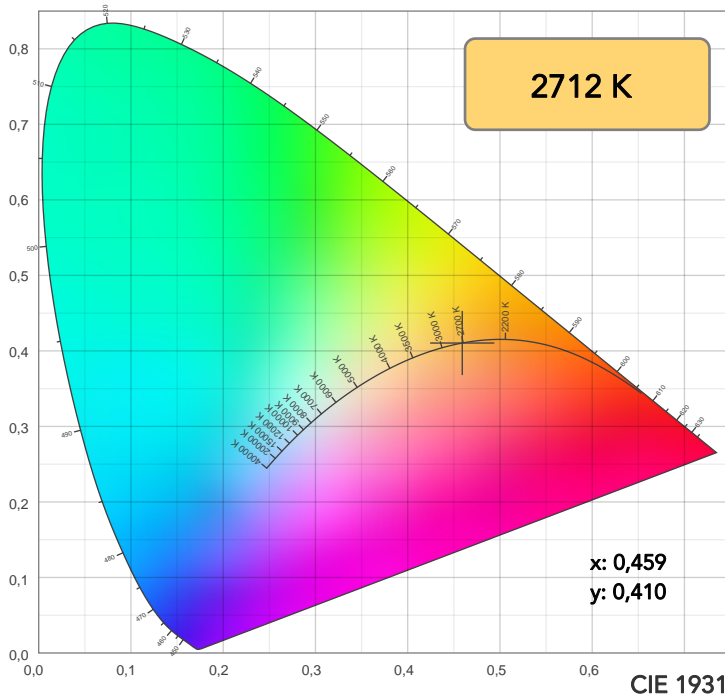
Beam angle 50%: 13,7°

Field angle 10%: 16,2°

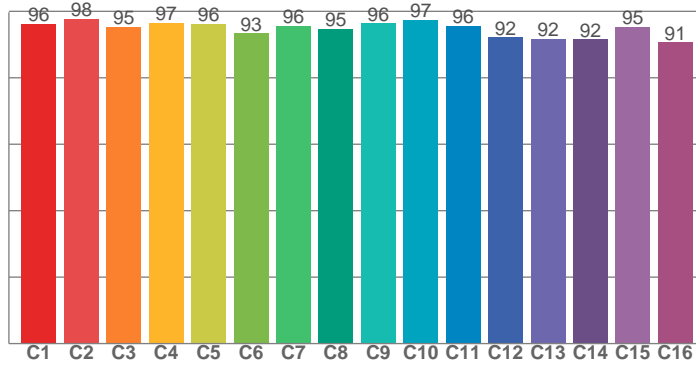
Cut off angle 2.5%: 16,9°

Spectra

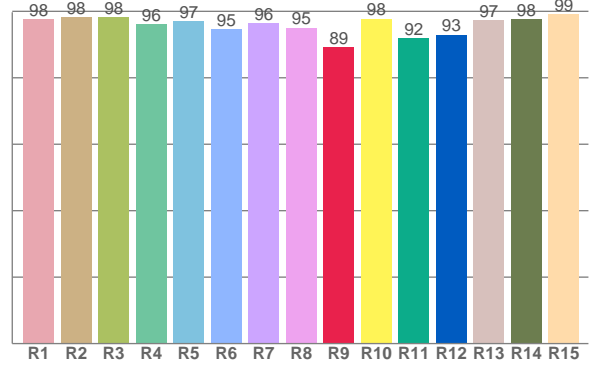




TM30: 95,1



CRI: 96,6 (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
97,6	98,2	98,1	96,0	97,1	94,7	96,4	95,1	89,3	97,8	92,0	93,0	97,2	97,7	99,1

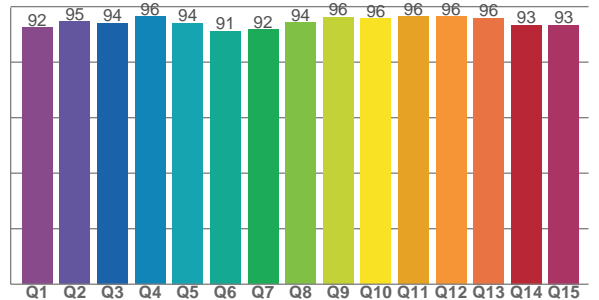
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
96,2	97,7	95,4	96,5	96,2	93,4	95,6	94,6	96,4	97,5	95,5	92,2	91,7	91,5	95,4	90,6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
92,5	94,6	94,1	96,5	94,1	91,3	91,8	94,3	96,2	95,7	96,4	96,4	95,9	93,4	93,5

CQS: 93,9



## COLOR PARAMETERS

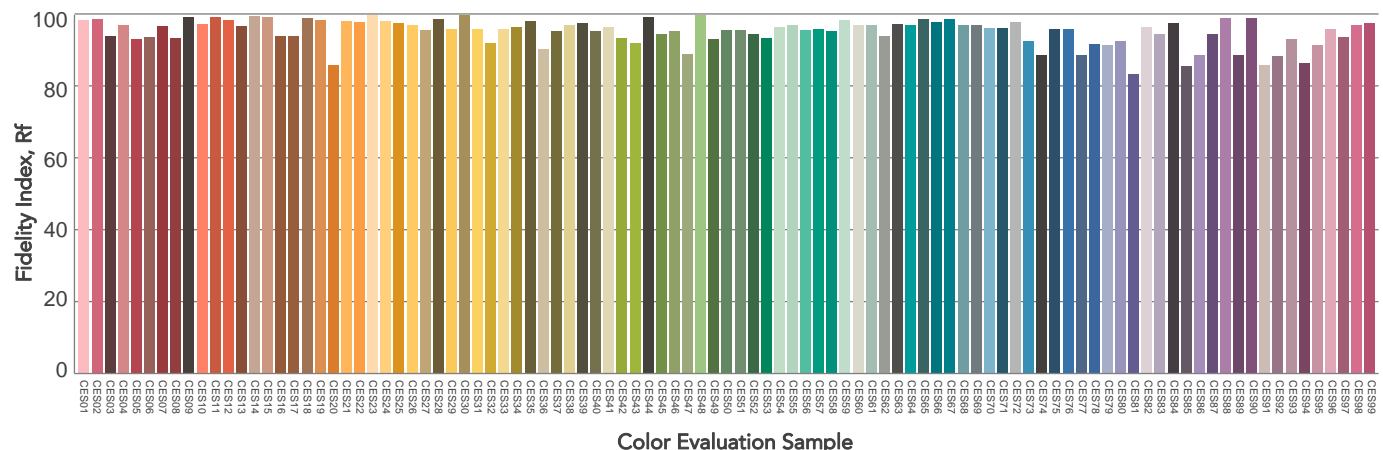
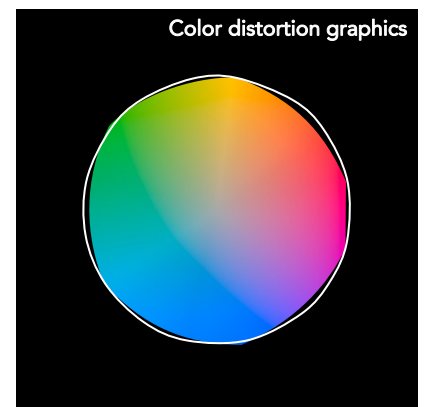
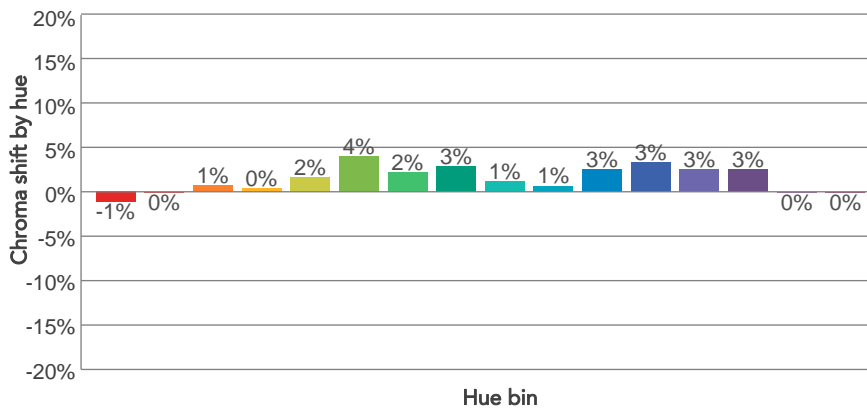
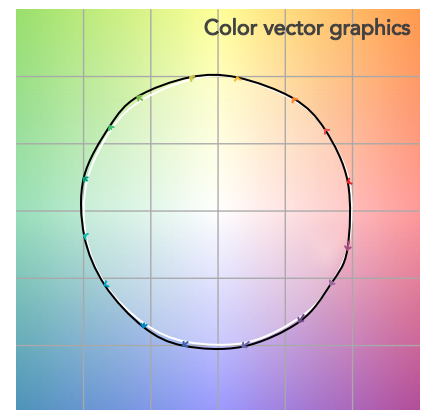
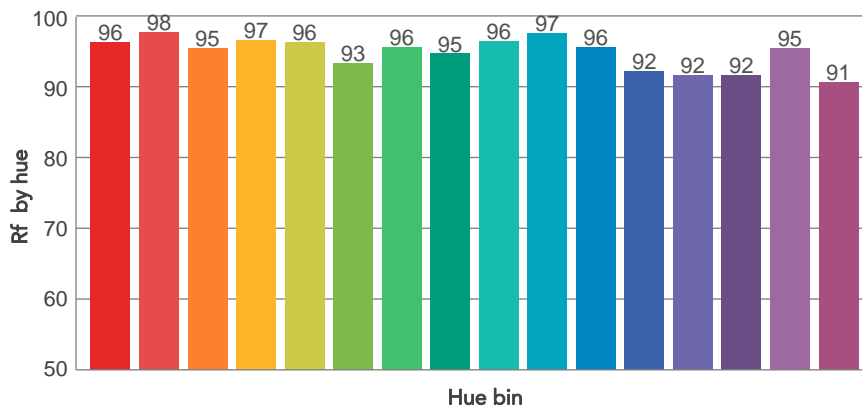
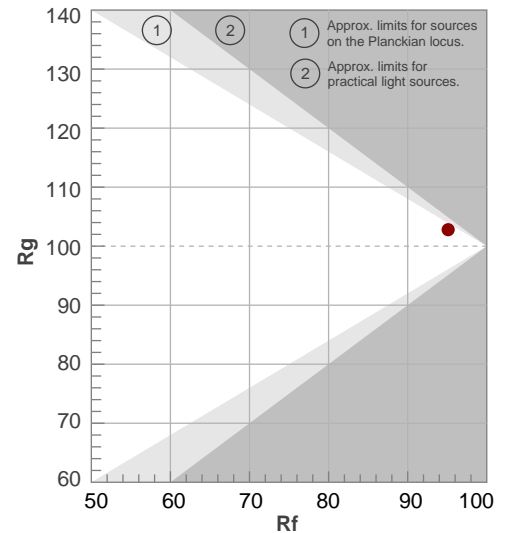
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
2712 K	96,6	89,3	95,1	102,8	93,9	98	0,459	0,410	-0,0019

# TM30 DETAILS

**Rf 95,1**  
Fidelity index Rf

**Rg 102,8**  
Gammut index

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	96	-1%	0%
2	98	0%	1%
3	95	1%	2%
4	97	0%	0%
5	96	2%	2%
6	93	4%	2%
7	96	2%	-1%
8	95	3%	-2%
9	96	1%	-1%
10	97	1%	0%
11	96	3%	1%
12	92	3%	-3%
13	92	3%	-5%
14	92	3%	-6%
15	95	0%	-2%
16	91	0%	-6%

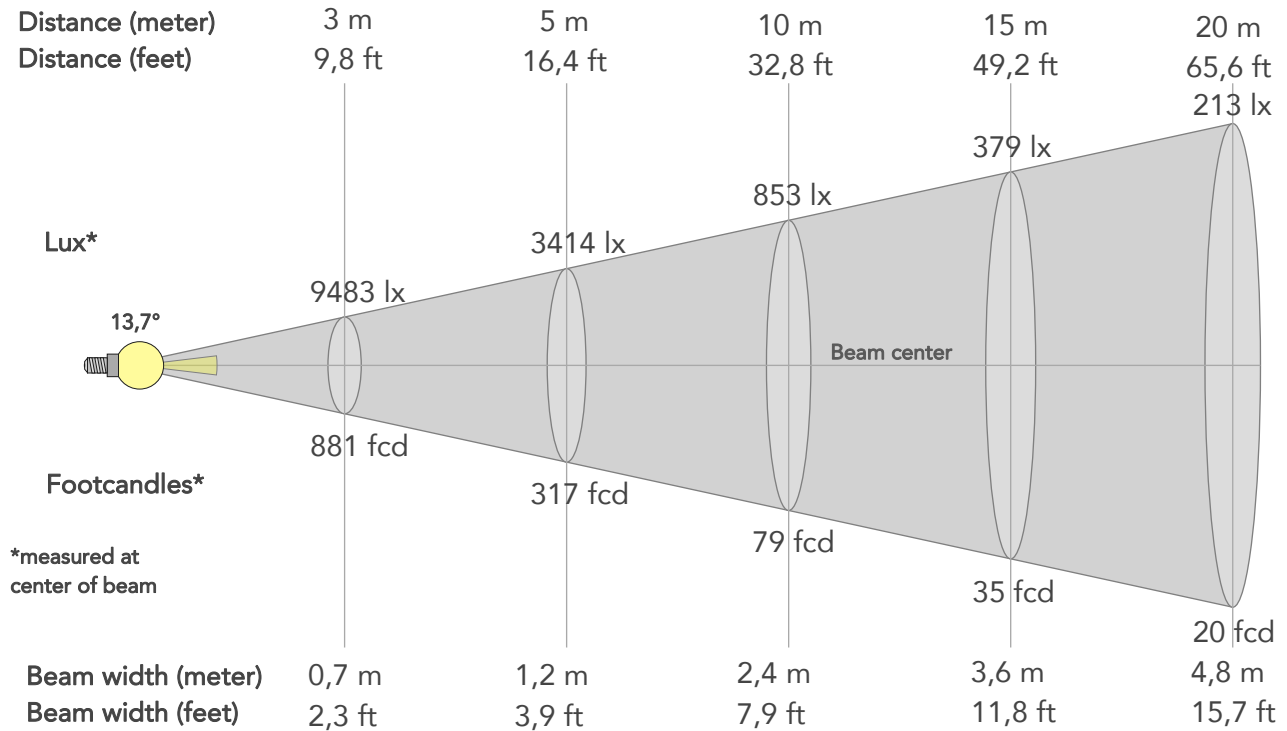




## BEAM DETAILS



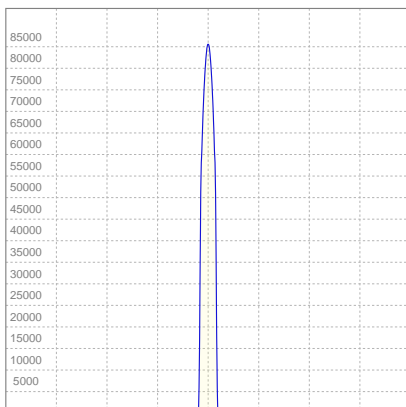
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
13,7°	16,2°	16,9°	100,0%	100,0%



### 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	85344lx	21336lx	9483lx	5334lx	3414lx	1517lx	853lx	379lx	213lx	137lx	95lx	53lx	34lx
Footcand.	7929fcd	1982fcd	881fcd	496fcd	317fcd	141fcd	79fcd	35fcd	20fcd	13fcd	9fcd	5fcd	3fcd
Beam wid.	0,2m	0,5m	0,7m	1m	1,2m	1,8m	2,4m	3,6m	4,8m	6m	7,2m	9,6m	12m
Beam wid.	0,8ft	1,6ft	2,3ft	3,1ft	3,9ft	5,9ft	7,9ft	11,8ft	15,7ft	19,6ft	23,6ft	31,4ft	39,3ft

### LINEAR DISTRIBUTION DIAGRAM

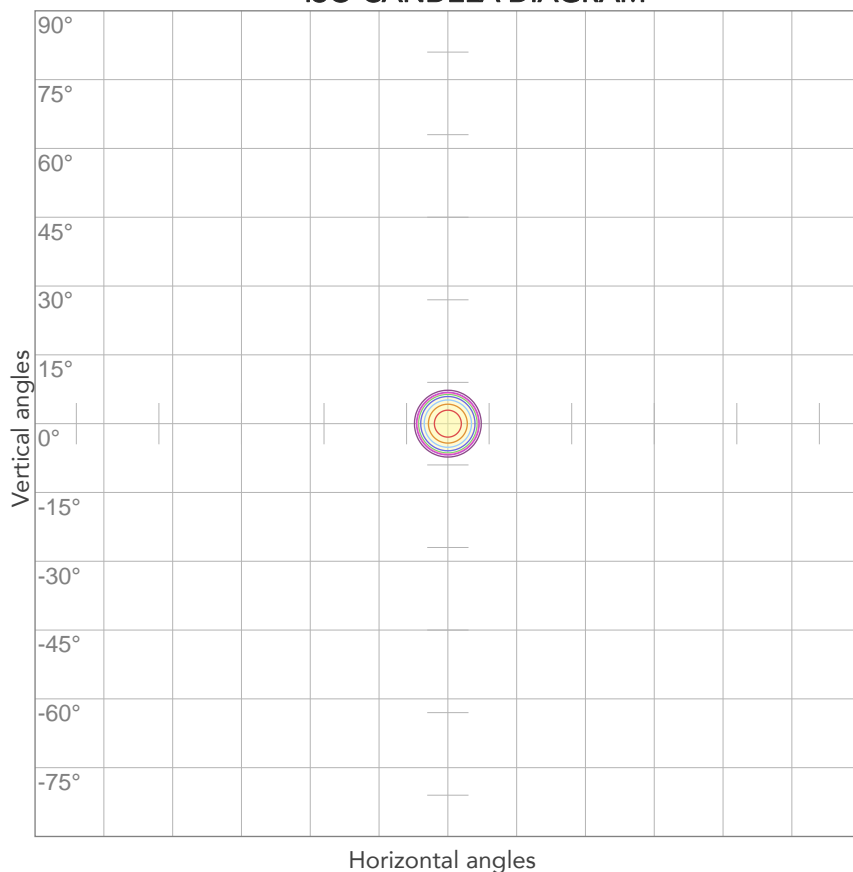


### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,631A	132,8W	26lm/W

Power Fc
0,97

## ISO CANDELA DIAGRAM



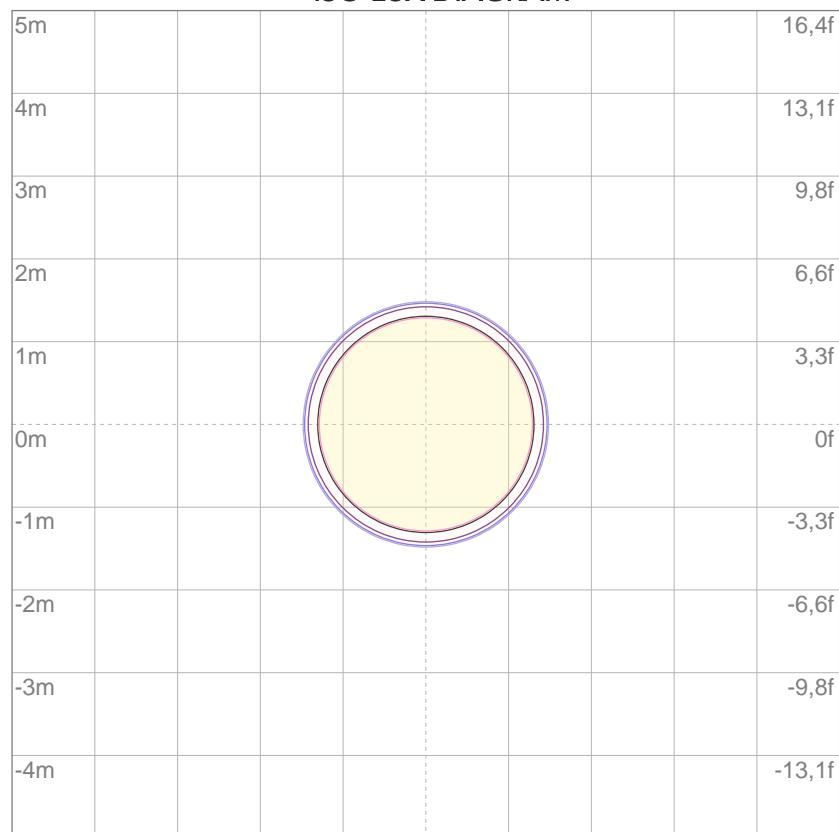
10%	8534 cd
20%	17069 cd
30%	25603 cd
40%	34138 cd
50%	42672 cd
60%	51207 cd
70%	59741 cd
80%	68275 cd

### Conditions:

Number of c-planes: 2

Candela at center: 85344 cd

## ISO LUX DIAGRAM



3%	25,6 lx
5%	42,7 lx
10%	85,3 lx
30%	256 lx
50%	427 lx

### Conditions:

Number of c-planes: 2

Lux at center: 853 lx

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