



# Photometric Test Report



## **ECLFWIP VW PRL50**

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

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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:

8118 lm

Peak candela output:

16606 cd

Light quality:

CRI: 95,0

Color temperature:

3996 K

**PRODUCT NAME:**

ECLFWIP VW

**MEASURAMENT CONDITIONS:**

Beam angle:

PRL50

Target:

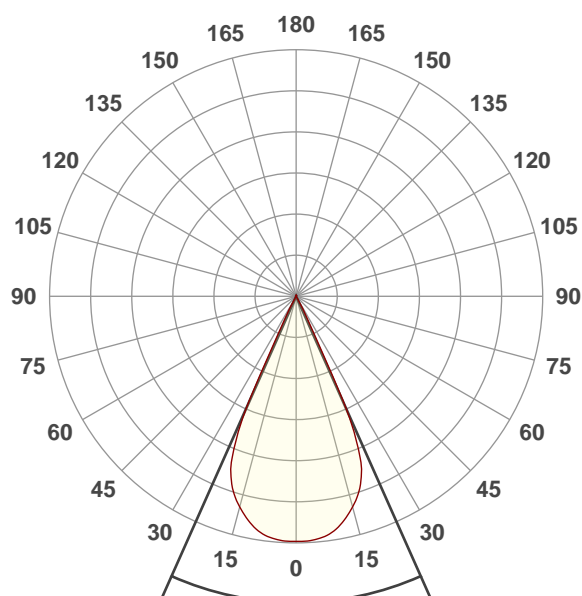
Full On

Operator:

Paolo Carvone

Date and time:

11/06/2021 12:43:37

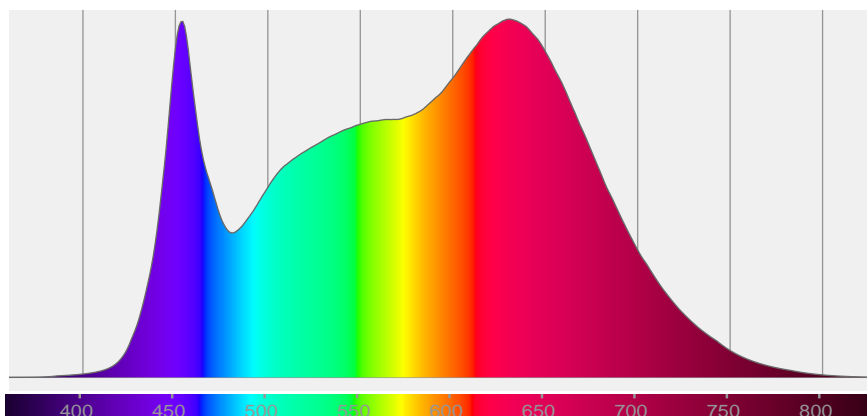


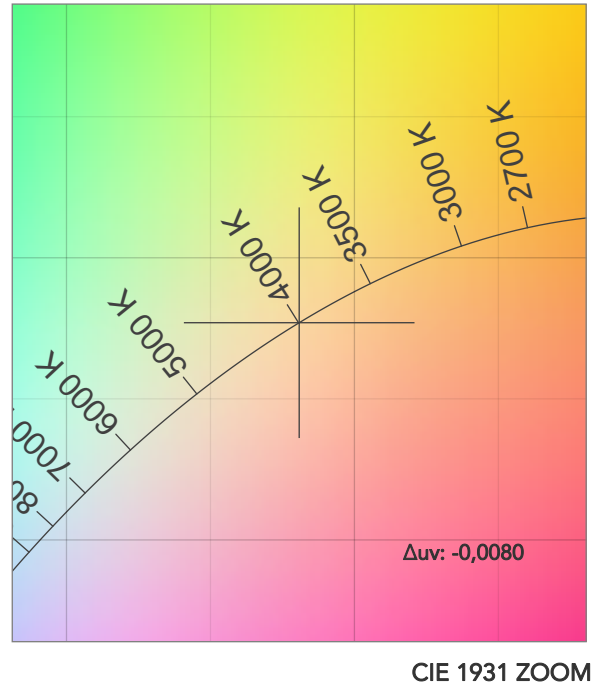
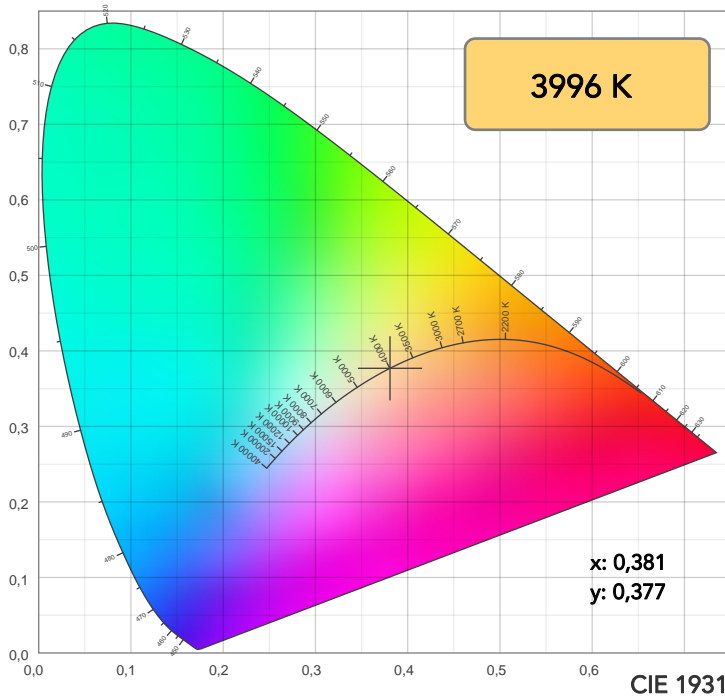
Beam angle 50%: 48°

Field angle 10%: 53,1°

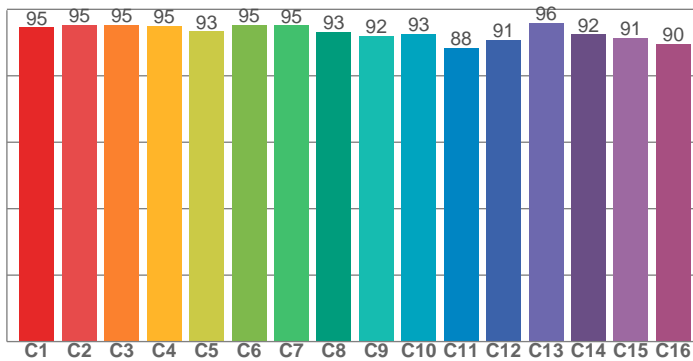
Cut off angle 2.5%: 56,5°

**Spectra**

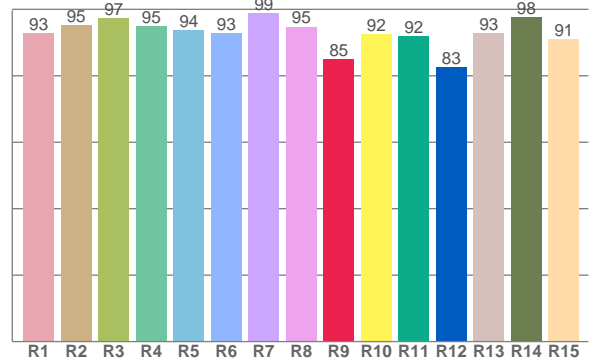




TM30: 93,1



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	95,2	97,4	94,9	93,7	92,7	98,8	94,8	84,9	92,5	91,8	82,6	92,8	97,6	91,0

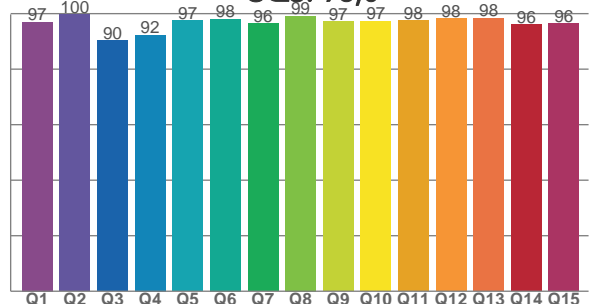
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
94,6	95,3	95,3	94,9	93,3	95,3	95,2	93,1	92,0	92,6	88,3	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	90,3	92,3	97,5	98,1	96,4	99,1	97,1	97,2	97,5	98,2	98,3	96,1	96,4

CQS: 96,0



## COLOR PARAMETERS

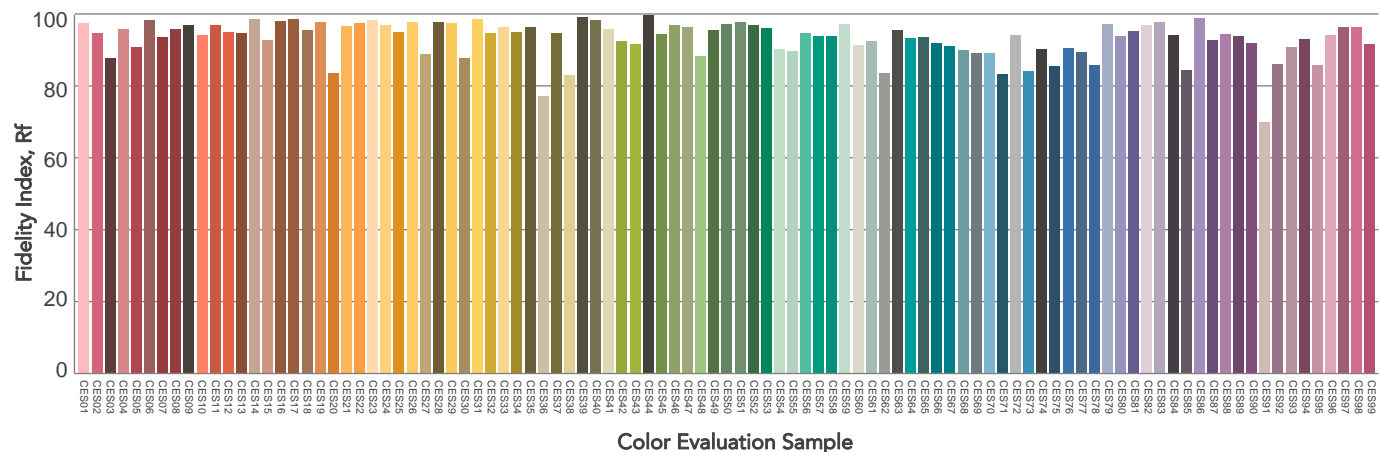
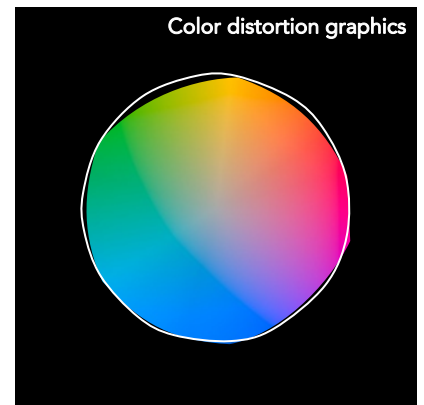
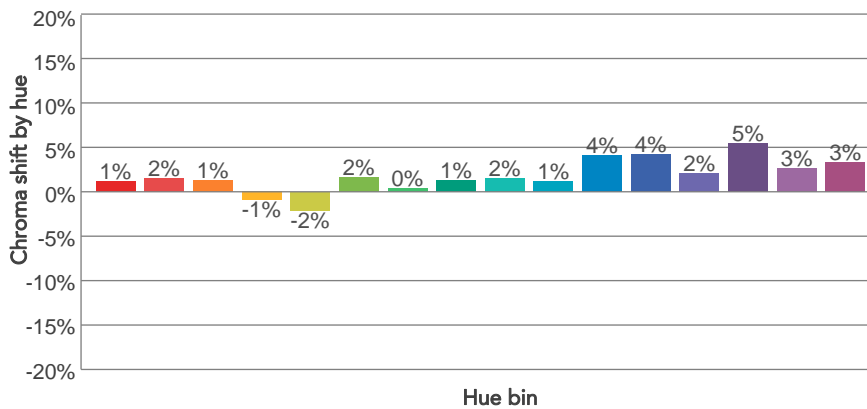
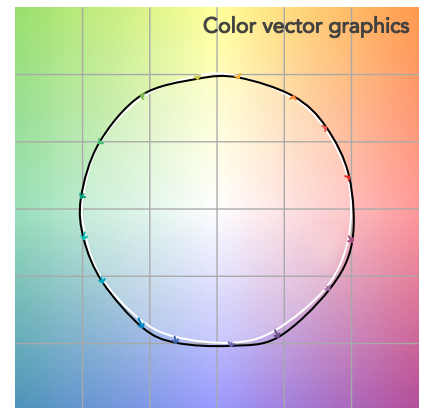
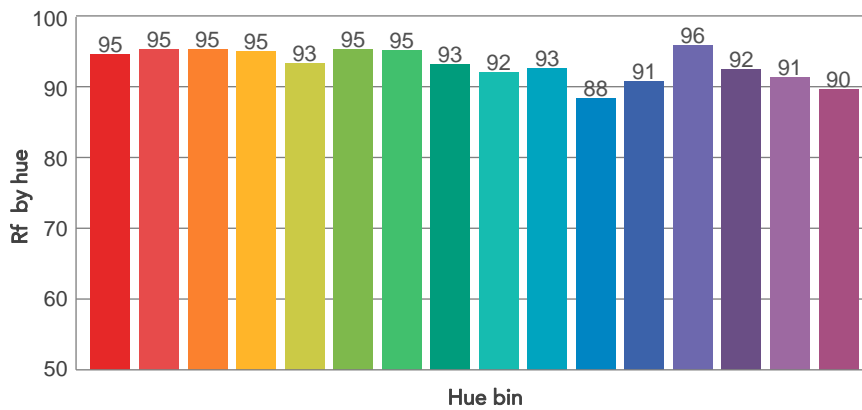
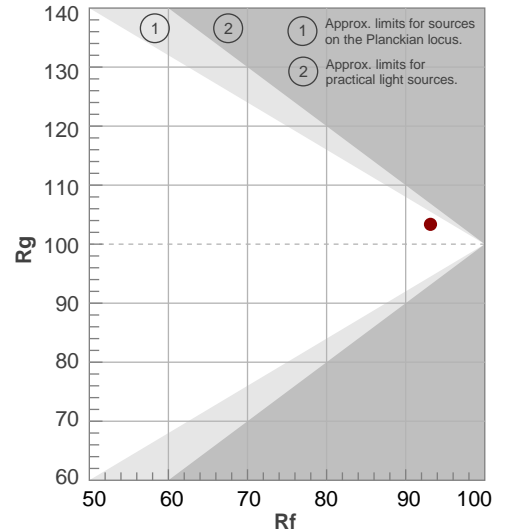
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
3996 K	95,0	84,9	93,1	103,4	96,0	98	0,381	0,377	-0,0080

# TM30 DETAILS

**Rf 93,1**  
Fidelity index Rf

**Rg 103,4**  
Gammut index

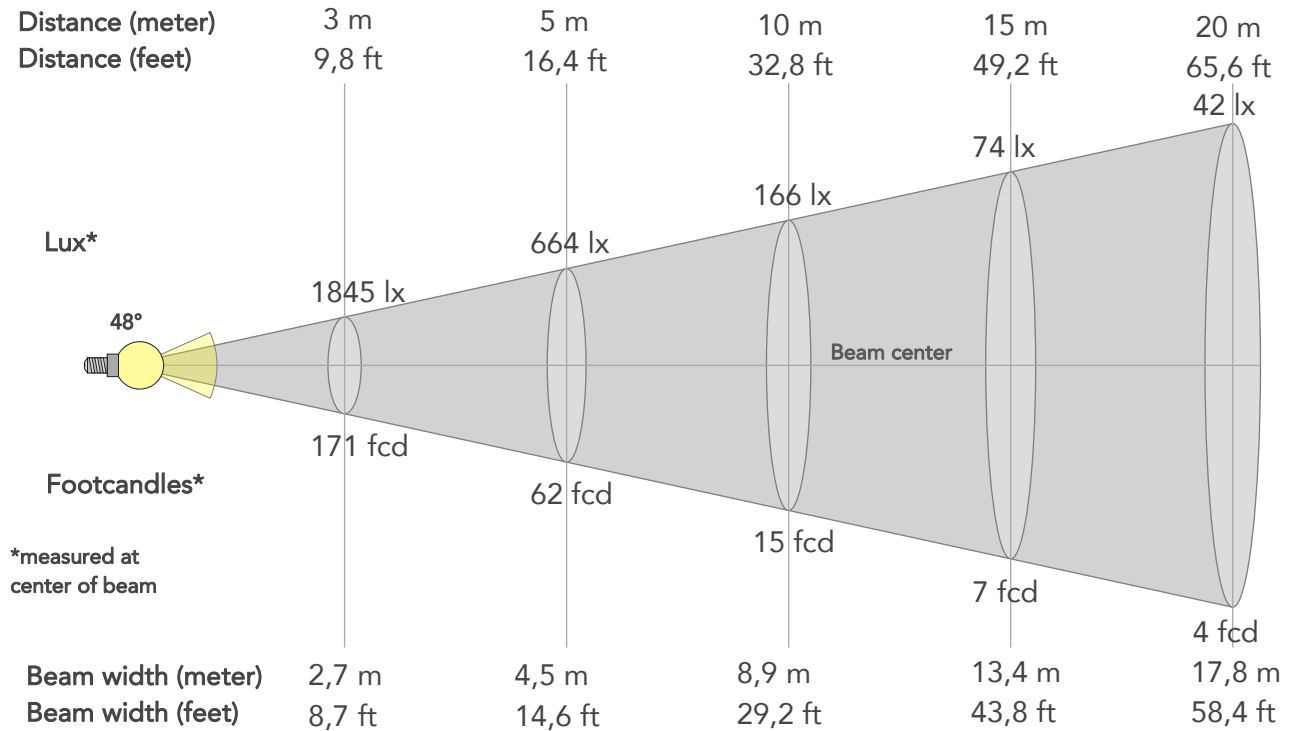
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	95	1%	1%
2	95	2%	0%
3	95	1%	1%
4	95	-1%	-1%
5	93	-2%	0%
6	95	2%	1%
7	95	0%	2%
8	93	1%	3%
9	92	2%	5%
10	93	1%	4%
11	88	4%	6%
12	91	4%	2%
13	96	2%	-1%
14	92	5%	-1%
15	91	3%	-1%
16	90	3%	-4%



# BEAM DETAILS



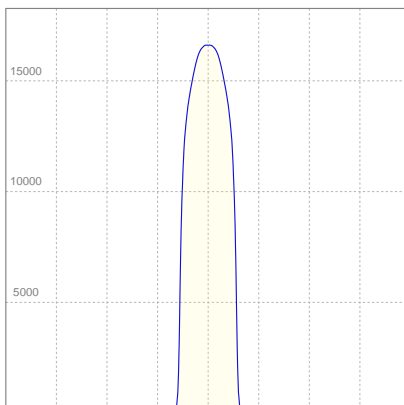
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
48°	53,1°	56,5°	100,0%	100,0%



## 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	16606lx	4151lx	1845lx	1038lx	664lx	295lx	166lx	74lx	42lx	27lx	18lx	10lx	7lx
Footcand.	1543fcd	386fcd	171fcd	96fcd	62fcd	27fcd	15fcd	7fcd	4fcd	2fcd	2fcd	1fcd	1fcd
Beam wid.	0,9m	1,8m	2,7m	3,6m	4,5m	6,7m	8,9m	13,4m	17,8m	22,3m	26,7m	35,6m	44,5m
Beam wid.	2,9ft	5,9ft	8,7ft	11,7ft	14,6ft	21,9ft	29,2ft	43,8ft	58,4ft	73ft	87,6ft	116,8ft	146ft

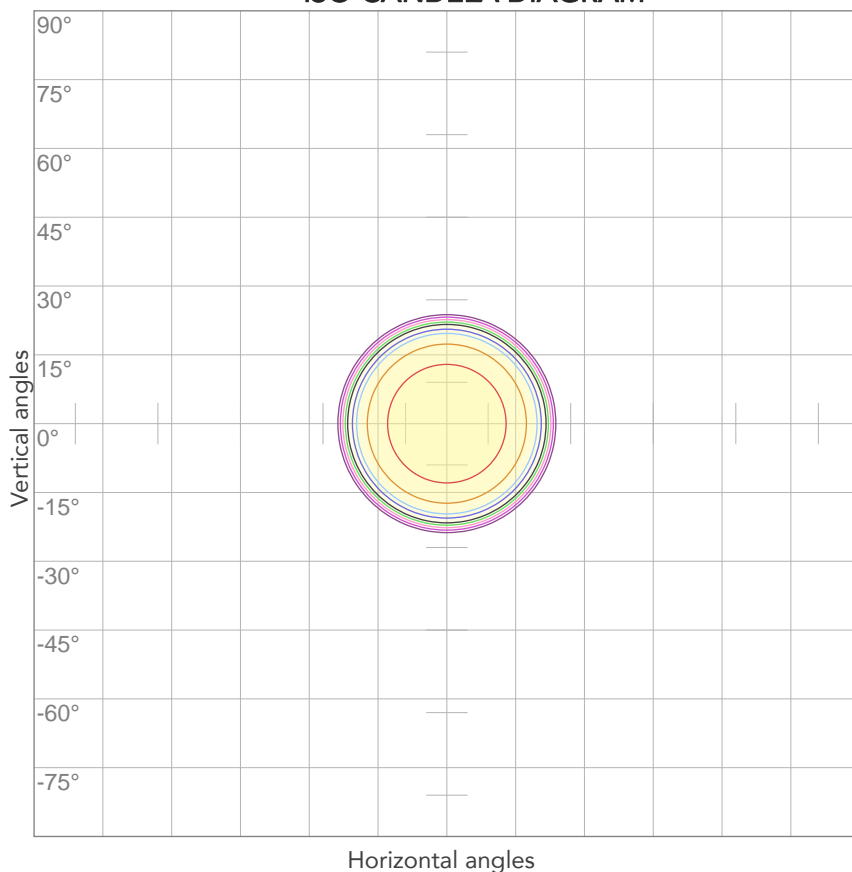
## LINEAR DISTRIBUTION DIAGRAM



## ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
228V	1,19A	261,1W	31lm/W
Power Fc			
0,97			

## ISO CANDELA DIAGRAM



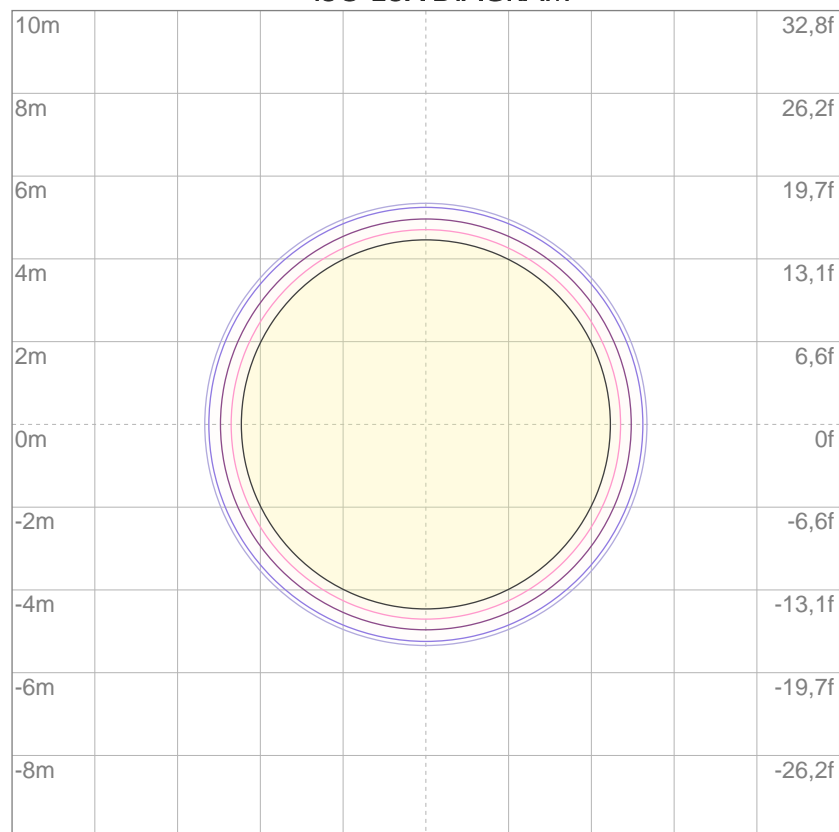
10%	1661 cd
20%	3321 cd
30%	4982 cd
40%	6642 cd
50%	8303 cd
60%	9963 cd
70%	11624 cd
80%	13285 cd

### Conditions:

Number of c-planes: 2

Candela at center: 16606 cd

## ISO LUX DIAGRAM



3%	4,98 lx
5%	8,30 lx
10%	16,6 lx
30%	49,8 lx
50%	83,0 lx

### Conditions:

Number of c-planes: 2

Lux at center: 166 lx

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





Total lumen output:

4497 lm

Peak candela output:

9202 cd

Light quality:

CRI: 97,1

Color temperature:

5613 K

**PRODUCT NAME:**

**ECLFWIP VW**

**MEASURAMENT CONDITIONS:**

Beam angle:

PRL50

Target:

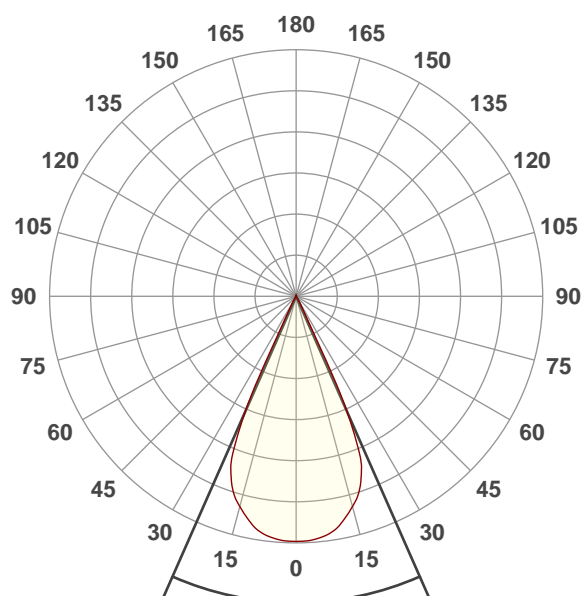
Cold White

Operator:

Paolo Carvone

Date and time:

11/06/2021 12:47:00

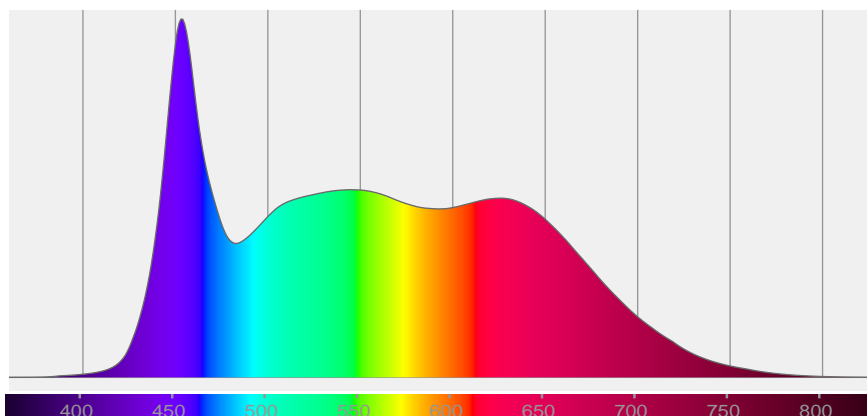


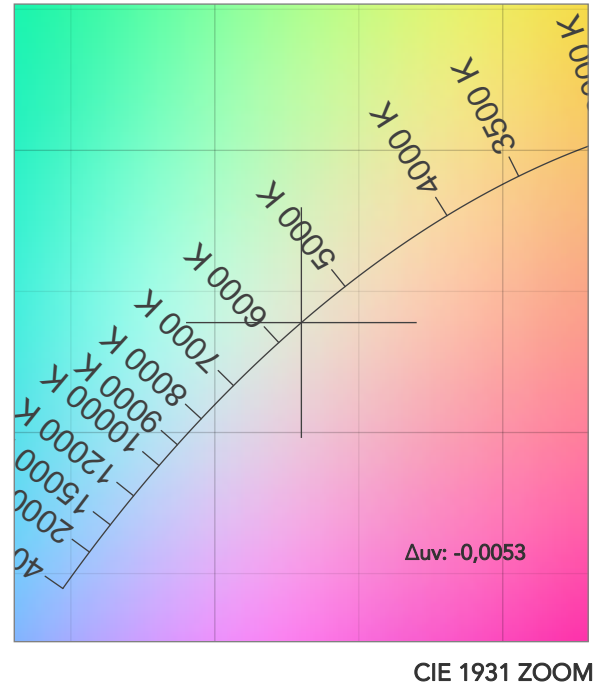
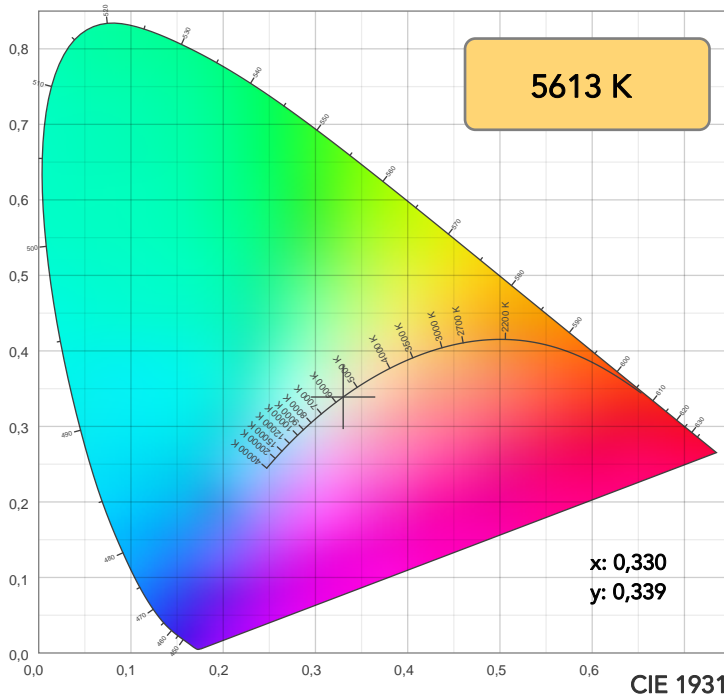
Beam angle 50%: 47,6°

Field angle 10%: 53,1°

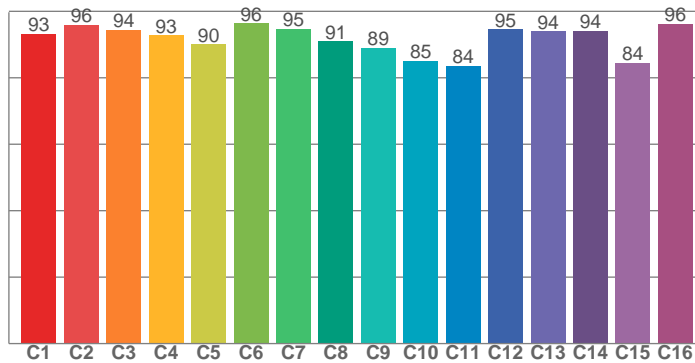
Cut off angle 2.5%: 56,7°

**Spectra**

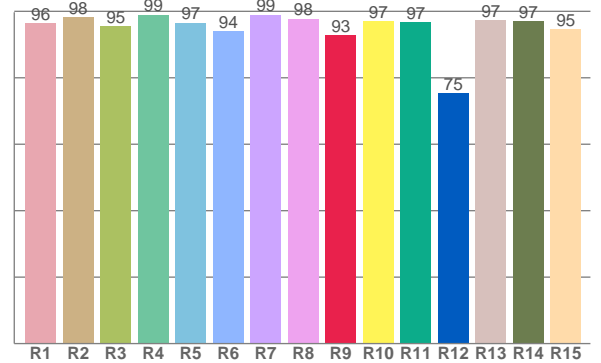




TM30: 91,6



CRI: 97,1 (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
96,5	98,2	95,5	99,0	96,6	94,1	99,0	97,7	92,9	97,1	96,7	75,4	97,3	97,1	94,6

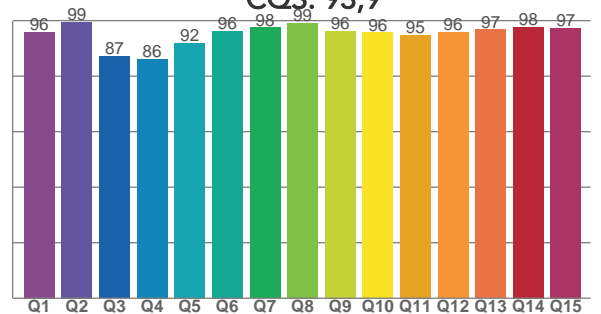
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
93,1	95,9	94,4	92,8	90,1	96,4	94,8	91,0	89,0	85,2	83,5	94,6	94,0	94,1	84,4	96,3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
95,8	99,5	87,2	86,2	92,0	96,3	97,5	99,2	96,2	95,7	94,9	95,8	96,8	97,6	97,3

CQS: 93,9



## COLOR PARAMETERS

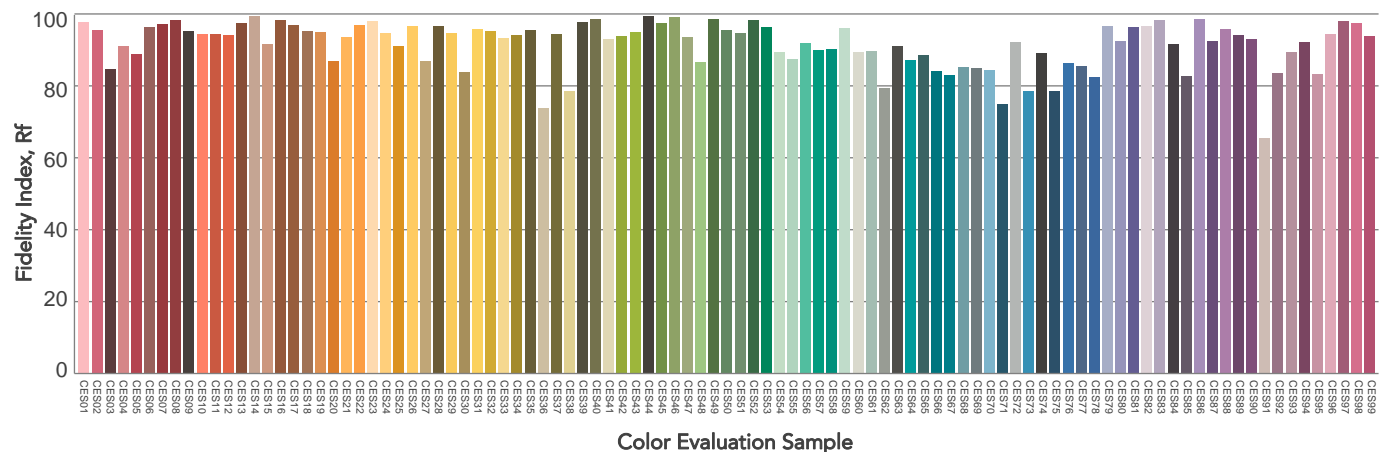
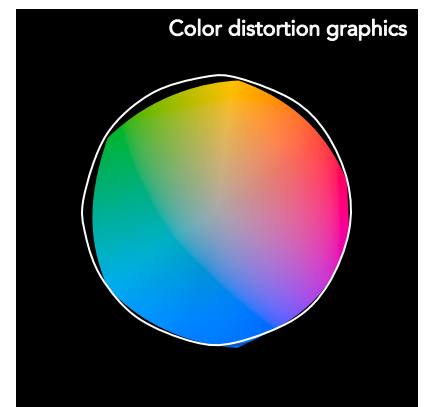
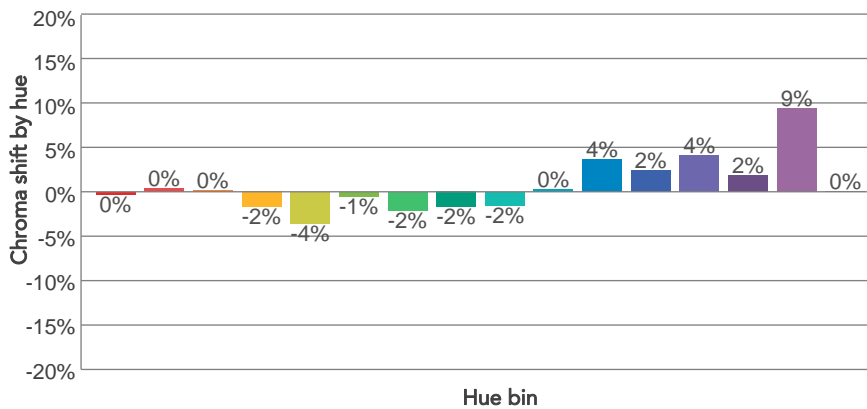
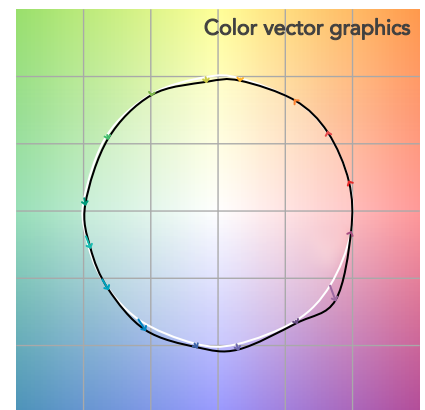
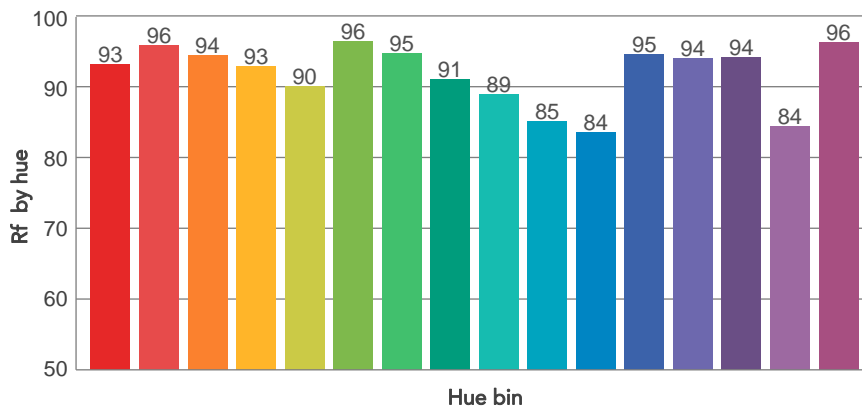
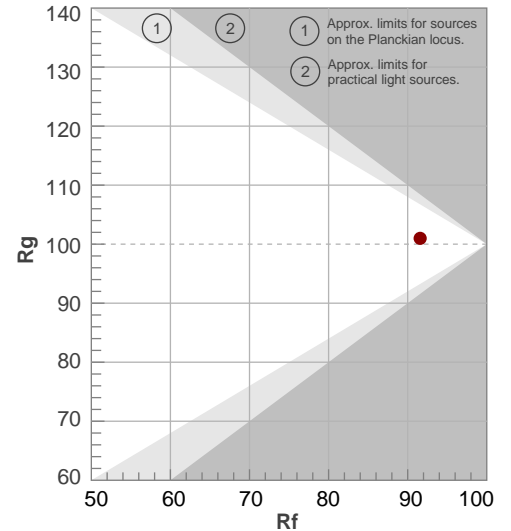
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5613 K	97,1	92,9	91,6	101,0	93,9	98	0,330	0,339	-0,0053

# TM30 DETAILS

**Rf 91,6**  
Fidelity index Rf

**Rg 101,0**  
Gammut index

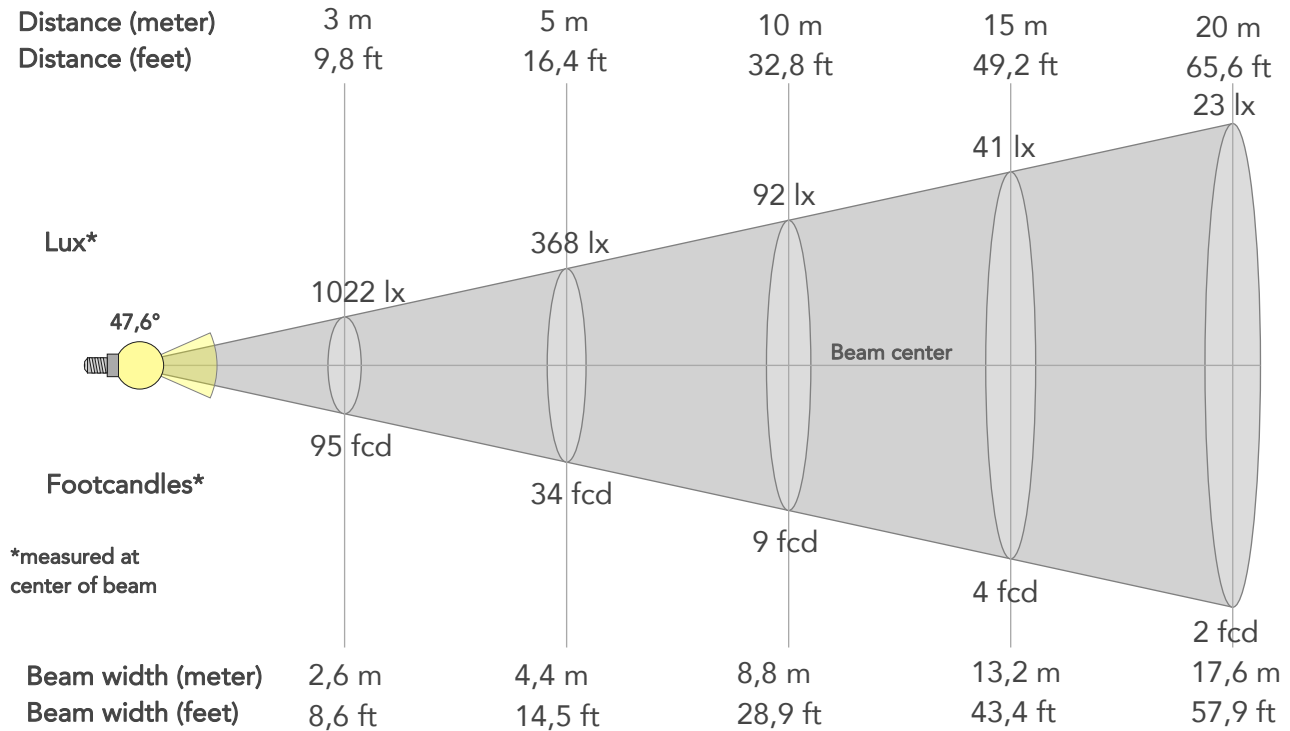
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	93	0%	1%
2	96	0%	1%
3	94	0%	1%
4	93	-2%	0%
5	90	-4%	0%
6	96	-1%	0%
7	95	-2%	2%
8	91	-2%	4%
9	89	-2%	9%
10	85	0%	8%
11	84	4%	9%
12	95	2%	2%
13	94	4%	1%
14	94	2%	0%
15	84	9%	-7%
16	96	0%	0%



# BEAM DETAILS



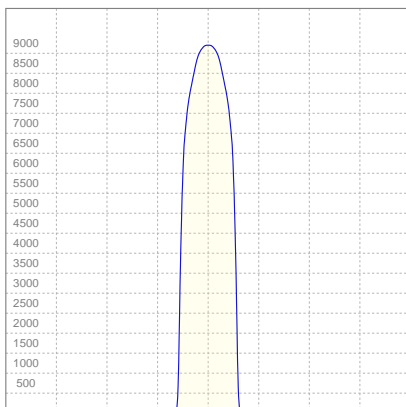
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
47,6°	53,1°	56,7°	100,0%	100,0%



## 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	9202lx	2300lx	1022lx	575lx	368lx	164lx	92lx	41lx	23lx	15lx	10lx	6lx	4lx
Footcand.	855fcd	214fcd	95fcd	53fcd	34fcd	15fcd	9fcd	4fcd	2fcd	1fcd	1fcd	1fcd	0fcd
Beam wid.	0,9m	1,8m	2,6m	3,5m	4,4m	6,6m	8,8m	13,2m	17,6m	22,1m	26,5m	35,3m	44,1m
Beam wid.	2,9ft	5,8ft	8,6ft	11,6ft	14,5ft	21,7ft	28,9ft	43,4ft	57,9ft	72,3ft	86,8ft	115,8ft	144,7ft

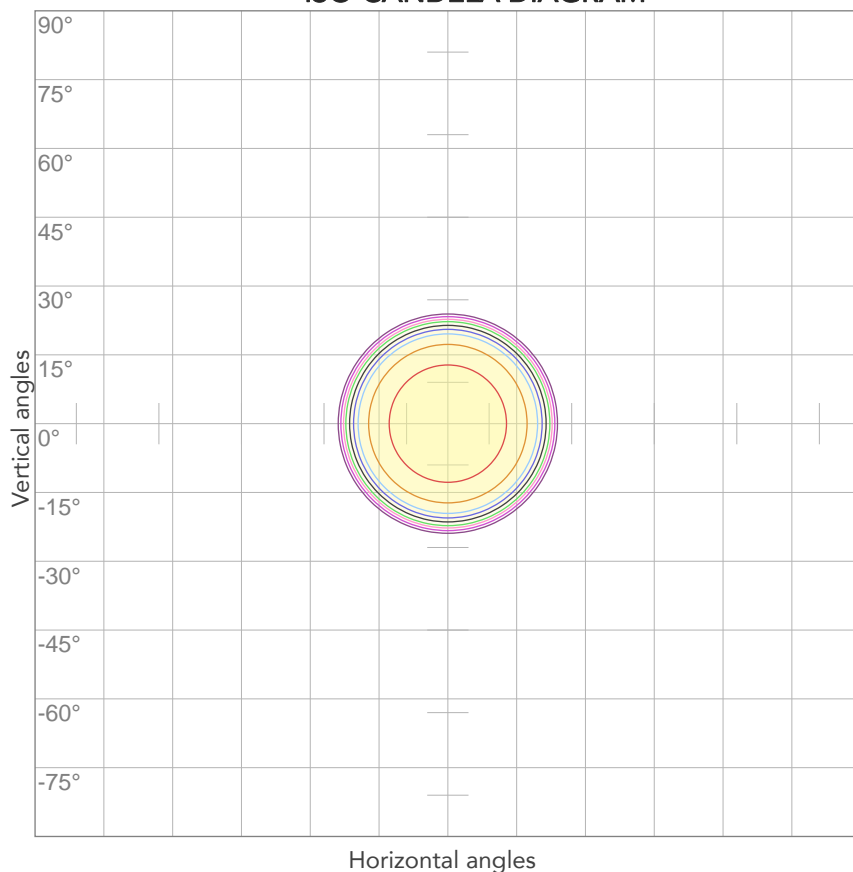
## LINEAR DISTRIBUTION DIAGRAM



## ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
228V	0,619A	130,6W	34lm/W
Power Fc			
0,97			

## ISO CANDELA DIAGRAM



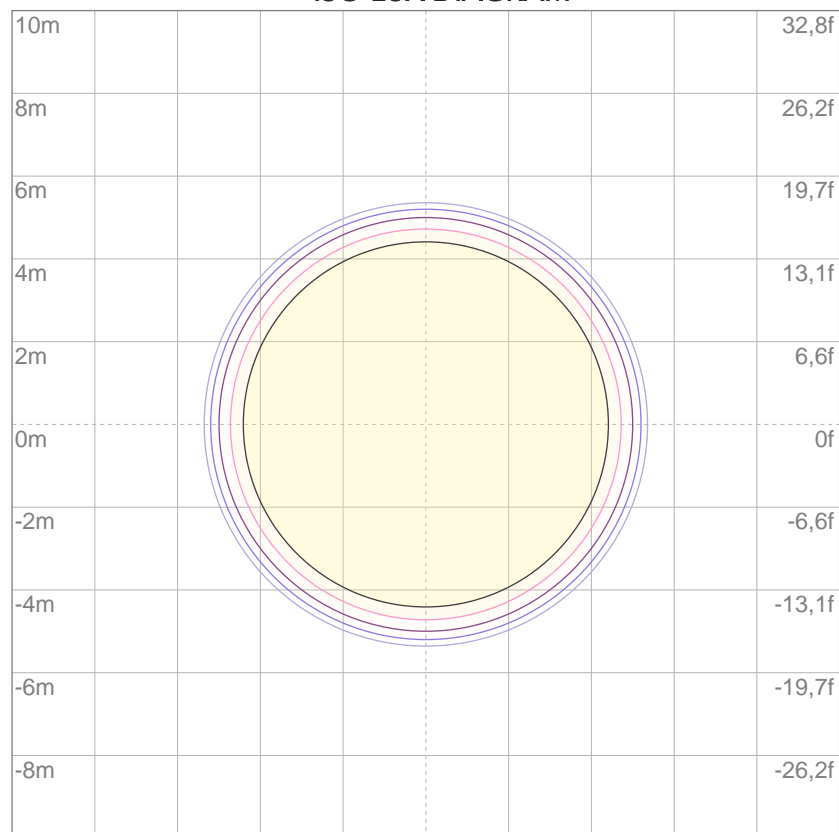
10%	920 cd
20%	1840 cd
30%	2761 cd
40%	3681 cd
50%	4601 cd
60%	5521 cd
70%	6441 cd
80%	7361 cd

### Conditions:

Number of c-planes: 2

Candela at center: 9202 cd

## ISO LUX DIAGRAM



3%	2,76 lx
5%	4,60 lx
10%	9,20 lx
30%	27,6 lx
50%	46,0 lx

### Conditions:

Number of c-planes: 2

Lux at center: 92,0 lx

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



Total lumen output:

3710 lm

Peak candela output:

7615 cd

Light quality:

CRI: 96,7

Color temperature:

2708 K

PRODUCT NAME:

ECLFWIP VW

MEASURAMENT CONDITIONS:

Beam angle:

PRL50

Target:

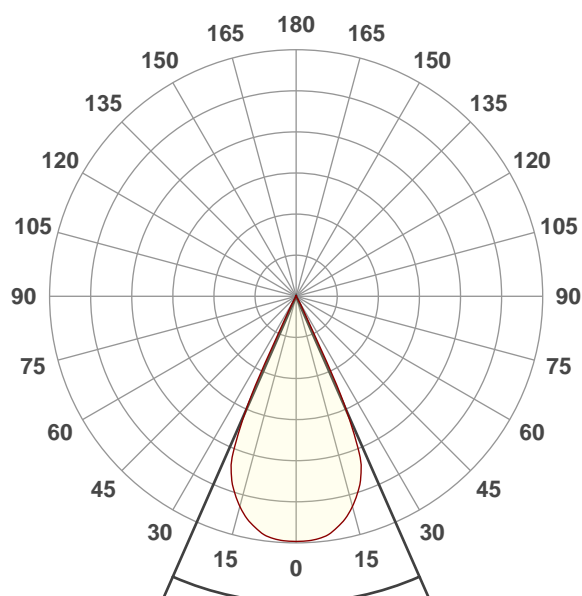
Warm White

Operator:

Paolo Carvone

Date and time:

11/06/2021 12:45:14

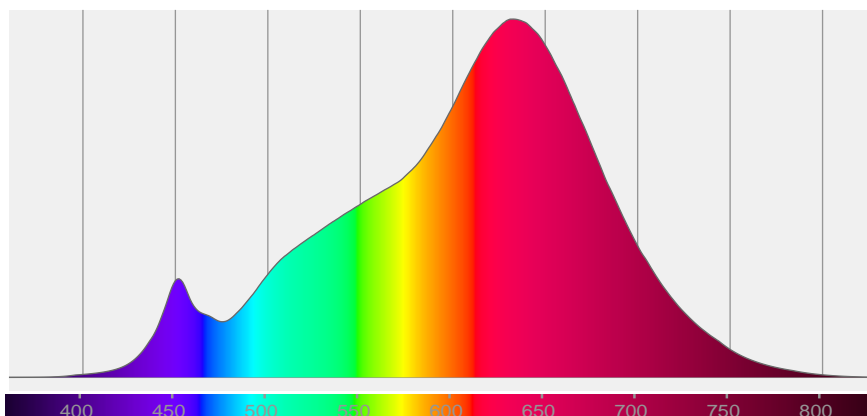


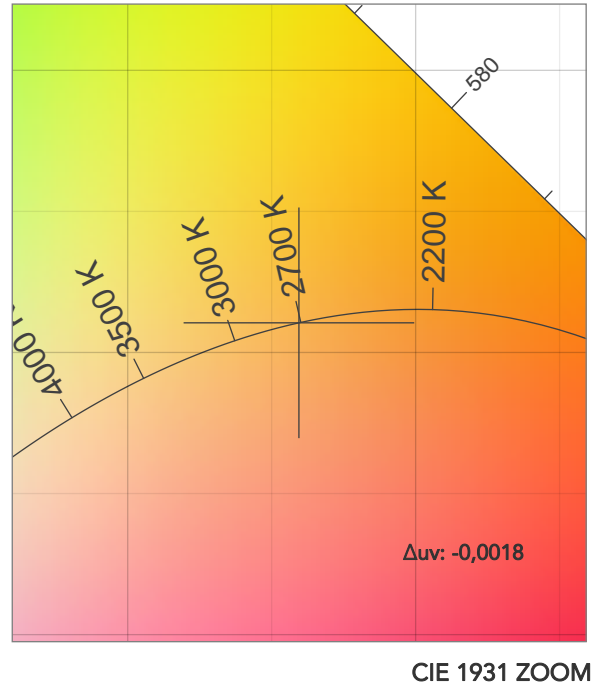
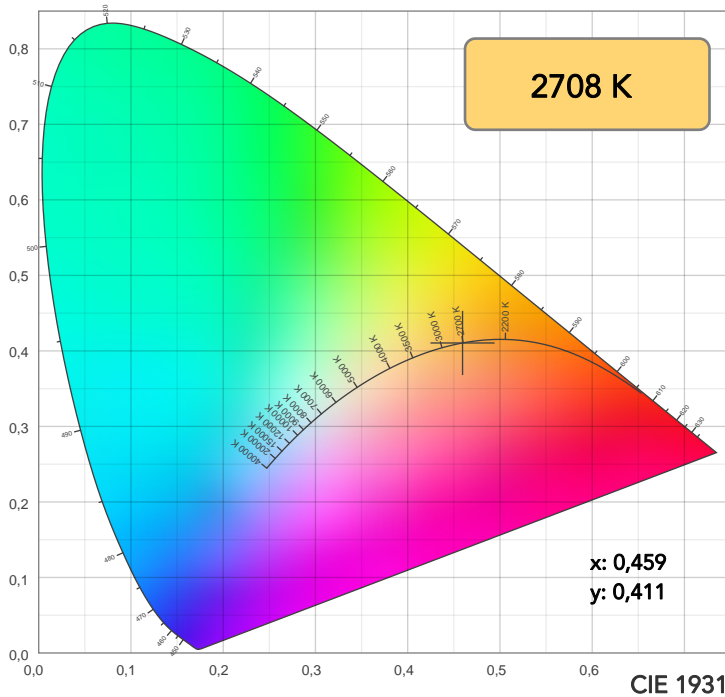
Beam angle 50%: 47,5°

Field angle 10%: 53,1°

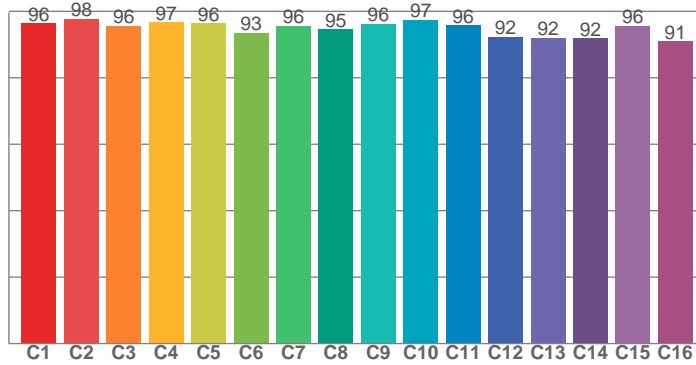
Cut off angle 2.5%: 56,8°

Spectra

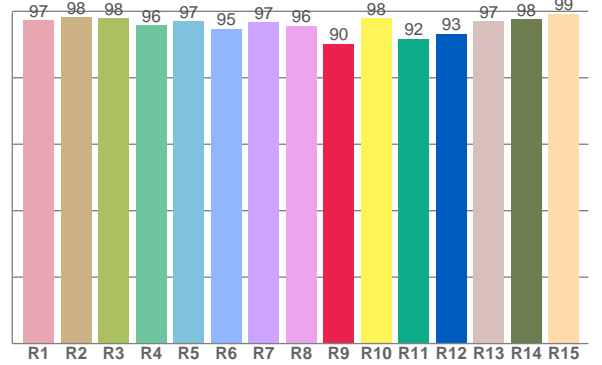




TM30: 95,2



CRI: 96,7 (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
97,4	98,3	97,9	95,8	96,9	94,8	96,7	95,6	90,2	97,9	91,7	93,2	97,1	97,6	99,3

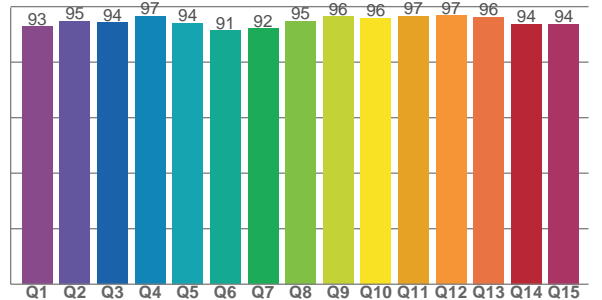
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
96,4	97,7	95,6	96,7	96,3	93,5	95,6	94,6	96,3	97,5	95,7	92,4	92,0	91,9	95,6	90,9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
92,8	94,7	94,3	96,7	94,0	91,3	92,1	94,8	96,5	95,9	96,6	96,7	96,3	93,7	93,8

CQS: 94,1



## COLOR PARAMETERS

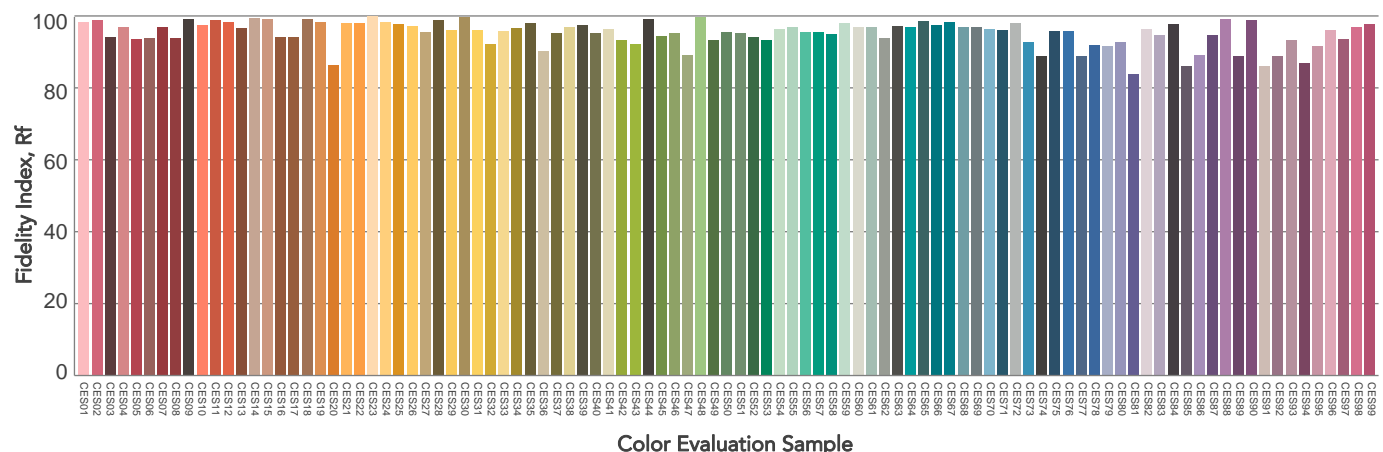
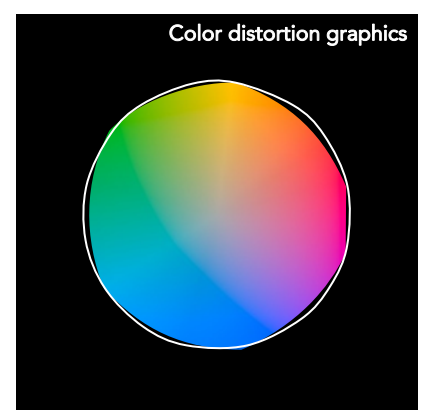
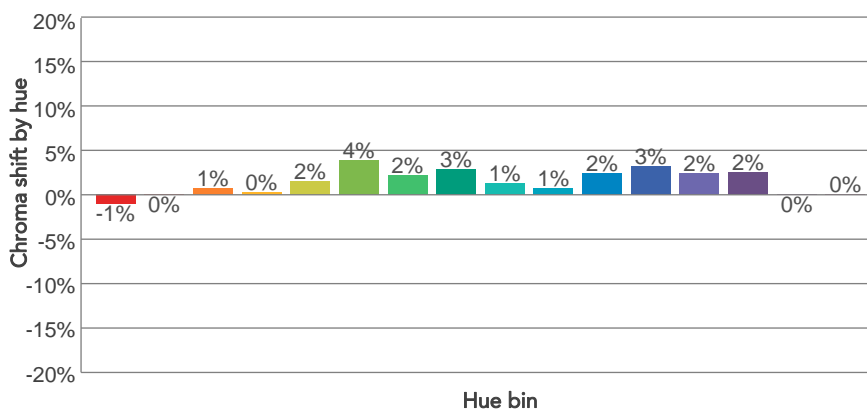
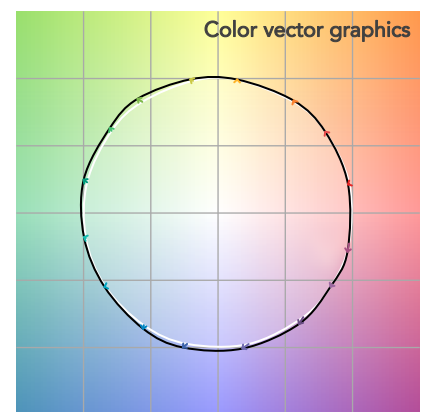
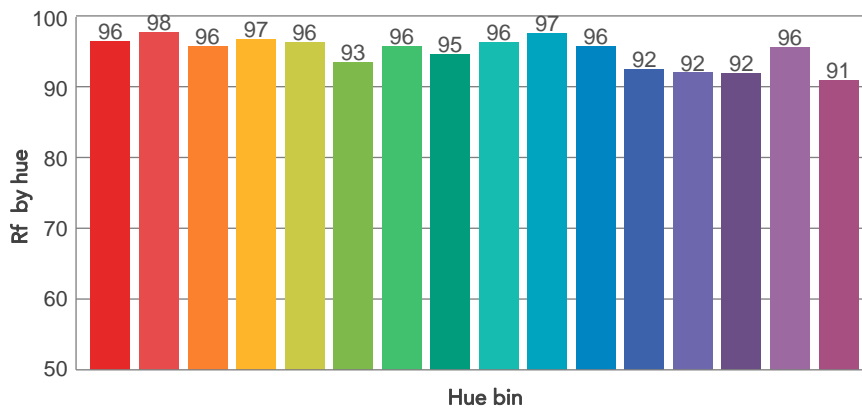
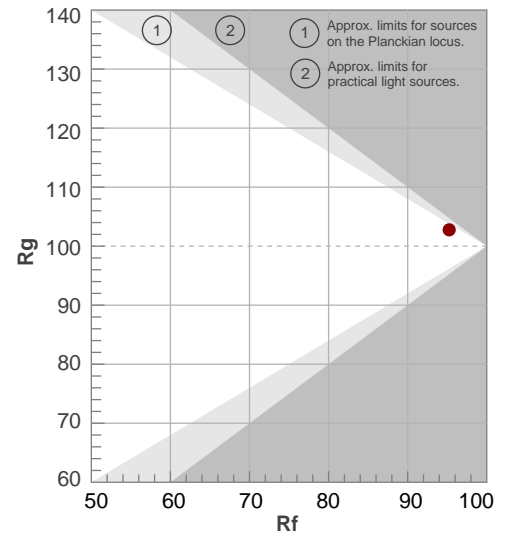
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	$\Delta uv$
2708 K	96,7	90,2	95,2	102,8	94,1	97	0,459	0,411	-0,0018

# TM30 DETAILS

**Rf 95,2**  
Fidelity index Rf

**Rg 102,8**  
Gammut index

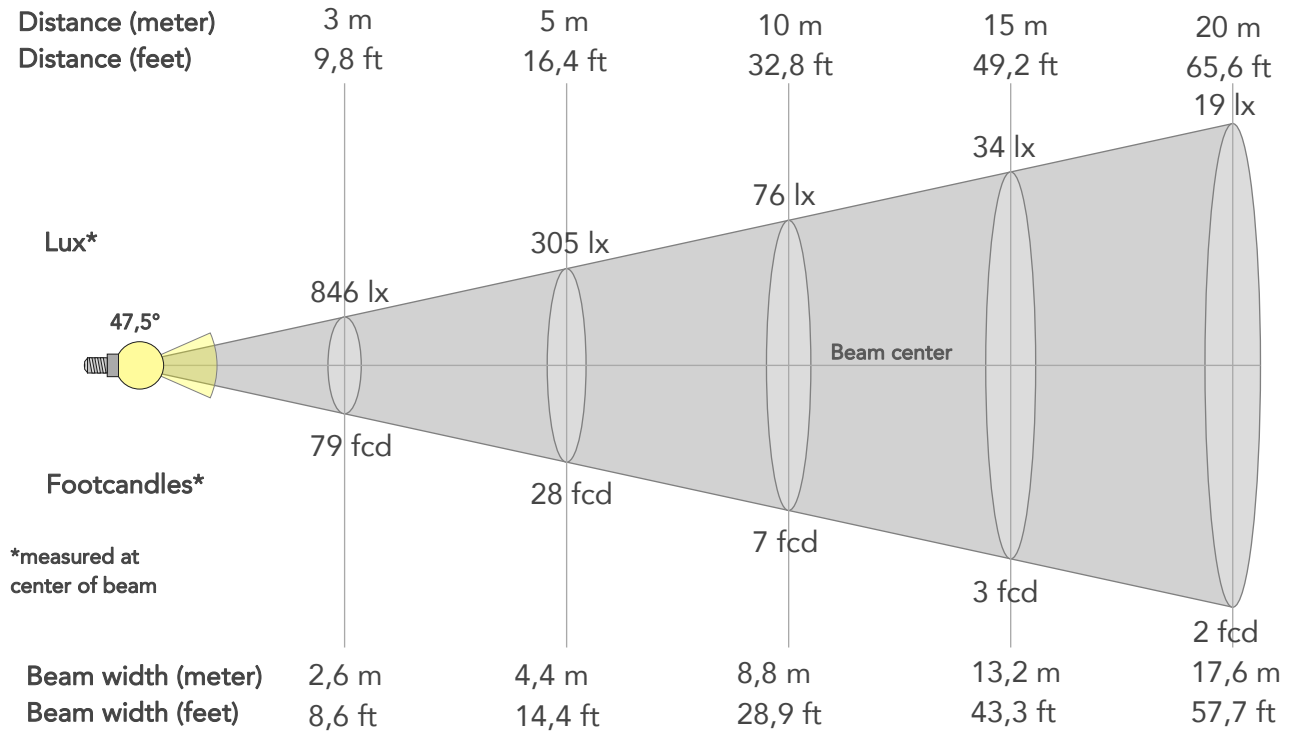
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	96	-1%	0%
2	98	0%	1%
3	96	1%	1%
4	97	0%	0%
5	96	2%	2%
6	93	4%	2%
7	96	2%	-1%
8	95	3%	-1%
9	96	1%	-1%
10	97	1%	0%
11	96	2%	1%
12	92	3%	-3%
13	92	2%	-5%
14	92	2%	-5%
15	96	0%	-2%
16	91	0%	-6%





## BEAM DETAILS

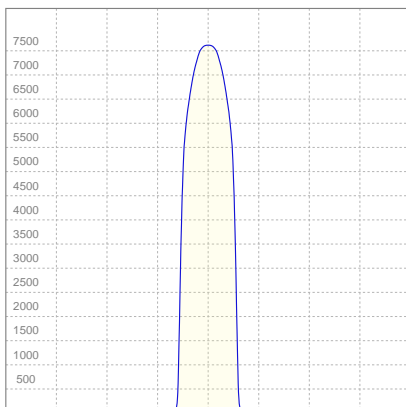
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
47,5°	53,1°	56,8°	100,0%	100,0%



### 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	7615lx	1904lx	846lx	476lx	305lx	135lx	76lx	34lx	19lx	12lx	8lx	5lx	3lx
Footcand.	707fcd	177fcd	79fcd	44fcd	28fcd	13fcd	7fcd	3fcd	2fcd	1fcd	1fcd	0fcd	0fcd
Beam wid.	0,9m	1,8m	2,6m	3,5m	4,4m	6,6m	8,8m	13,2m	17,6m	22m	26,4m	35,2m	44m
Beam wid.	2,9ft	5,8ft	8,6ft	11,5ft	14,4ft	21,6ft	28,9ft	43,3ft	57,7ft	72,1ft	86,6ft	115,4ft	144,3ft

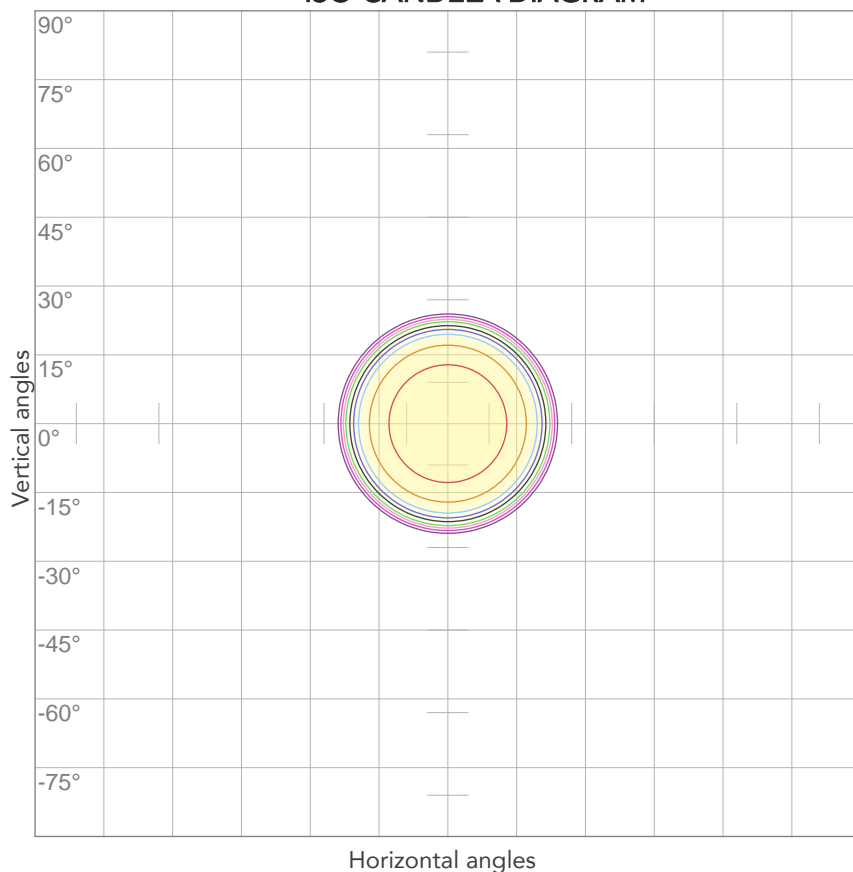
### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
228V	0,628A	132,5W	28lm/W
Power Fc			
0,97			

## ISO CANDELA DIAGRAM



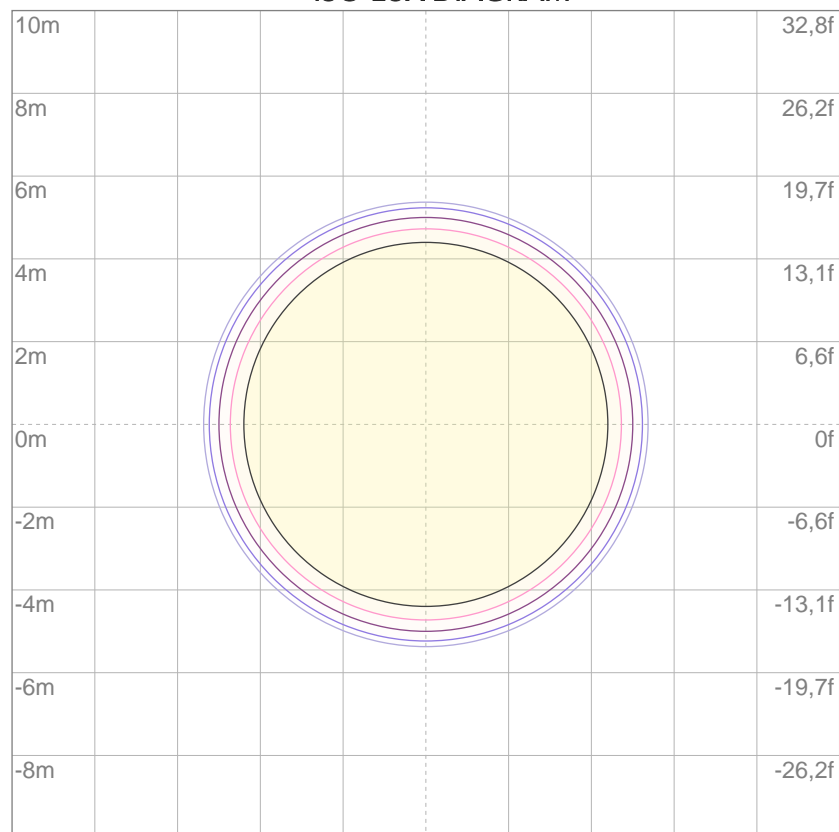
10%	762 cd
20%	1523 cd
30%	2285 cd
40%	3046 cd
50%	3808 cd
60%	4569 cd
70%	5331 cd
80%	6092 cd

### Conditions:

Number of c-planes: 2

Candela at center: 7615 cd

## ISO LUX DIAGRAM



3%	2,28 lx
5%	3,81 lx
10%	7,62 lx
30%	22,8 lx
50%	38,1 lx

### Conditions:

Number of c-planes: 2

Lux at center: 76,2 lx

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