

# Photometric Test Report



## Gallery Ecl TU

35 W zoomable LED ellipsoidals with static white LED source and framing shutter

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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:

**2150 lm**

Peak candela output:

**9284 cd**

Light quality:

**CRI: 90,7**

Color temperature:

**3164 K**

## PRODUCT NAME:

Gallery Ecl TU

## MEASUREMENT CONDITIONS:

Beam angle:

Max Zoom

Target:

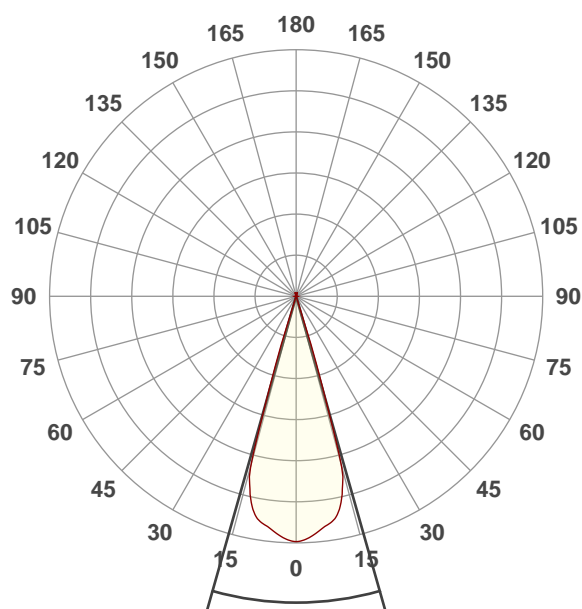
Warm White

Operator:

Paolo Carvone

Date and time:

05/05/2020 15:22:51

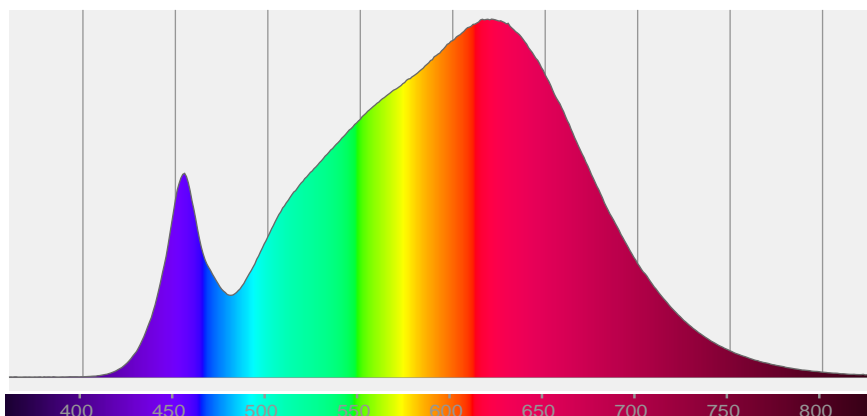


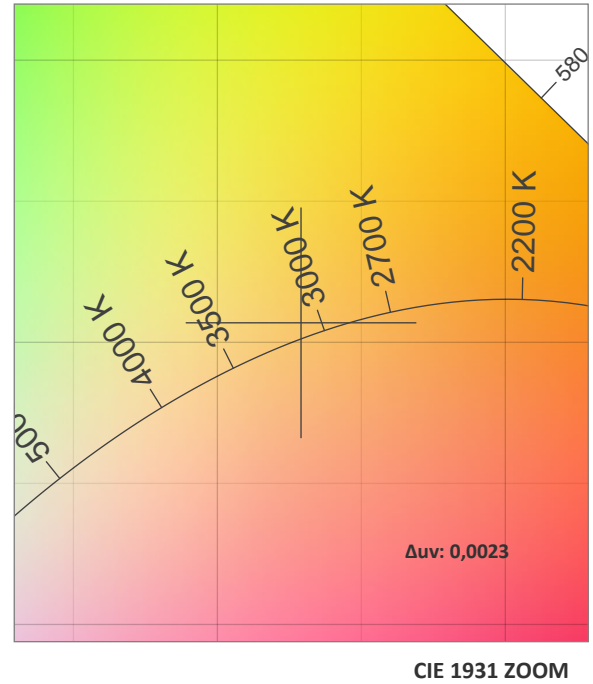
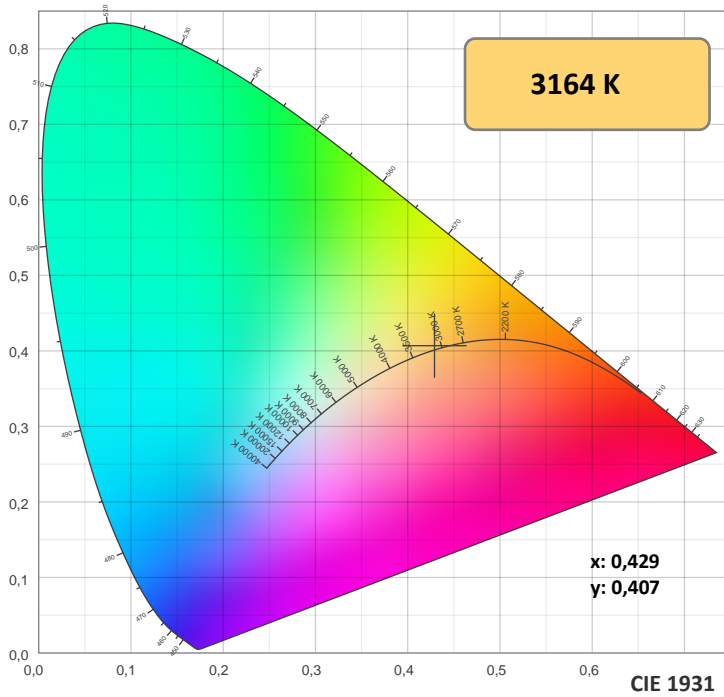
Beam angle 50%: 31,7°

Field angle 10%: 35,5°

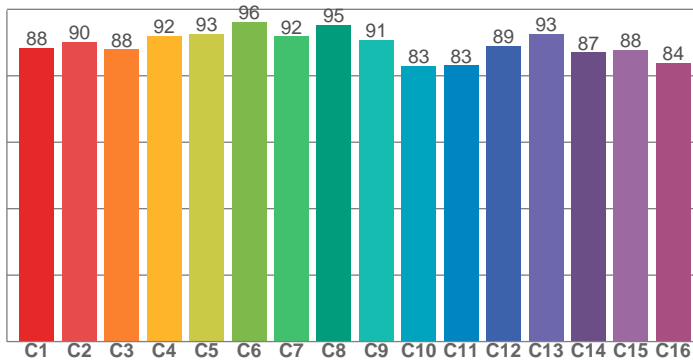
Cut off angle 2.5%: 36,4°

## Spectra

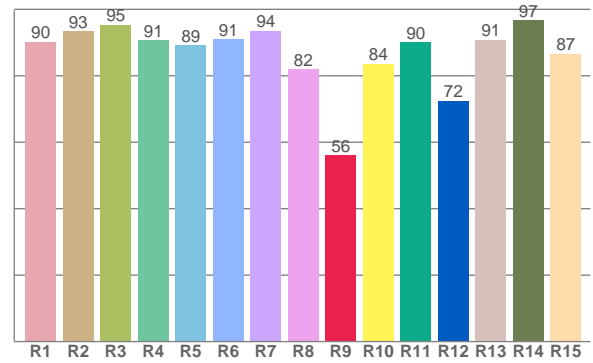




**TM30: 89,4**



**CRI: 90,7 (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
90,3	93,5	95,4	90,8	89,1	91,0	93,6	81,9	56,1	83,6	90,1	72,5	90,8	96,8	86,6

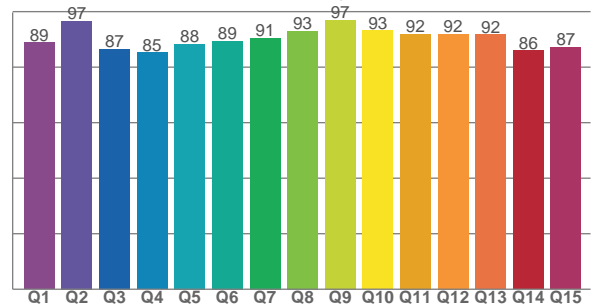
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
88,5	90,2	87,9	92,1	92,6	96,3	91,9	95,3	90,8	83,1	83,1	88,9	92,6	87,1	87,7	83,9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
88,9	96,6	86,6	85,3	88,4	89,4	90,5	93,1	97,0	93,2	92,0	91,9	91,8	86,0	87,1

**CQS: 89,8**



## 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
3164 K	90,7	56,1	89,4	98,1	89,8	92	0,429	0,407	0,0023

## TM30 DETAILS

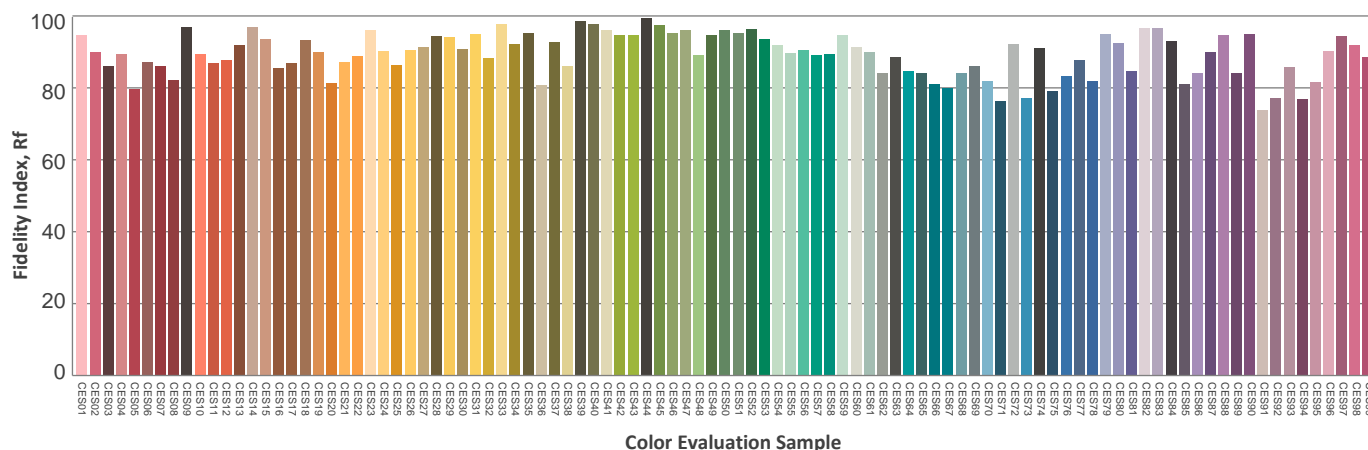
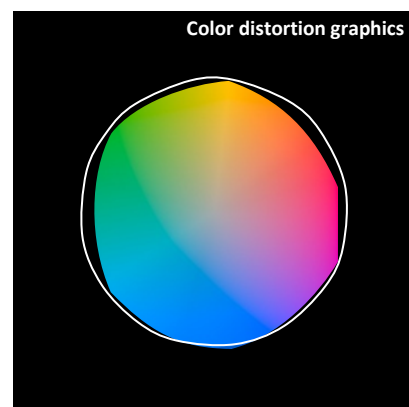
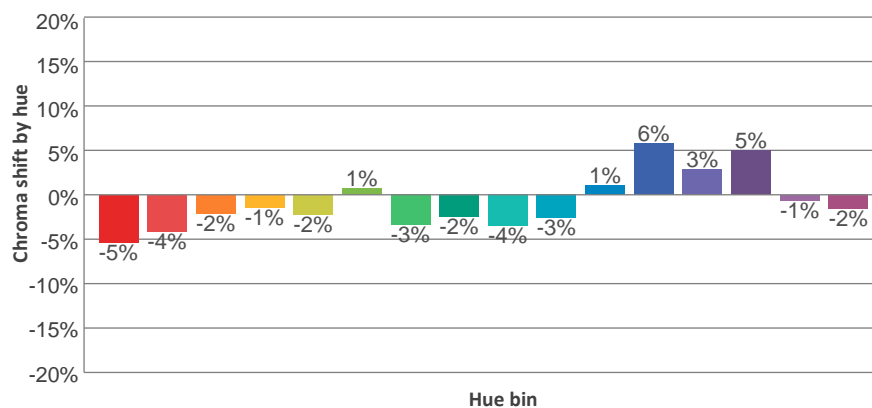
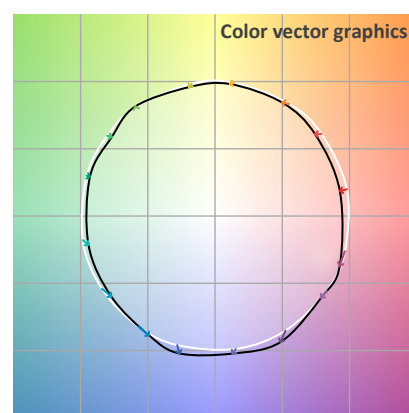
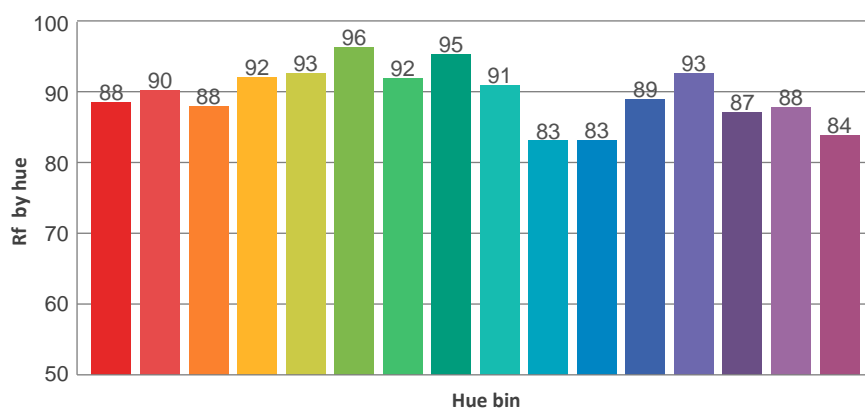
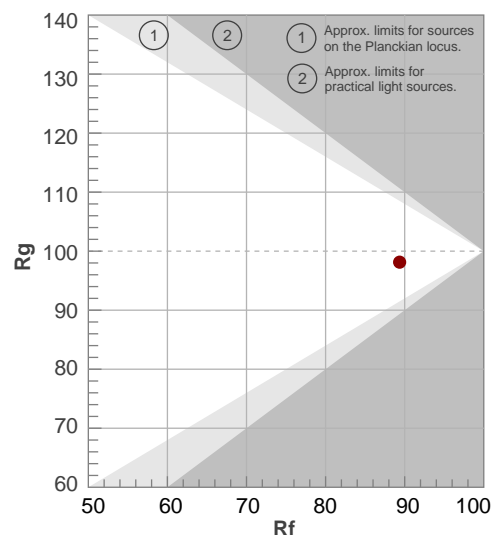
**Rf 89,4**

Fidelity index Rf

**Rg 98,1**

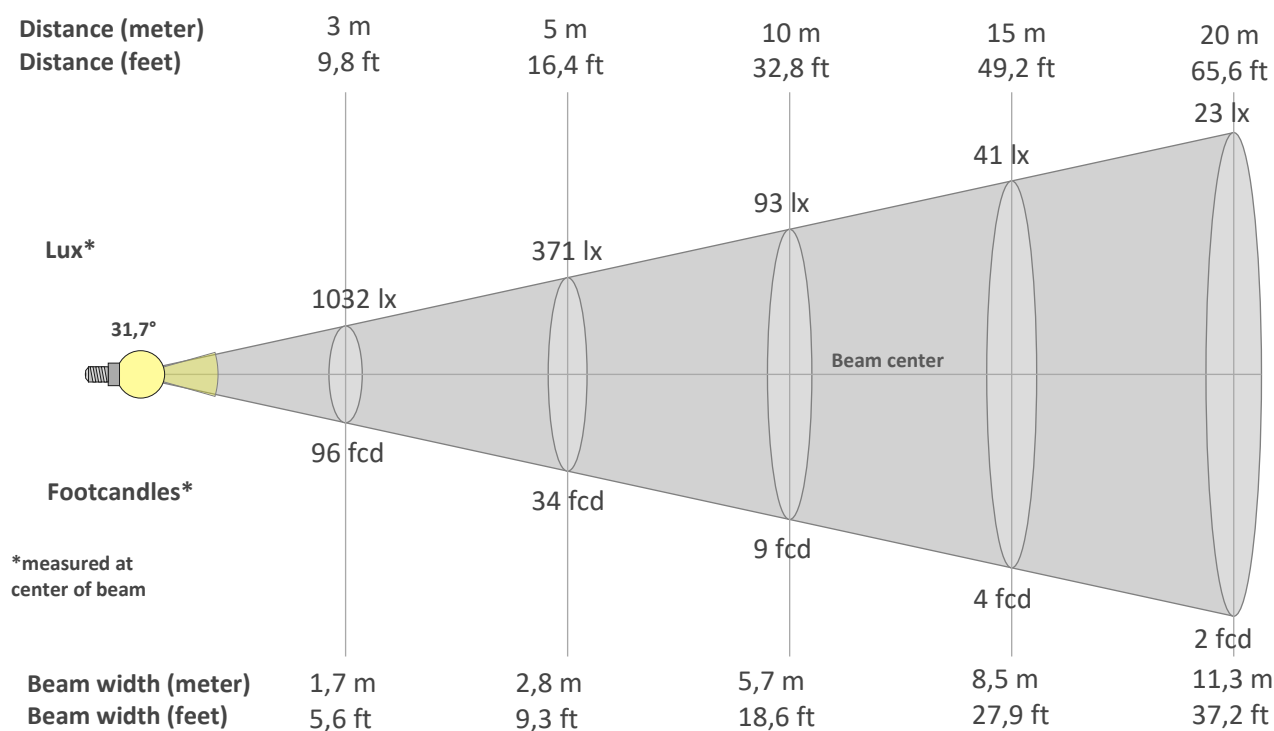
Gammut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	88	-5%	0%
2	90	-4%	2%
3	88	-2%	5%
4	92	-1%	3%
5	93	-2%	2%
6	96	1%	0%
7	92	-3%	-1%
8	95	-2%	0%
9	91	-4%	4%
10	83	-3%	9%
11	83	1%	10%
12	89	6%	3%
13	93	3%	-3%
14	87	5%	-8%
15	88	-1%	-7%
16	84	-2%	-11%



## BEAM DETAILS

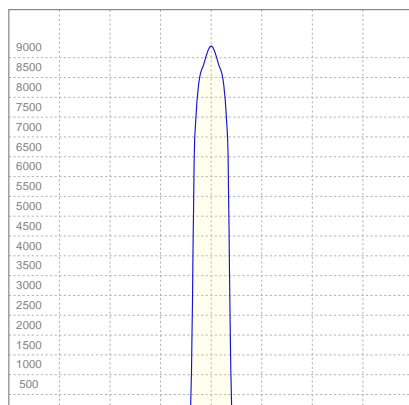
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
31,7°	35,5°	36,4°	96,7%	96,3%



### 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	9284lx	2321lx	1032lx	580lx	371lx	165lx	93lx	41lx	23lx	15lx	10lx	6lx	4lx
Footcand.	862fcd	216fcd	96fcd	54fcd	34fcd	15fcd	9fcd	4fcd	2fcd	1fcd	1fcd	1fcd	0fcd
Beam wid.	0,6m	1,1m	1,7m	2,3m	2,8m	4,3m	5,7m	8,5m	11,3m	14,2m	17m	22,7m	28,4m
Beam wid.	1,9ft	3,7ft	5,6ft	7,4ft	9,3ft	14ft	18,6ft	27,9ft	37,2ft	46,5ft	55,8ft	74,4ft	93,1ft

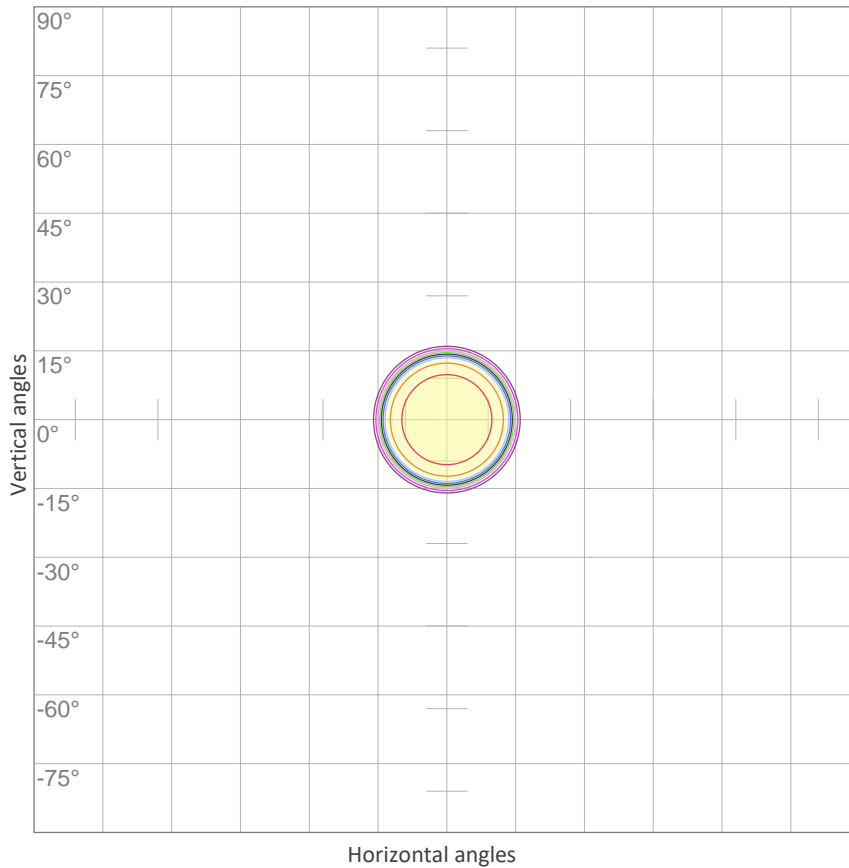
### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Efficiency
226V	0,196A	42,9W	50lm/W
Power FC			
0,97			

## ISO CANDELA DIAGRAM



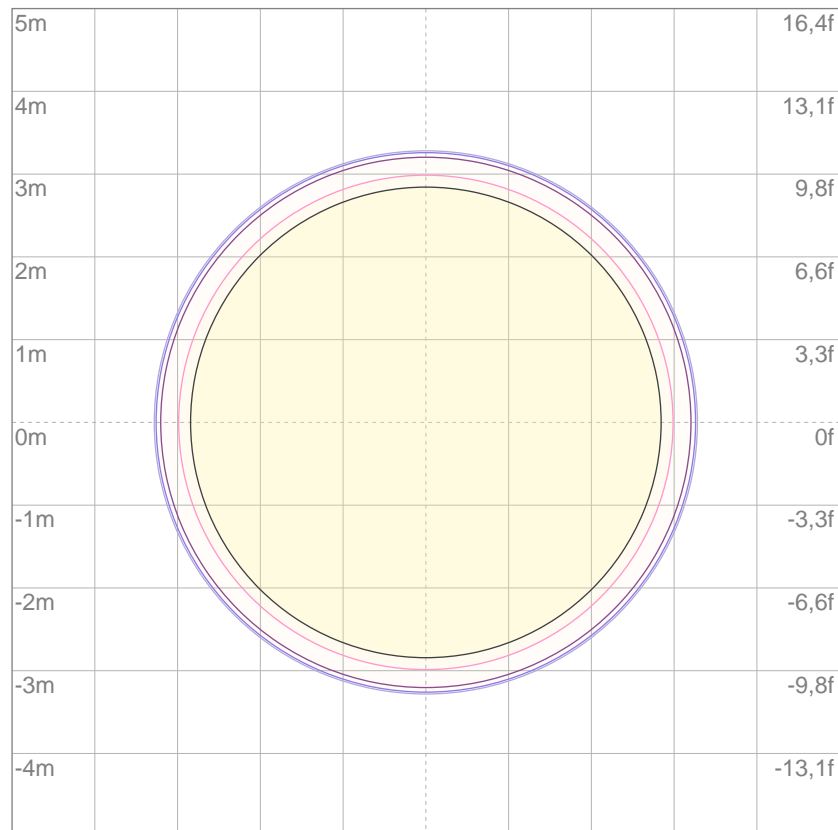
10%	928 cd
20%	1857 cd
30%	2785 cd
40%	3713 cd
50%	4642 cd
60%	5570 cd
70%	6498 cd
80%	7427 cd
90%	8355 cd

### Conditions:

Number of c-planes: 2

Candela at center: 9284 cd

## ISO LUX DIAGRAM



3%	2,79 lx
5%	4,64 lx
10%	9,28 lx
30%	27,9 lx
50%	46,4 lx

### Conditions:

Number of c-planes: 2

Lux at center: 92,8 lx

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





Total lumen output:

**1887 lm**

Peak candela output:

**30214 cd**

Light quality:

**CRI: 90,5**

Color temperature:

**3130 K**

## PRODUCT NAME:

Gallery Ecl TU

## MEASUREMENT CONDITIONS:

Beam angle:

Min Zoom

Target:

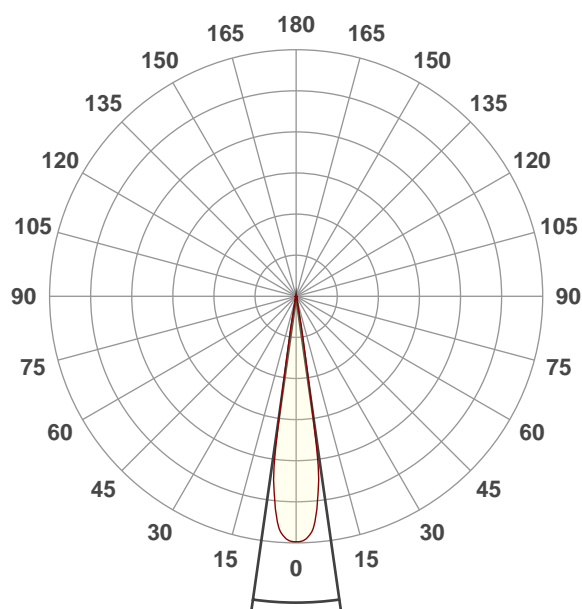
Warm White

Operator:

Paolo Carvone

Date and time:

05/05/2020 15:18:12

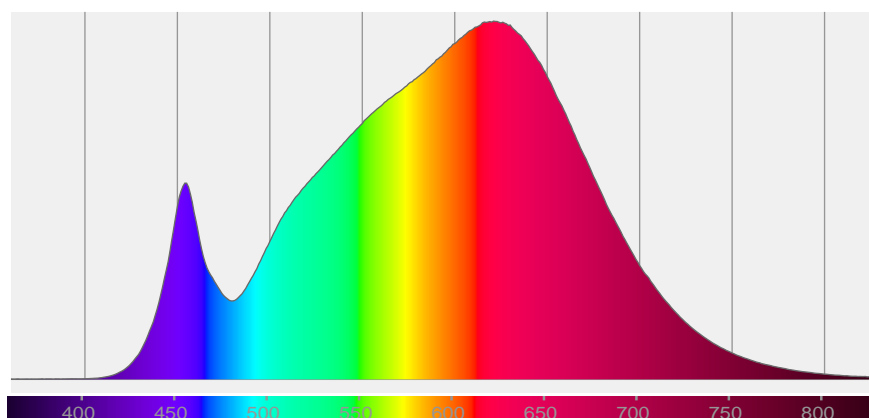


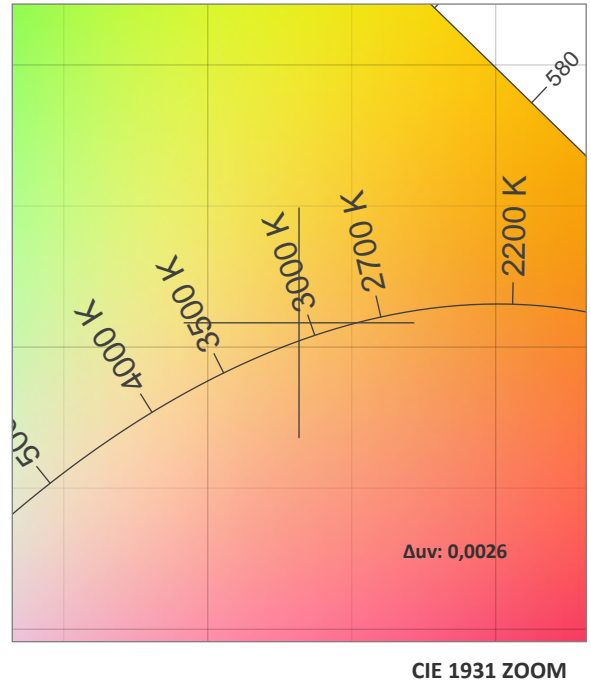
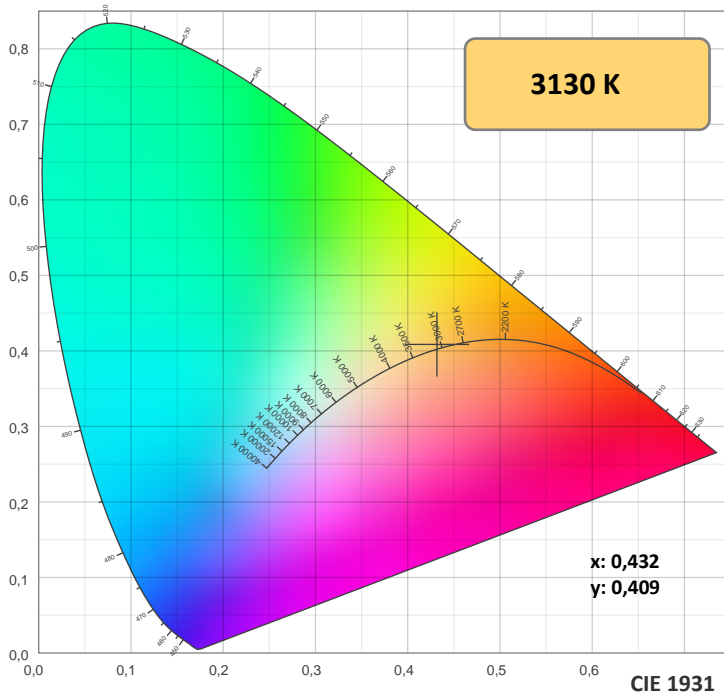
Beam angle 50%: 16,2°

Field angle 10%: 20,1°

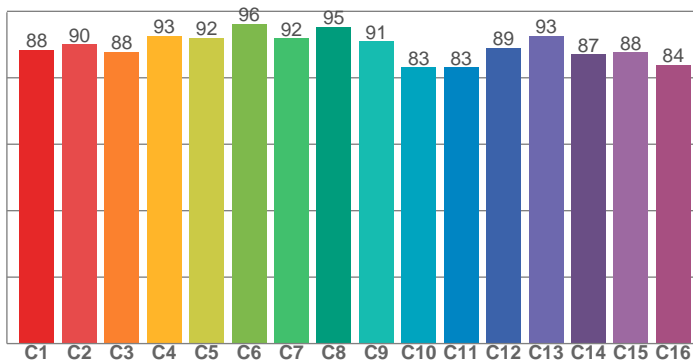
Cut off angle 2.5%: 21,5°

## Spectra

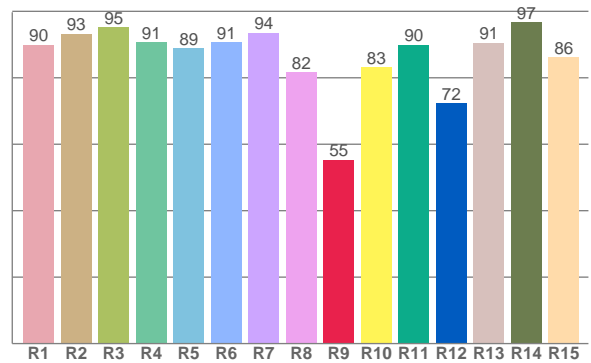




**TM30: 89,3**



**CRI: 90,5 (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
90,0	93,2	95,2	90,6	88,8	90,7	93,5	81,6	55,3	83,1	89,9	72,2	90,5	96,7	86,2

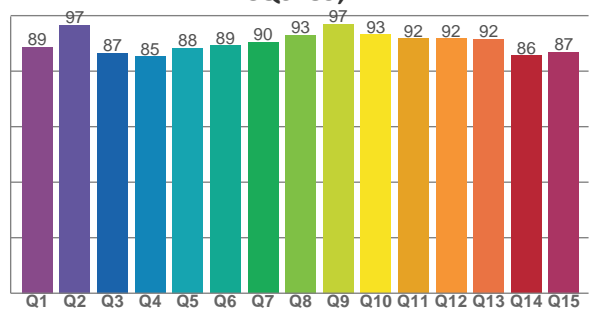
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
88,3	90,1	87,7	92,6	92,0	96,3	91,9	95,3	90,9	83,2	83,1	88,9	92,5	87,0	87,6	83,9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
88,7	96,6	86,6	85,3	88,3	89,2	90,4	93,1	96,9	93,1	91,8	91,7	91,6	85,7	86,9

**CQS: 89,7**



## 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	Δuv
3130 K	90,5	55,3	89,3	98,1	89,7	92	0,432	0,409	0,0026

## TM30 DETAILS

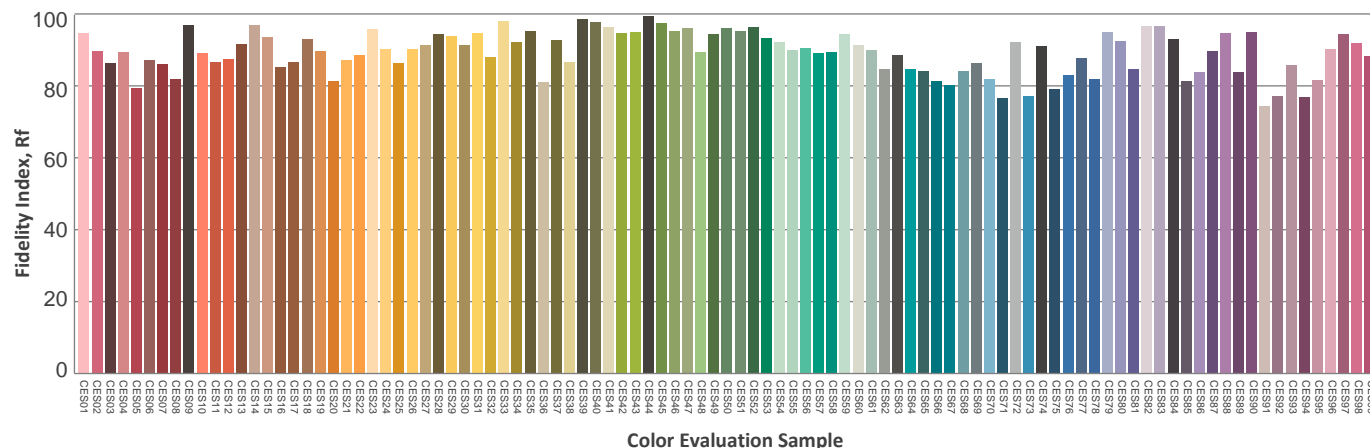
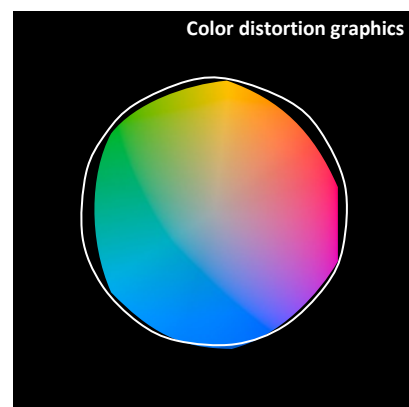
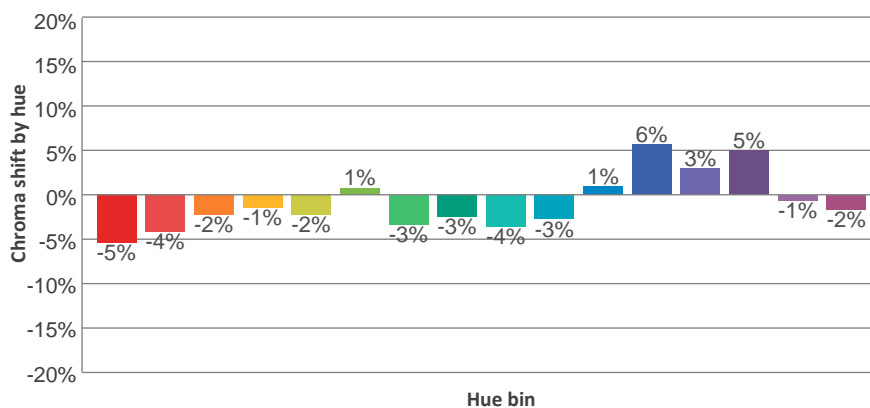
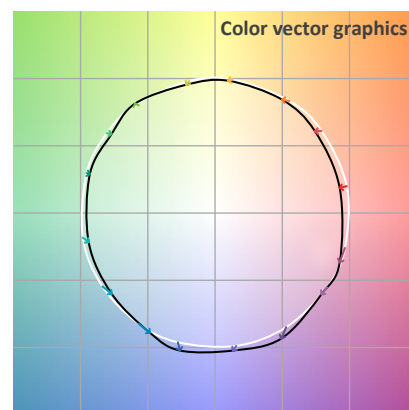
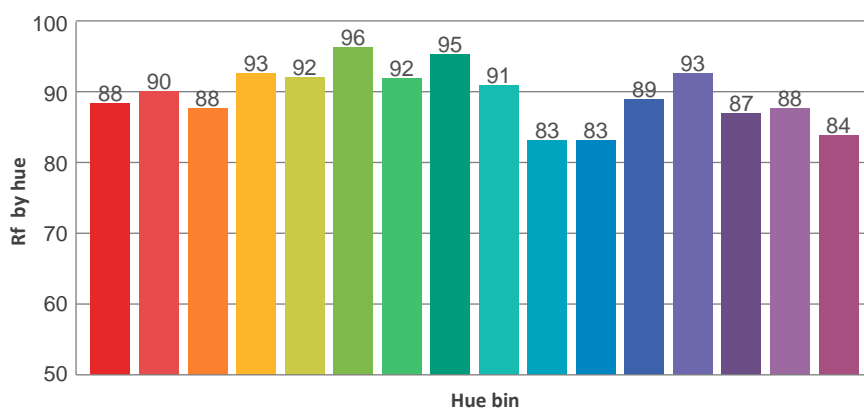
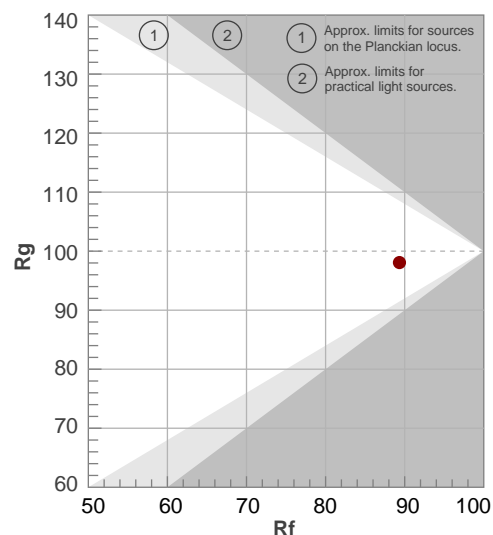
**Rf 89,3**

Fidelity index Rf

**Rg 98,1**

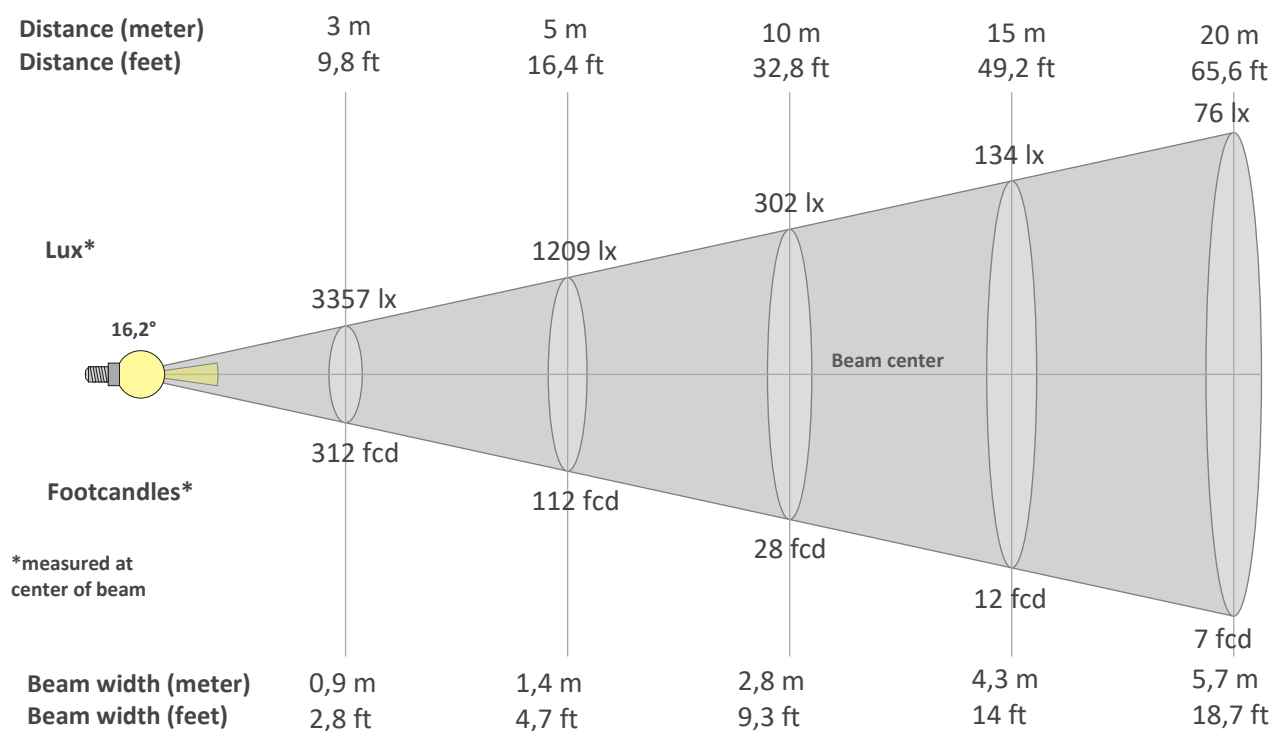
Gammut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	88	-5%	0%
2	90	-4%	2%
3	88	-2%	5%
4	93	-1%	3%
5	92	-2%	3%
6	96	1%	0%
7	92	-3%	-2%
8	95	-3%	0%
9	91	-4%	4%
10	83	-3%	8%
11	83	1%	10%
12	89	6%	3%
13	93	3%	-3%
14	87	5%	-8%
15	88	-1%	-7%
16	84	-2%	-11%



## BEAM DETAILS

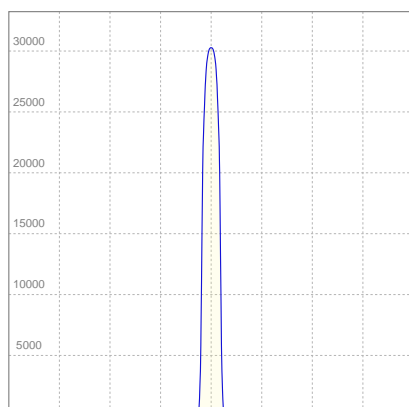
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
16,2°	20,1°	21,5°	98,8%	98,5%



### 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	30214lx	7554lx	3357lx	1888lx	1209lx	537lx	302lx	134lx	76lx	48lx	34lx	19lx	12lx
Footcand.	2807fcd	702fcd	312fcd	175fcd	112fcd	50fcd	28fcd	12fcd	7fcd	4fcd	3fcd	2fcd	1fcd
Beam wid.	0,3m	0,6m	0,9m	1,1m	1,4m	2,1m	2,8m	4,3m	5,7m	7,1m	8,5m	11,4m	14,2m
Beam wid.	0,9ft	1,9ft	2,8ft	3,7ft	4,7ft	7ft	9,3ft	14ft	18,7ft	23,4ft	28ft	37,4ft	46,7ft

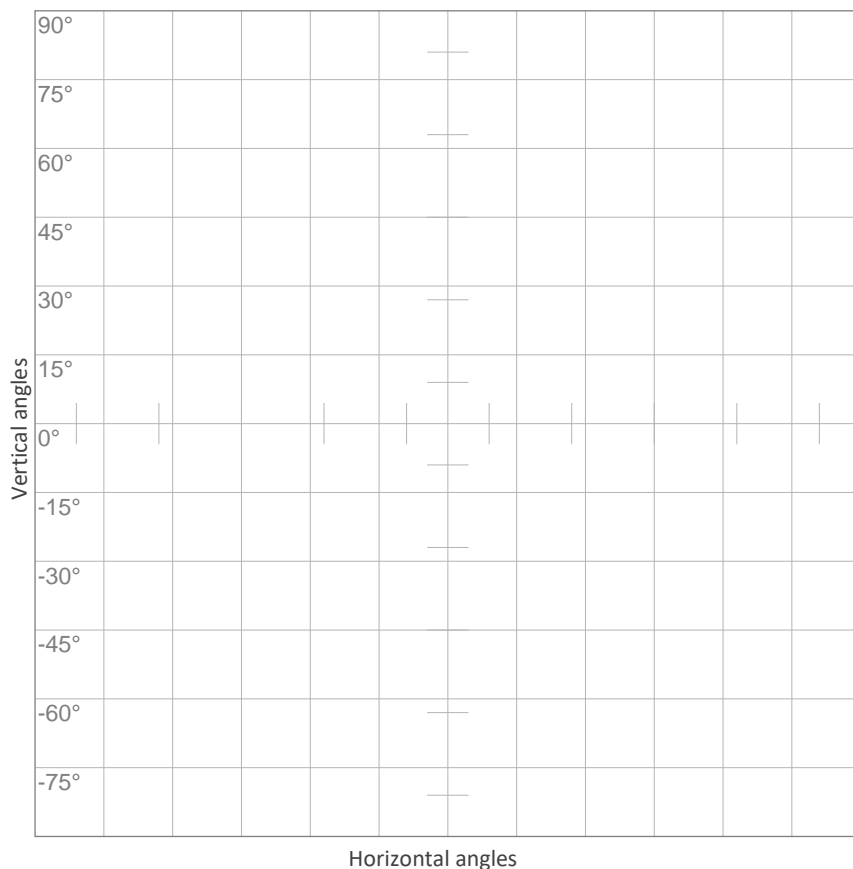
### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,198A	43,1W	44lm/W
Power FC			
0,97			

## ISO CANDELA DIAGRAM



10%	3021 cd
20%	6043 cd
30%	9064 cd
40%	12086 cd
50%	15107 cd
60%	18129 cd
70%	21150 cd
80%	24171 cd
90%	27193 cd

### Conditions:

Number of c-planes: 2

Candela at center: 30214 cd

## ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	9,06 lx
5%	15,1 lx
10%	30,2 lx
30%	90,6 lx
50%	151 lx

### Conditions:

Number of c-planes: 2

Lux at center: 302 lx

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