

# Photometric Test Report



## ECLFWVW PRL19

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:

7634 lm

Peak candela output:

102481 cd

Light quality:

CRI: 94,7

Color temperature:

3948 K

PRODUCT NAME:

ECLFWWW

MEASURAMENT CONDITIONS:

Beam angle:

PRL19

Target:

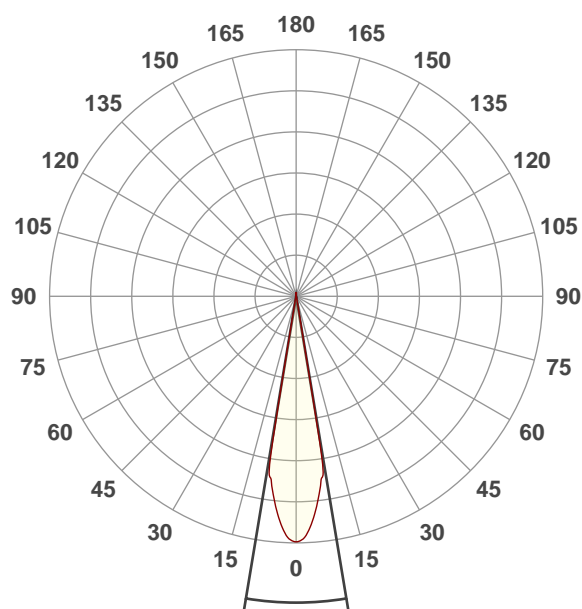
Full On

Operator:

Paolo Carvone

Date and time:

11/06/2021 13:01:52

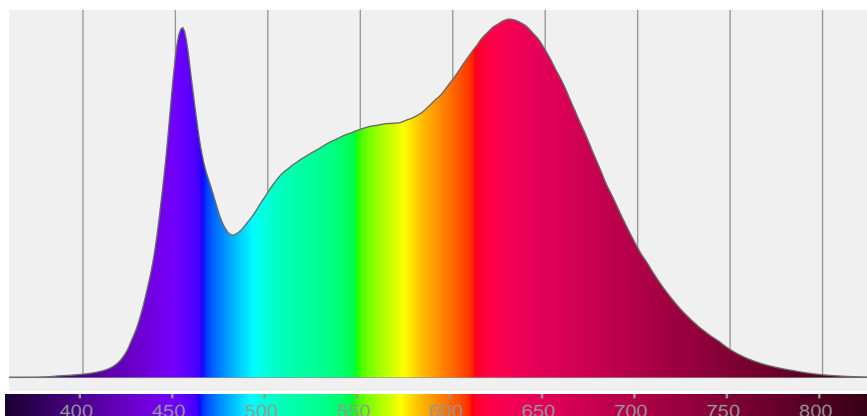


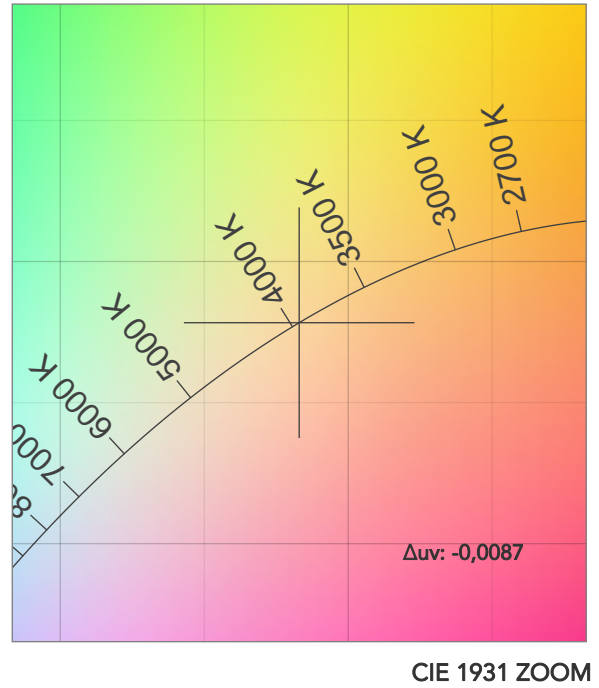
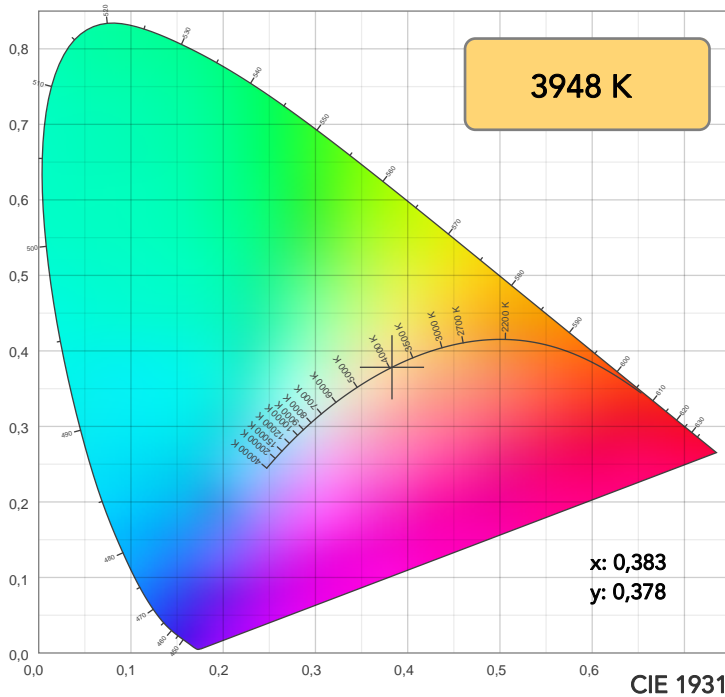
Beam angle 50%: 18,9°

Field angle 10%: 20,7°

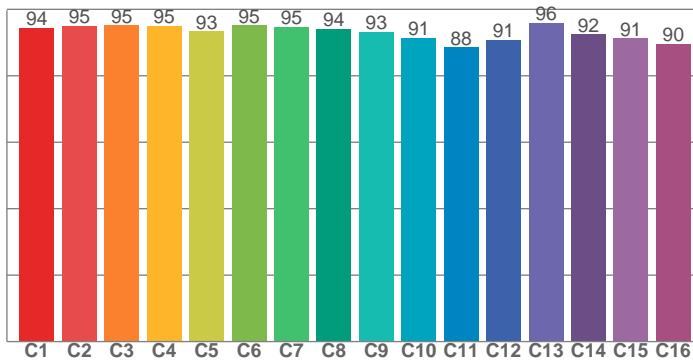
Cut off angle 2.5%: 22,2°

Spectra

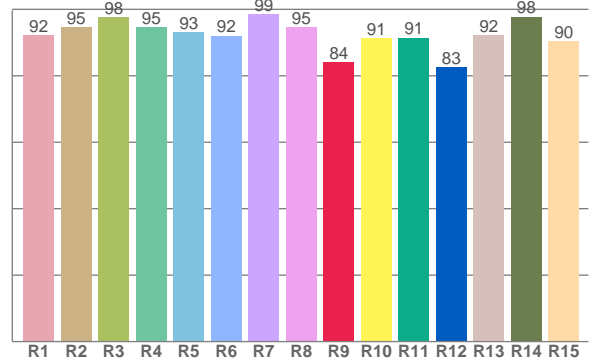




TM30: 93,1



CRI: 94,7 (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
92,3	94,7	97,7	94,7	93,1	92,0	98,5	94,5	84,0	91,4	91,5	82,5	92,3	97,8	90,4

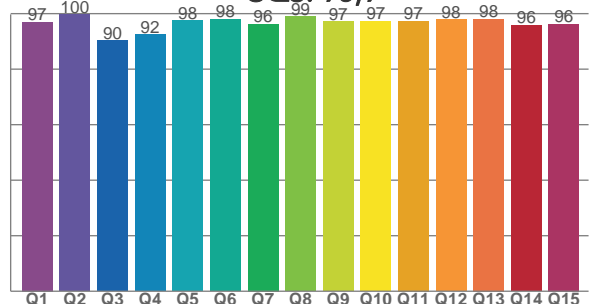
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
94,5	95,1	95,1	95,0	93,3	95,1	94,7	94,2	93,2	91,4	88,5	90,8	95,9	92,5	91,3	89,6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
97,0	99,7	90,4	92,4	97,6	97,9	96,2	99,0	97,2	97,2	97,4	97,9	98,0	95,8	96,3

CQS: 95,9



## COLOR PARAMETERS

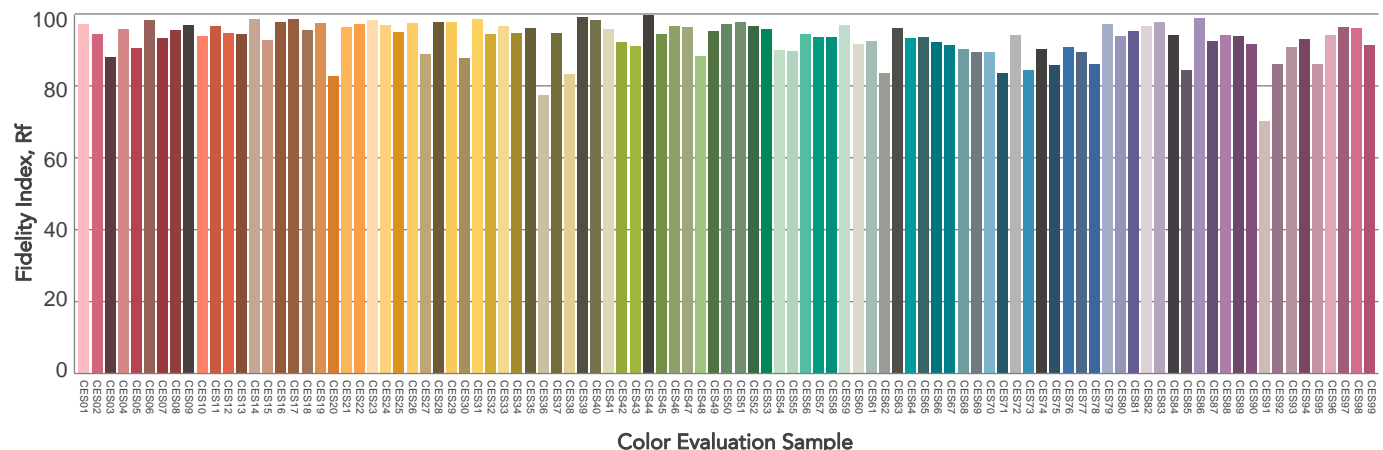
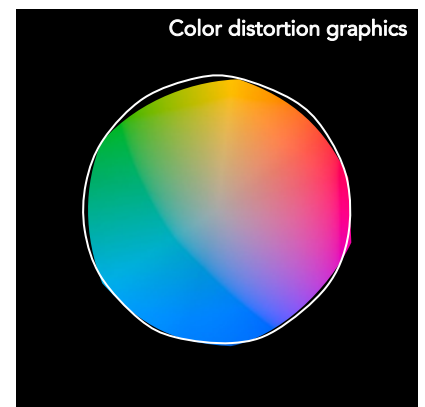
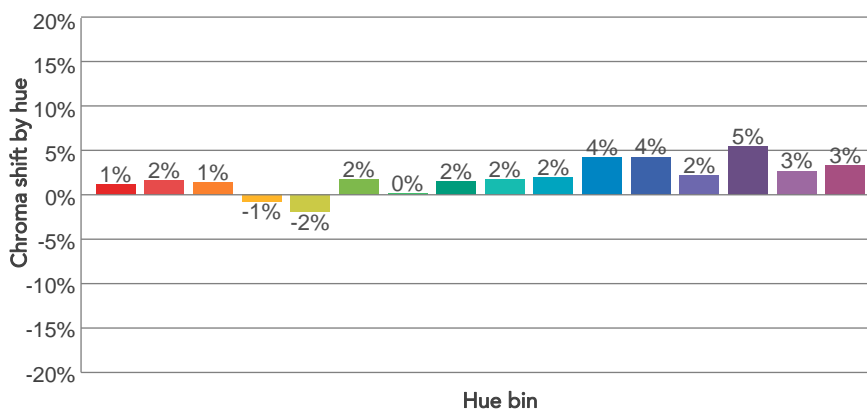
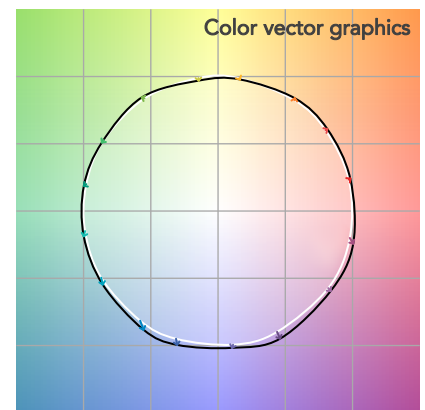
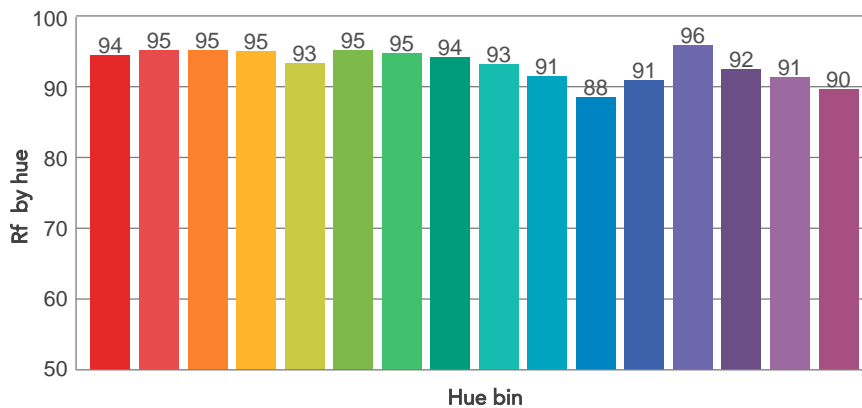
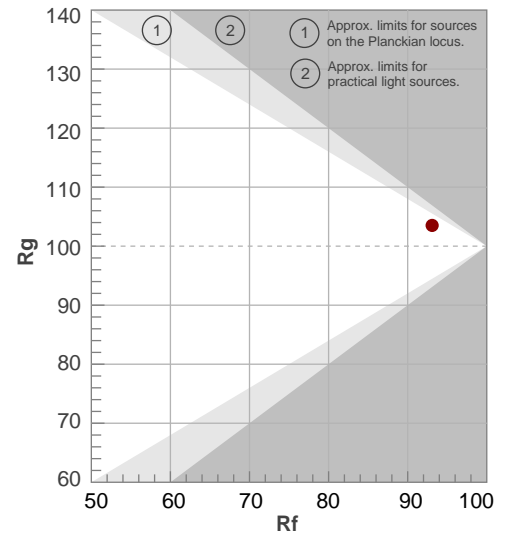
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
3948 K	94,7	84,0	93,1	103,5	95,9	98	0,383	0,378	-0,0087

# TM30 DETAILS

**Rf 93,1**  
Fidelity index Rf

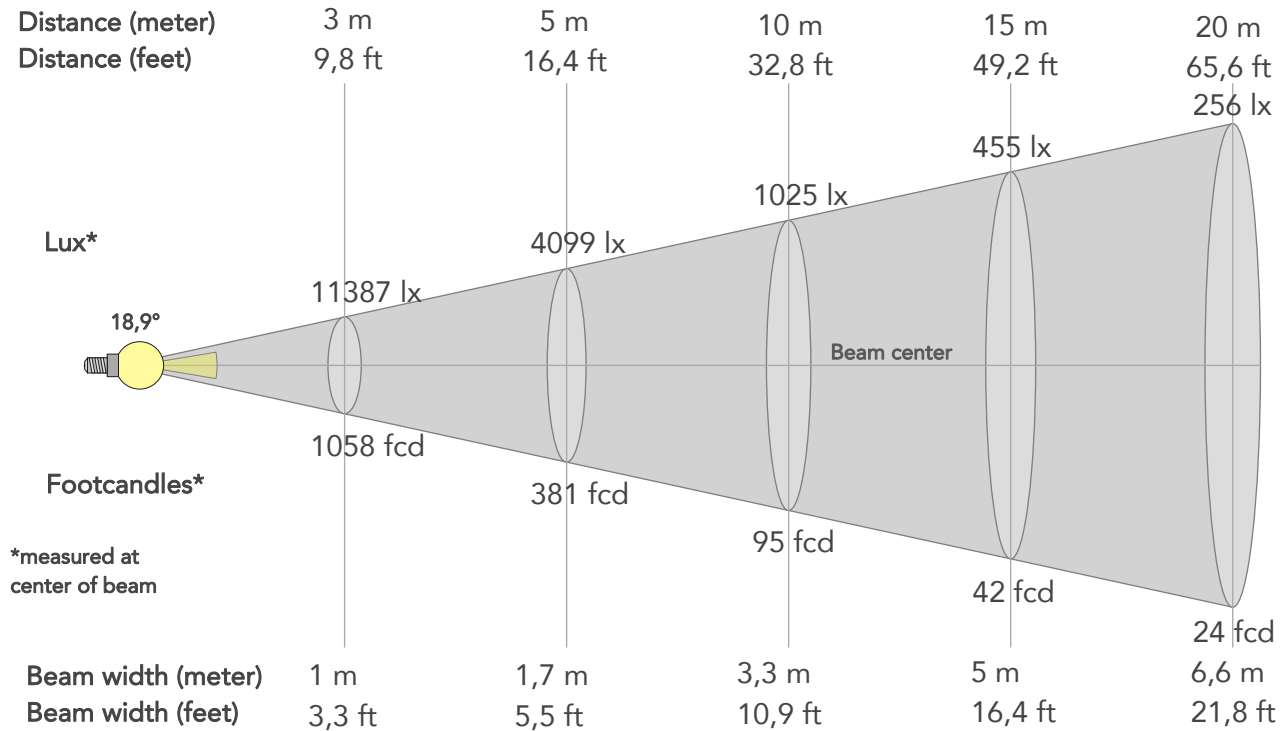
**Rg 103,5**  
Gammut index

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	94	1%	1%
2	95	2%	0%
3	95	1%	1%
4	95	-1%	-1%
5	93	-2%	0%
6	95	2%	1%
7	95	0%	2%
8	94	2%	2%
9	93	2%	4%
10	91	2%	5%
11	88	4%	6%
12	91	4%	2%
13	96	2%	-1%
14	92	5%	-1%
15	91	3%	-1%
16	90	3%	-4%





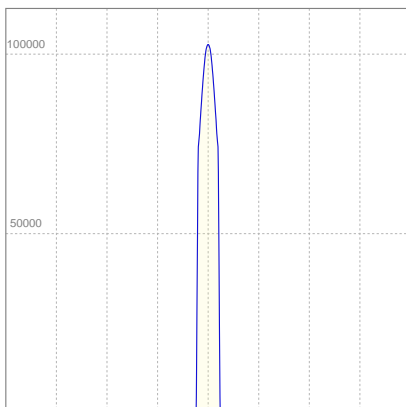
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
18,9°	20,7°	22,2°	100,0%	100,0%



## 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	102481lx	25620lx	11387lx	6405lx	4099lx	1822lx	1025lx	455lx	256lx	164lx	114lx	64lx	41lx
Footcand.	9521fcd	2380fcd	1058fcd	595fcd	381fcd	169fcd	95fcd	42fcd	24fcd	15fcd	11fcd	6fcd	4fcd
Beam wid.	0,3m	0,7m	1m	1,3m	1,7m	2,5m	3,3m	5m	6,6m	8,3m	10m	13,3m	16,6m
Beam wid.	1,1ft	2,2ft	3,3ft	4,4ft	5,5ft	8,2ft	10,9ft	16,4ft	21,8ft	27,3ft	32,7ft	43,6ft	54,5ft

## LINEAR DISTRIBUTION DIAGRAM

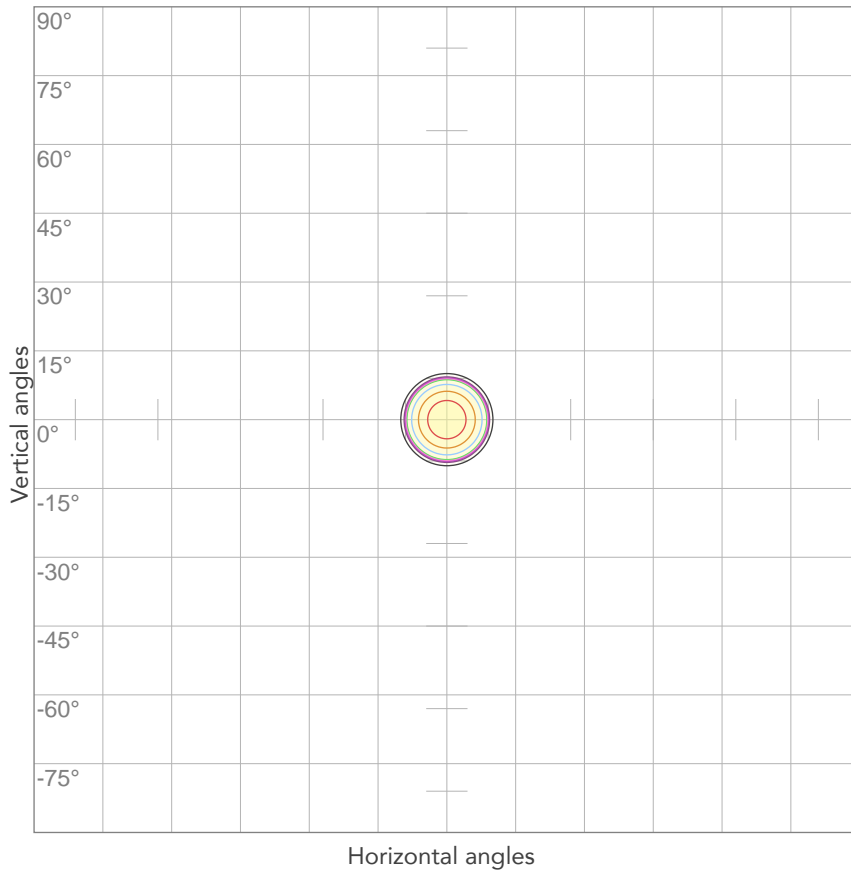


## ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
227V	1,19A	260W	29lm/W

Power Fc
<b>0,97</b>

## ISO CANDELA DIAGRAM



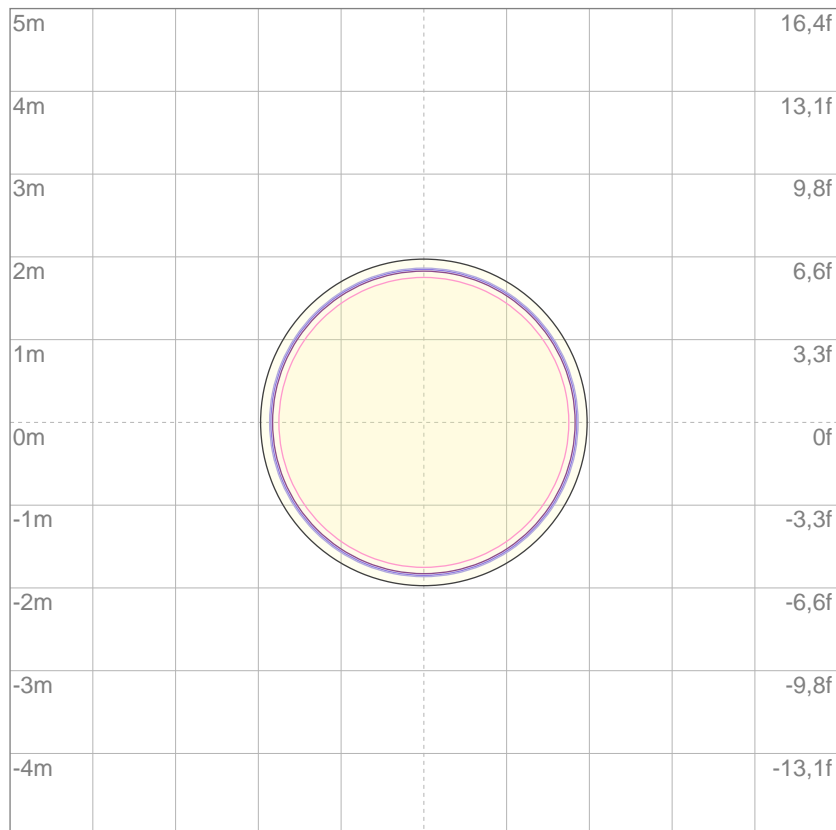
10%	10248 cd
20%	20496 cd
30%	30744 cd
40%	40992 cd
50%	51240 cd
60%	61488 cd
70%	71736 cd
80%	81985 cd

### Conditions:

Number of c-planes: 2

Candela at center: 102481 cd

## ISO LUX DIAGRAM



3%	30,7 lx
5%	51,2 lx
10%	102 lx
30%	307 lx
50%	512 lx

### Conditions:

Number of c-planes: 2

Lux at center: 1025 lx

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



Total lumen output:

4251 lm

Peak candela output:

56963 cd

Light quality:

CRI: 96,8

Color temperature:

5621 K

PRODUCT NAME:

ECLFWWW

MEASURAMENT CONDITIONS:

Beam angle:

PRL19

Target:

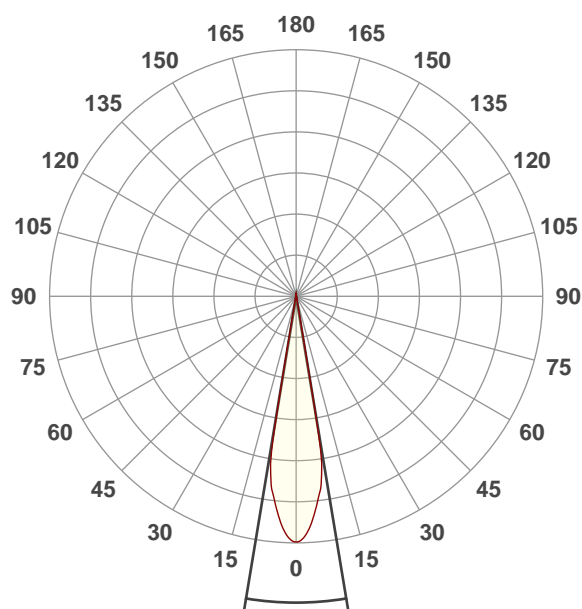
Cold White

Operator:

Paolo Carvone

Date and time:

11/06/2021 13:06:08

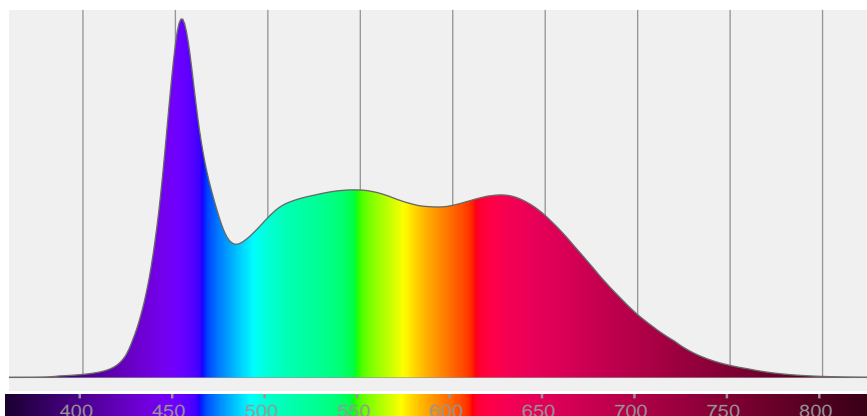


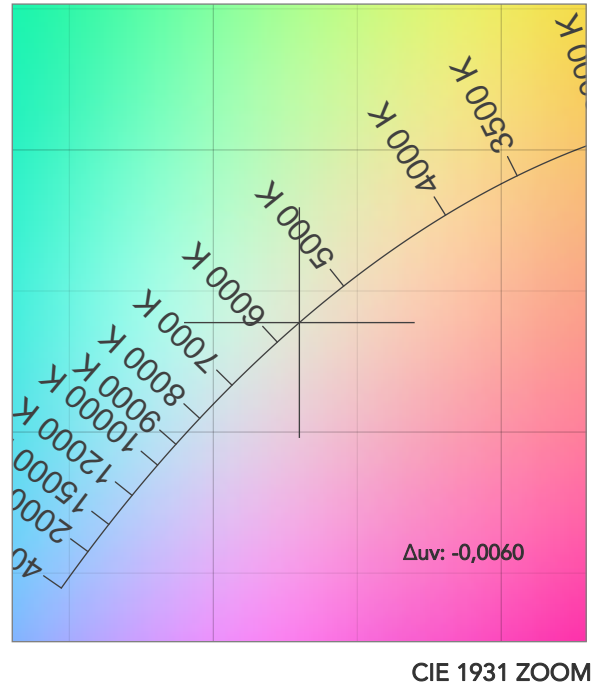
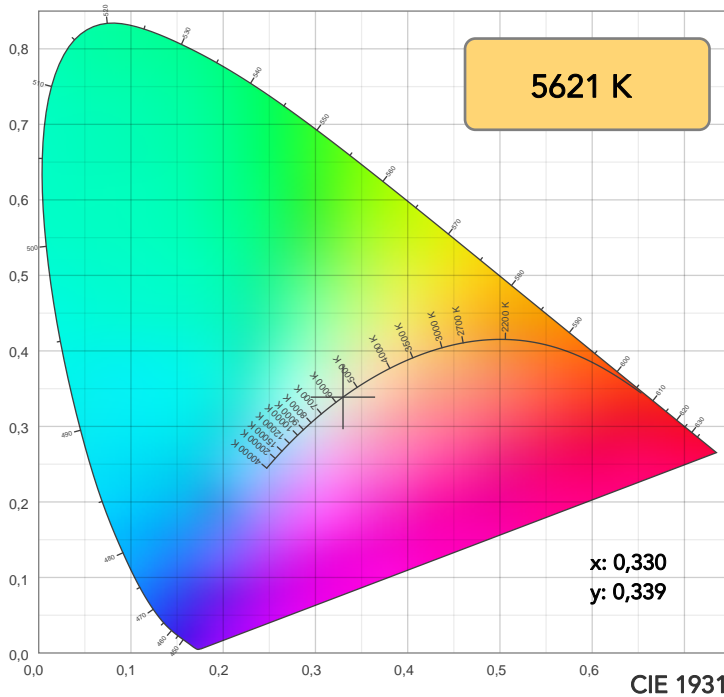
Beam angle 50%: 18,8°

Field angle 10%: 20,9°

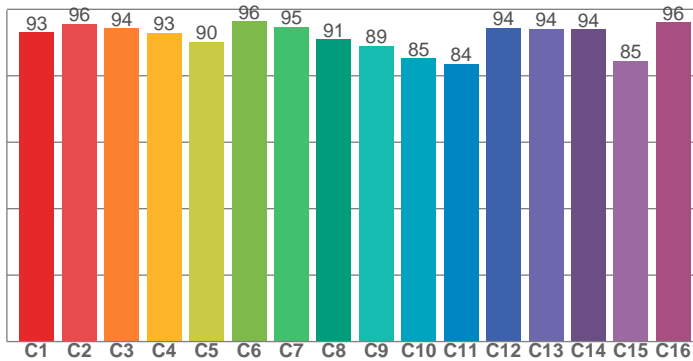
Cut off angle 2.5%: 22,9°

Spectra

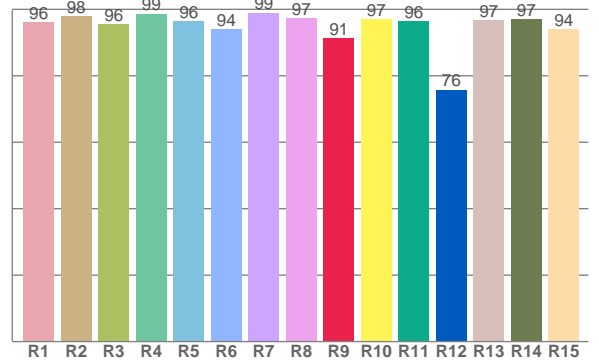




TM30: 91,6



CRI: 96,8 (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
96,0	97,9	95,5	98,7	96,4	94,0	99,0	97,3	91,2	97,1	96,3	75,8	96,7	97,0	94,0

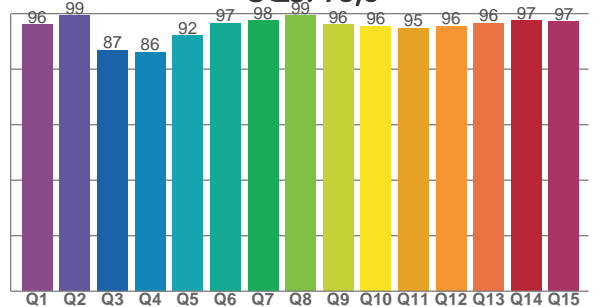
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
93,0	95,6	94,2	92,9	90,2	96,3	94,8	91,0	89,0	85,3	83,6	94,4	94,1	94,0	84,6	96,1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
96,1	99,4	87,0	86,2	92,1	96,6	97,5	99,3	96,0	95,5	94,7	95,5	96,5	97,5	97,2

CQS: 93,8



## COLOR PARAMETERS

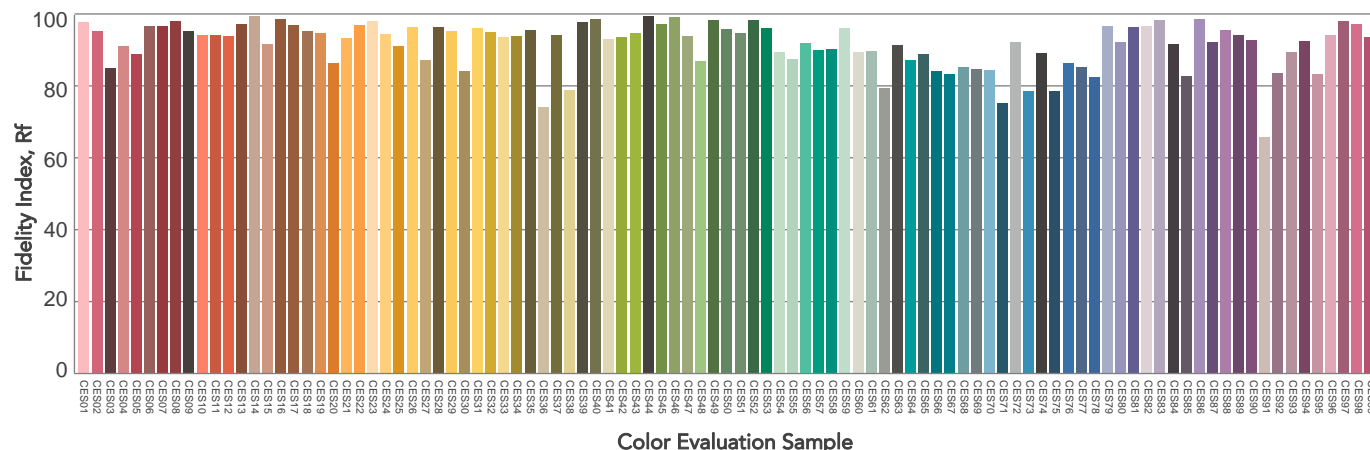
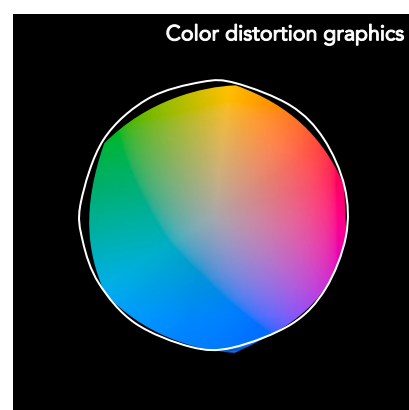
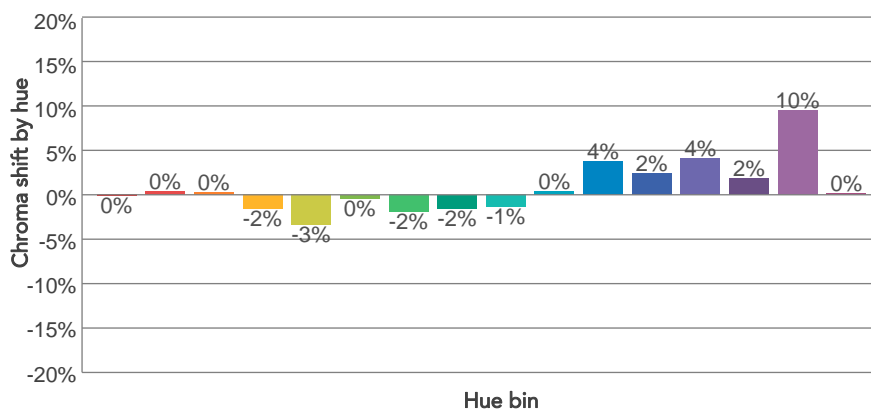
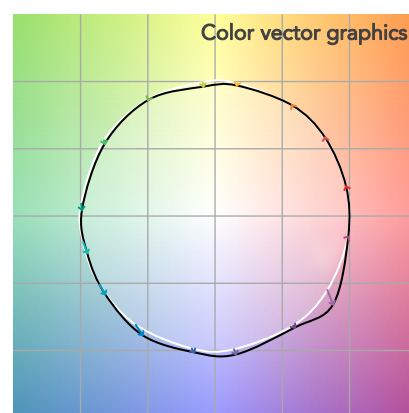
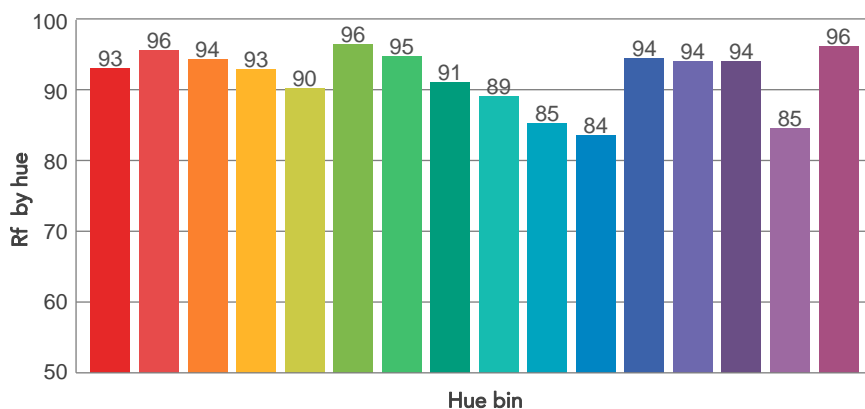
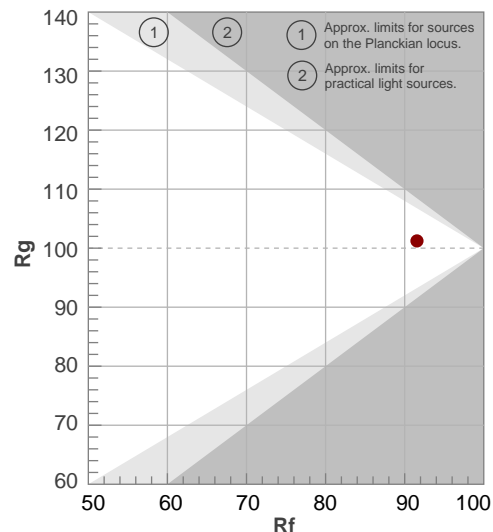
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	$\Delta uv$
5621 K	96,8	91,2	91,6	101,2	93,8	98	0,330	0,339	-0,0060

# TM30 DETAILS

**Rf 91,6**  
Fidelity index Rf

**Rg 101,2**  
Gammut index

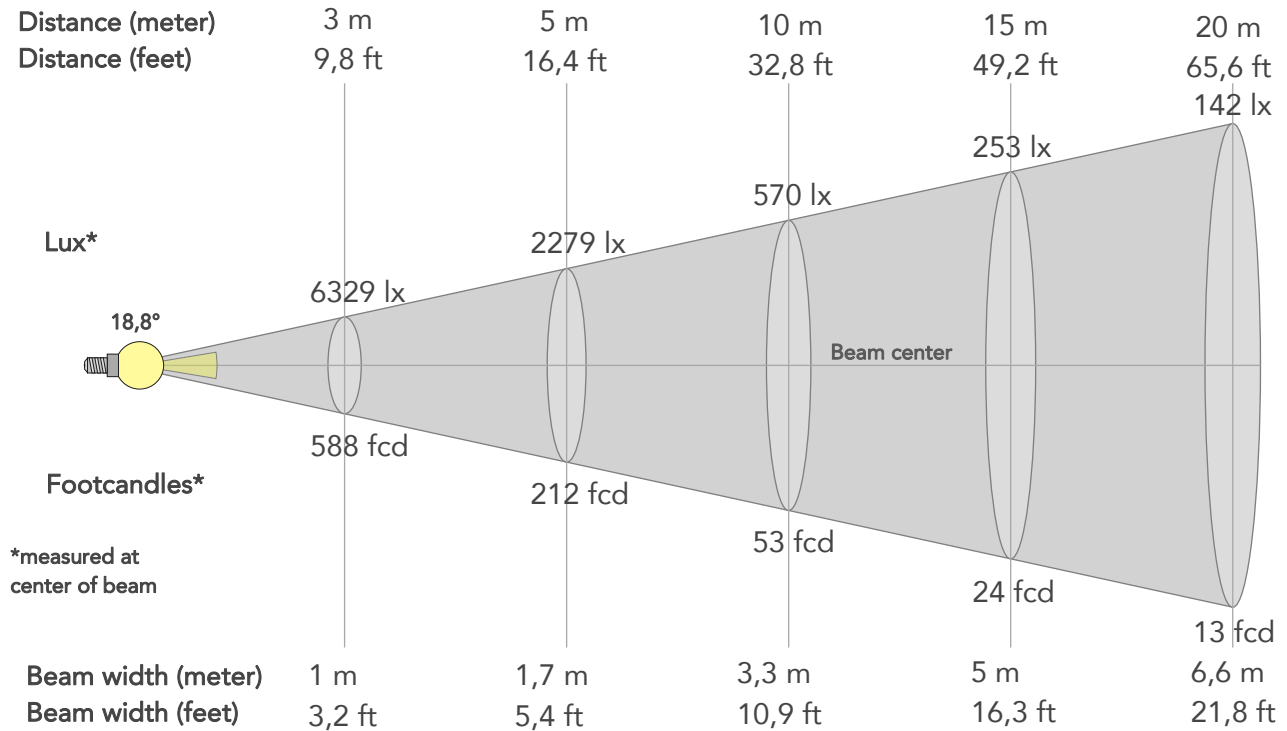
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	93	0%	1%
2	96	0%	1%
3	94	0%	1%
4	93	-2%	0%
5	90	-3%	0%
6	96	0%	1%
7	95	-2%	2%
8	91	-2%	4%
9	89	-1%	9%
10	85	0%	8%
11	84	4%	9%
12	94	2%	2%
13	94	4%	1%
14	94	2%	0%
15	85	10%	-7%
16	96	0%	1%



## BEAM DETAILS



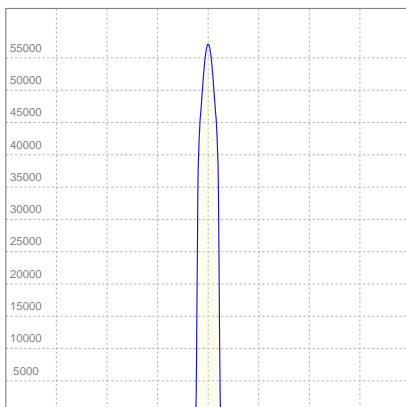
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
18,8°	20,9°	22,9°	100,0%	100,0%



### 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	56963lx	14241lx	6329lx	3560lx	2279lx	1013lx	570lx	253lx	142lx	91lx	63lx	36lx	23lx
Footcand.	5292fcd	1323fcd	588fcd	331fcd	212fcd	94fcd	53fcd	24fcd	13fcd	8fcd	6fcd	3fcd	2fcd
Beam wid.	0,3m	0,7m	1m	1,3m	1,7m	2,5m	3,3m	5m	6,6m	8,3m	9,9m	13,3m	16,6m
Beam wid.	1,1ft	2,2ft	3,2ft	4,3ft	5,4ft	8,2ft	10,9ft	16,3ft	21,8ft	27,2ft	32,6ft	43,5ft	54,4ft

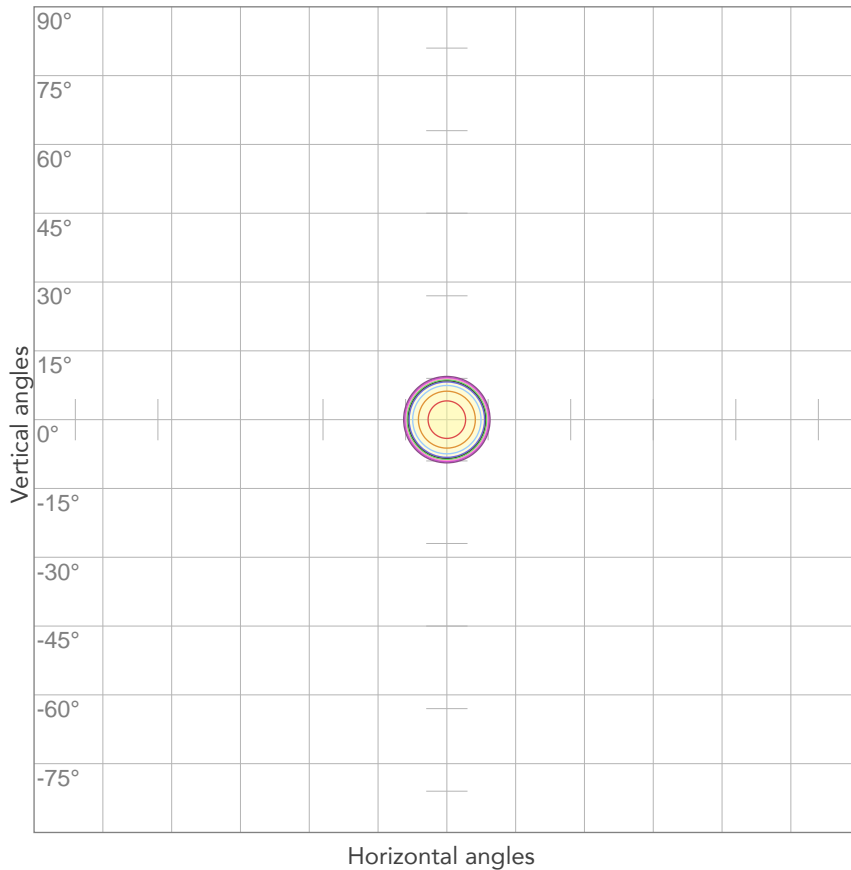
### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
228V	0,618A	130,7W	33lm/W
Power Fc			
0,97			

## ISO CANDELA DIAGRAM



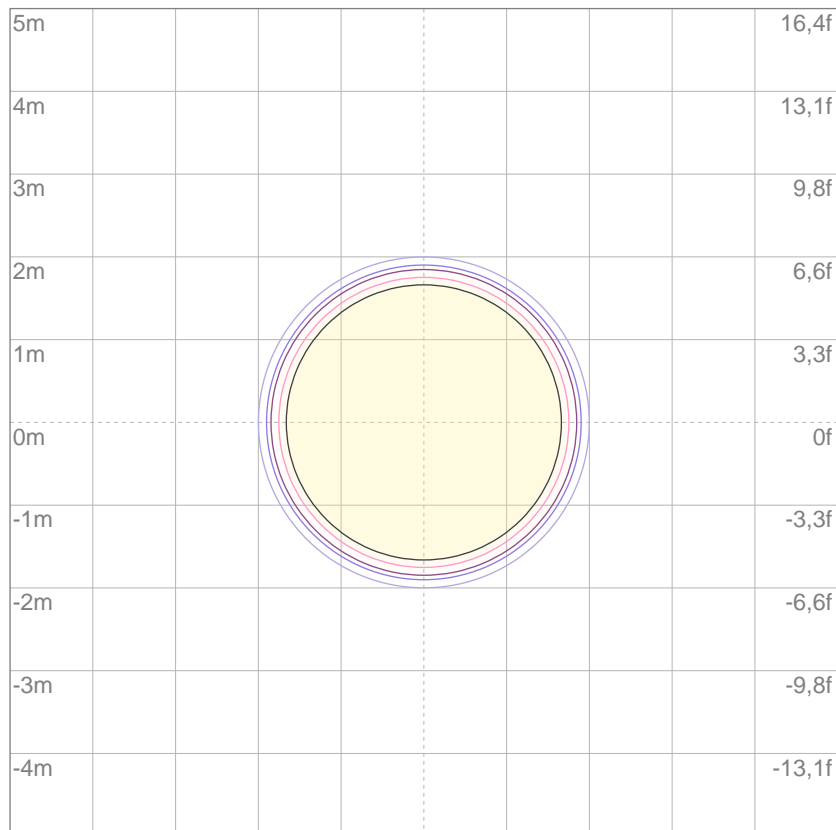
10%	5696 cd
20%	11393 cd
30%	17089 cd
40%	22785 cd
50%	28481 cd
60%	34178 cd
70%	39874 cd
80%	45570 cd

### Conditions:

Number of c-planes: 2

Candela at center: 56963 cd

## ISO LUX DIAGRAM



3%	17,1 lx
5%	28,5 lx
10%	57,0 lx
30%	171 lx
50%	285 lx

### Conditions:

Number of c-planes: 2

Lux at center: 570 lx

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



Total lumen output:

3550 lm

Peak candela output:

47308 cd

Light quality:

CRI: 96,5

Color temperature:

2718 K

**PRODUCT NAME:**

ECLFWWW

**MEASURAMENT CONDITIONS:**

Beam angle:

PRL19

Target:

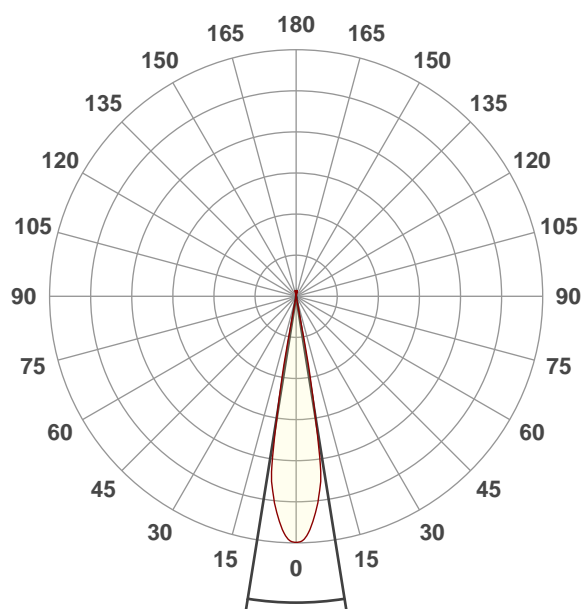
ww

Operator:

Paolo Carvone

Date and time:

11/06/2021 13:04:04

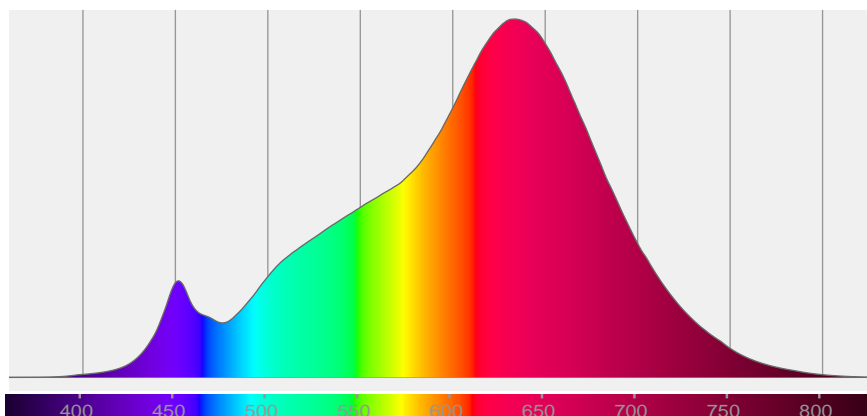


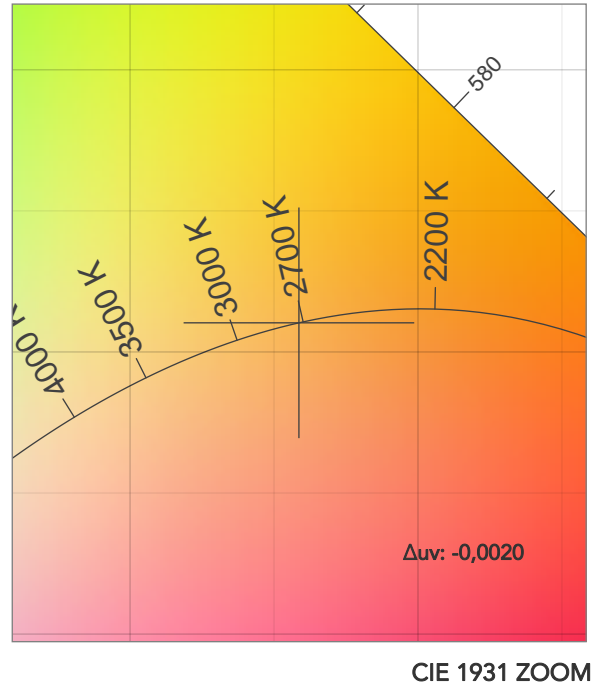
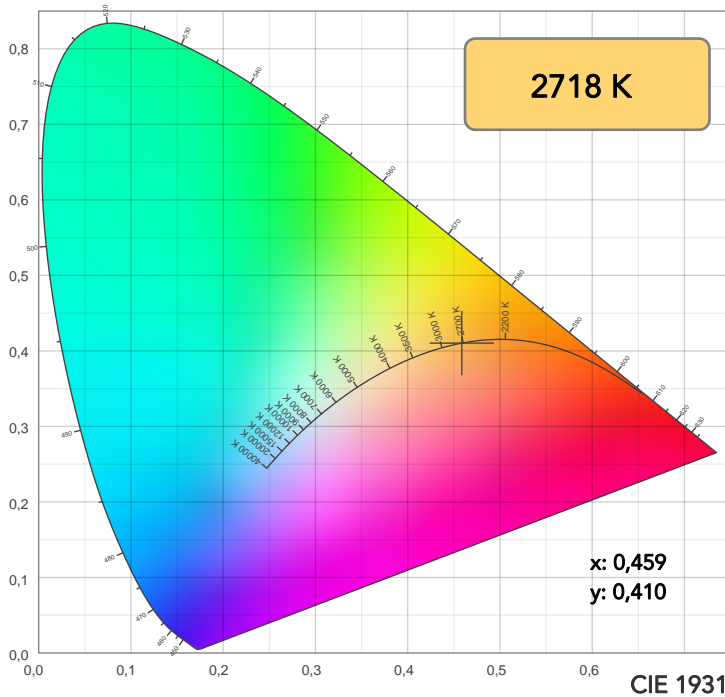
Beam angle 50%: 18,2°

Field angle 10%: 22,3°

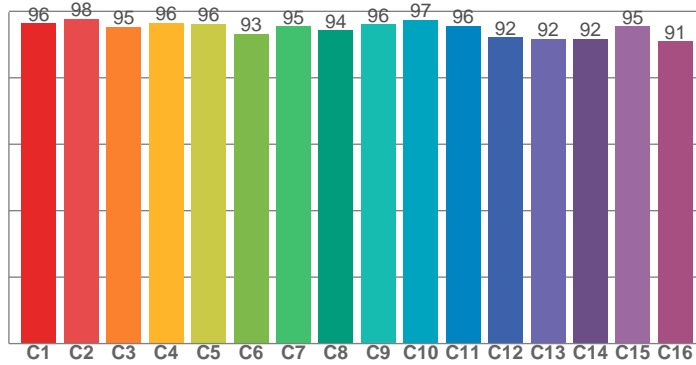
Cut off angle 2.5%: 23,1°

**Spectra**

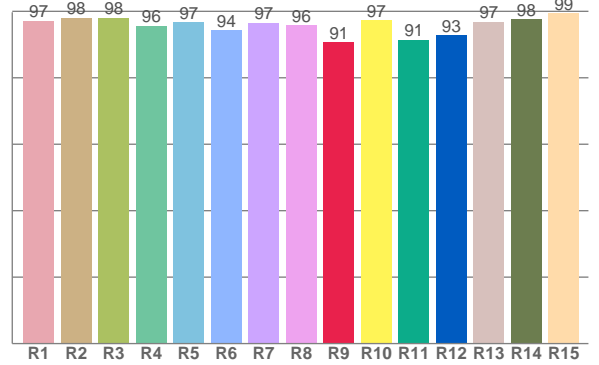




TM30: 95,1



CRI: 96,5 (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
97,2	98,0	98,1	95,6	96,6	94,4	96,6	95,7	90,6	97,4	91,4	92,7	96,9	97,6	99,3

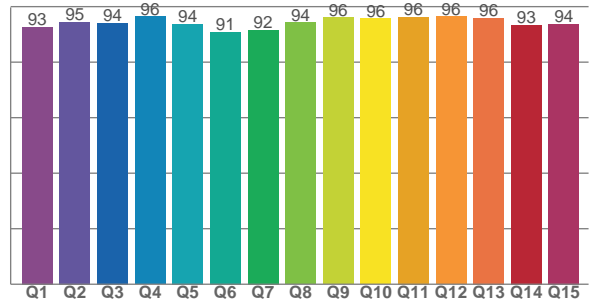
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
96,3	97,7	95,4	96,5	96,2	93,2	95,4	94,3	96,1	97,4	95,7	92,2	91,8	91,8	95,5	90,9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
92,6	94,5	94,2	96,4	93,7	90,9	91,6	94,3	96,1	95,7	96,3	96,4	95,9	93,4	93,7

CQS: 93,8



## COLOR PARAMETERS

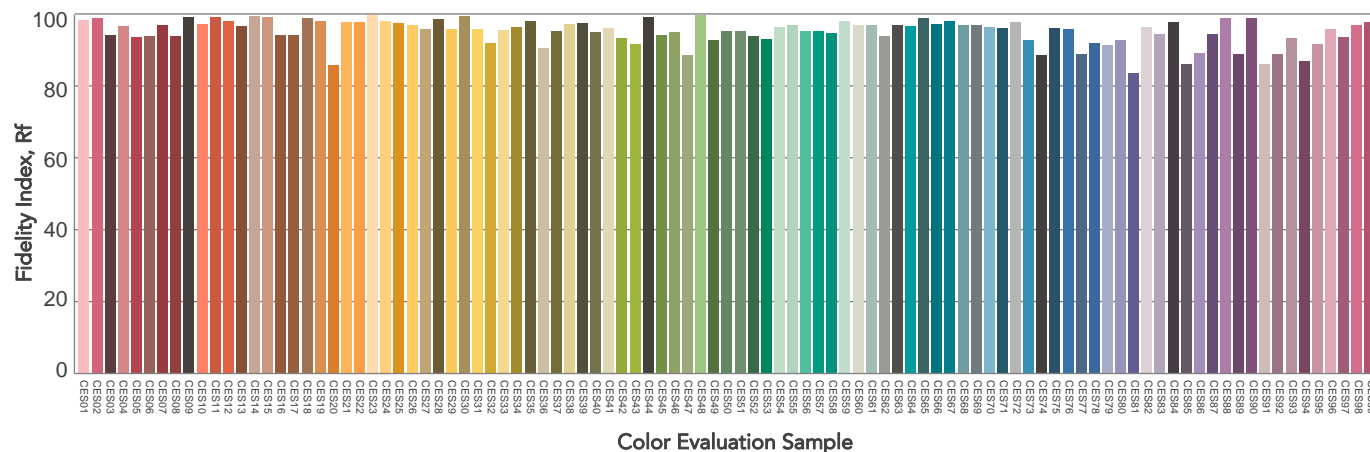
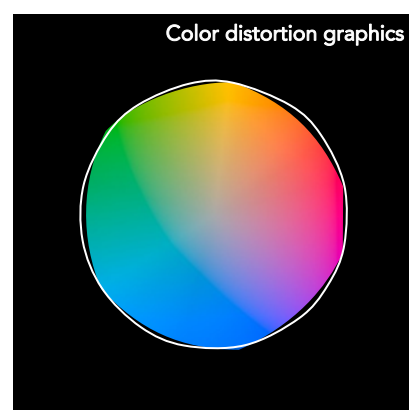
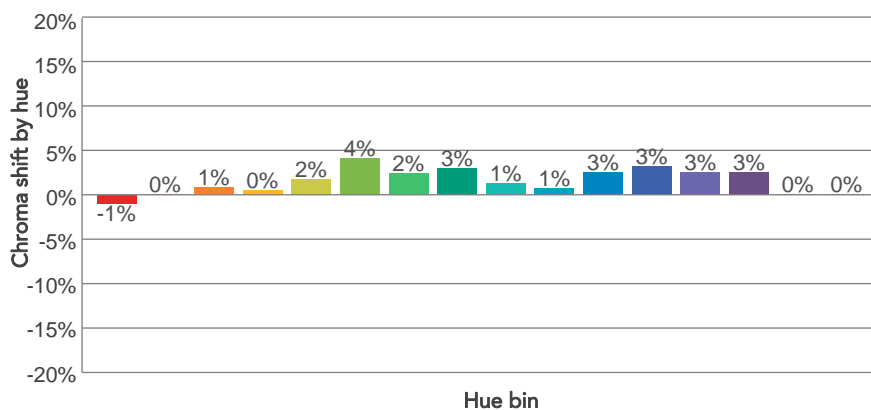
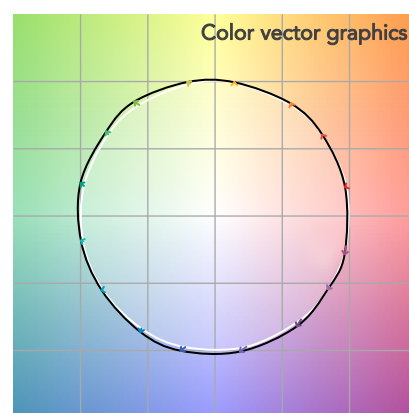
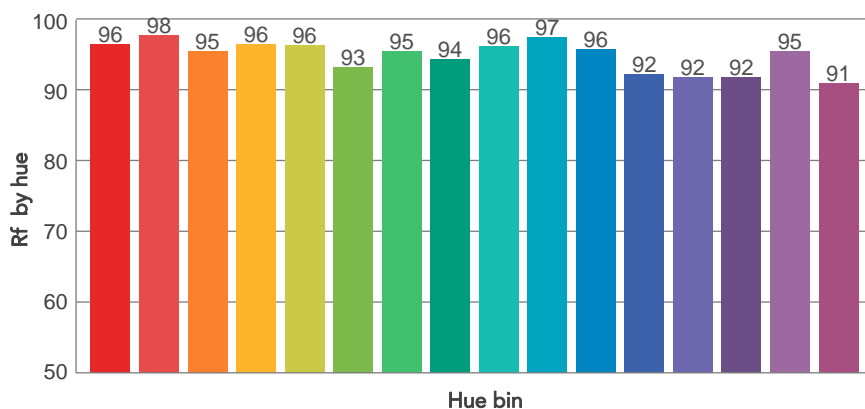
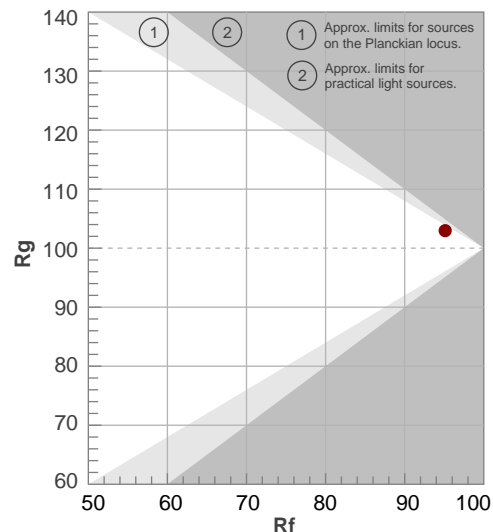
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	$\Delta uv$
2718 K	96,5	90,6	95,1	103,0	93,8	98	0,459	0,410	-0,0020

# TM30 DETAILS

**Rf 95,1**  
Fidelity index Rf

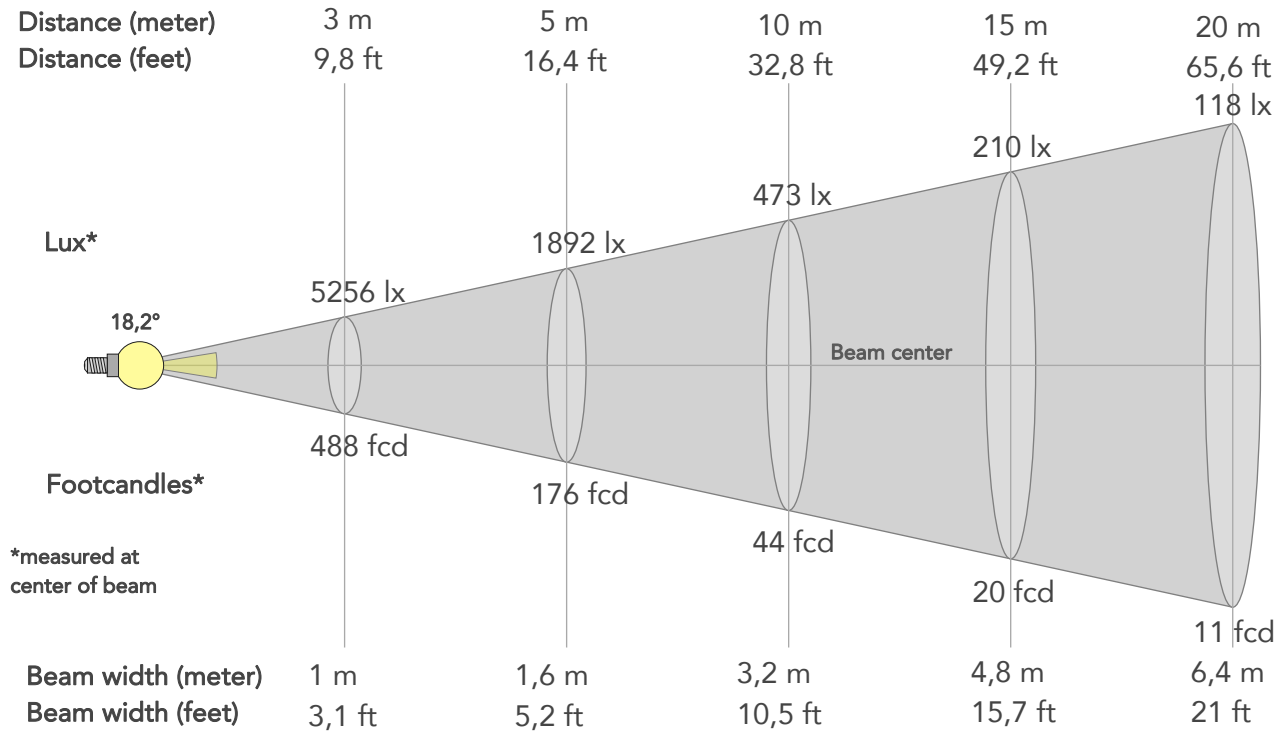
**Rg 103,0**  
Gammut index

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	96	-1%	0%
2	98	0%	1%
3	95	1%	1%
4	96	0%	0%
5	96	2%	2%
6	93	4%	2%
7	95	2%	-1%
8	94	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%	-5%
15	95	0%	-2%
16	91	0%	-6%



## BEAM DETAILS

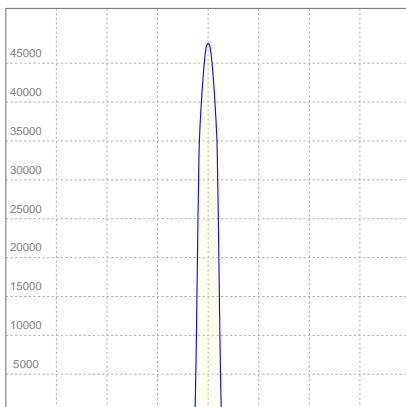
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
18,2°	22,3°	23,1°	100,0%	100,0%



### 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	47308lx	11827lx	5256lx	2957lx	1892lx	841lx	473lx	210lx	118lx	76lx	53lx	30lx	19lx
Footcand.	4395fcd	1099fcd	488fcd	275fcd	176fcd	78fcd	44fcd	20fcd	11fcd	7fcd	5fcd	3fcd	2fcd
Beam wid.	0,3m	0,6m	1m	1,3m	1,6m	2,4m	3,2m	4,8m	6,4m	8m	9,6m	12,8m	16m
Beam wid.	1,1ft	2,1ft	3,1ft	4,2ft	5,2ft	7,9ft	10,5ft	15,7ft	21ft	26,2ft	31,5ft	42ft	52,5ft

### LINEAR DISTRIBUTION DIAGRAM

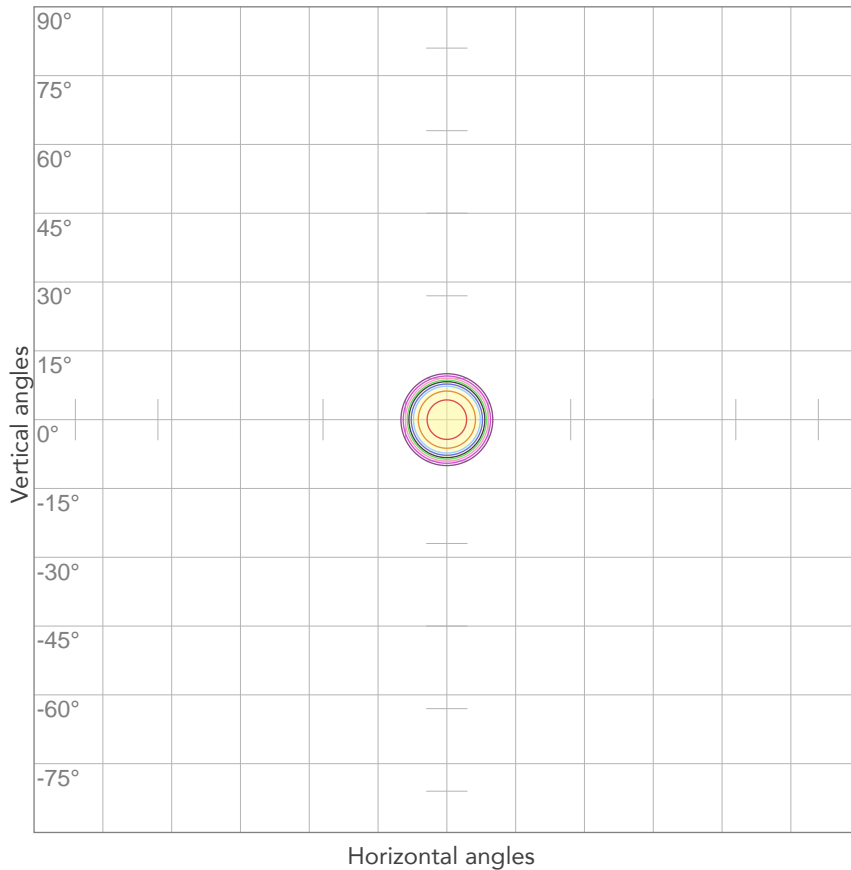


### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
228V	0,627A	132,7W	27lm/W

Power Fc
0,97

## ISO CANDELA DIAGRAM



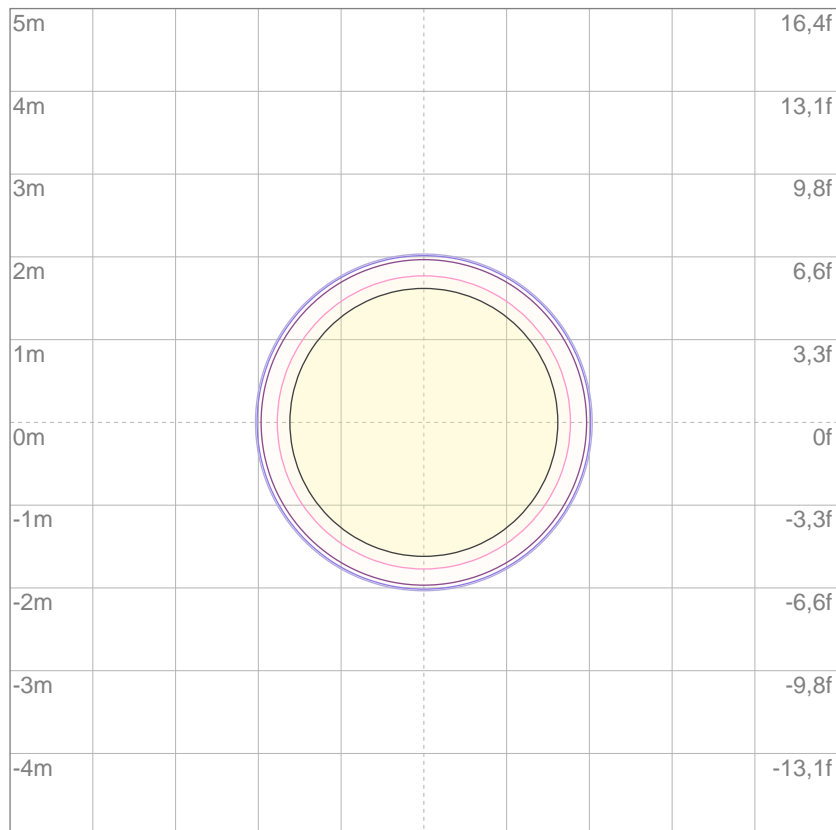
10%	4731 cd
20%	9462 cd
30%	14193 cd
40%	18923 cd
50%	23654 cd
60%	28385 cd
70%	33116 cd
80%	37847 cd

### Conditions:

Number of c-planes: 2

Candela at center: 47308 cd

## ISO LUX DIAGRAM



3%	14,2 lx
5%	23,7 lx
10%	47,3 lx
30%	142 lx
50%	237 lx

### Conditions:

Number of c-planes: 2

Lux at center: 473 lx

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