



# Photometric Test Report



## ECLPENDANT TU

200W White LED source

innovative pendant light

## CONTENTS

Table of contents	2
Testing process	3
Preset Full on	
Beam angle Narrow Optic	4
Beam angle Medium Optic	9
Beam angle Wide Optic	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:

11233 lm

Peak candela output:

69027 cd

Light quality:

CRI: 96,6

Color temperature:

3010 K

**PRODUCT NAME:**

ECLPENDANT TU

**MEASURAMENT CONDITIONS:**

Beam angle:

20°

Target:

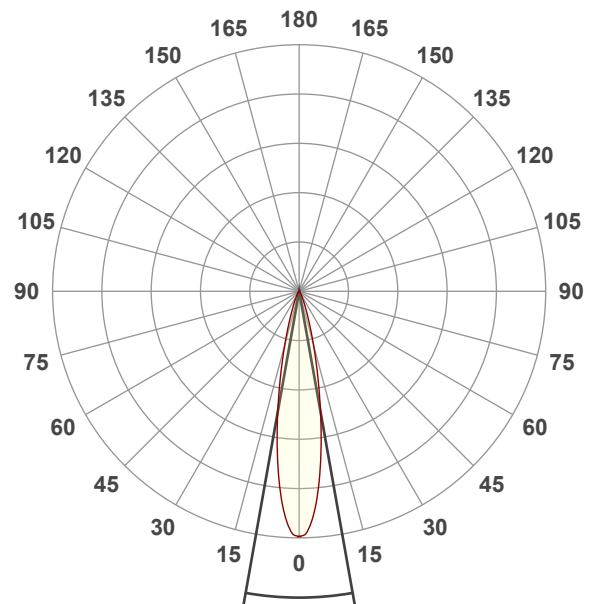
Full On

Operator:

Paolo Carvone

Date and time:

13/10/2022 10:51:06

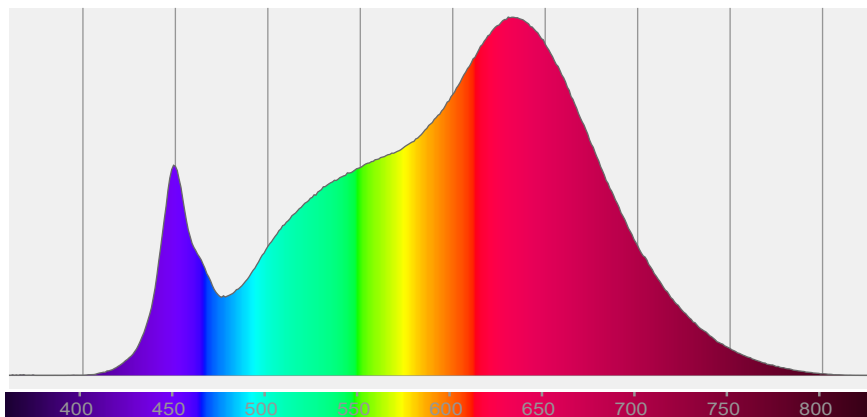


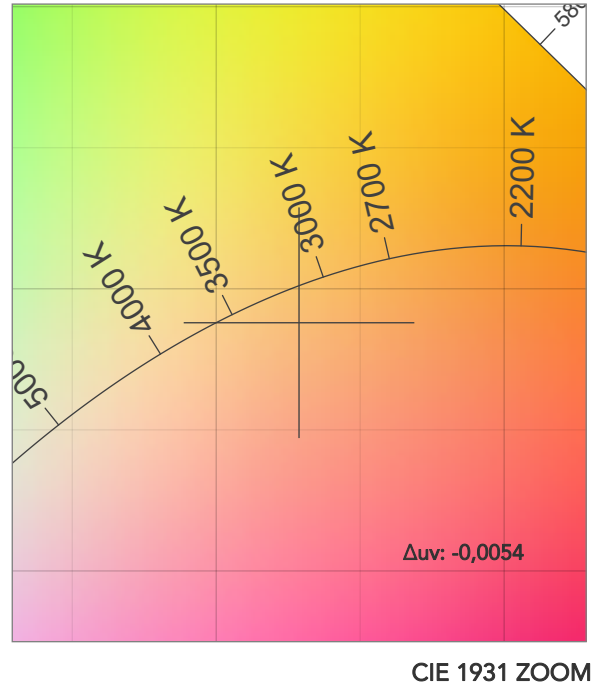
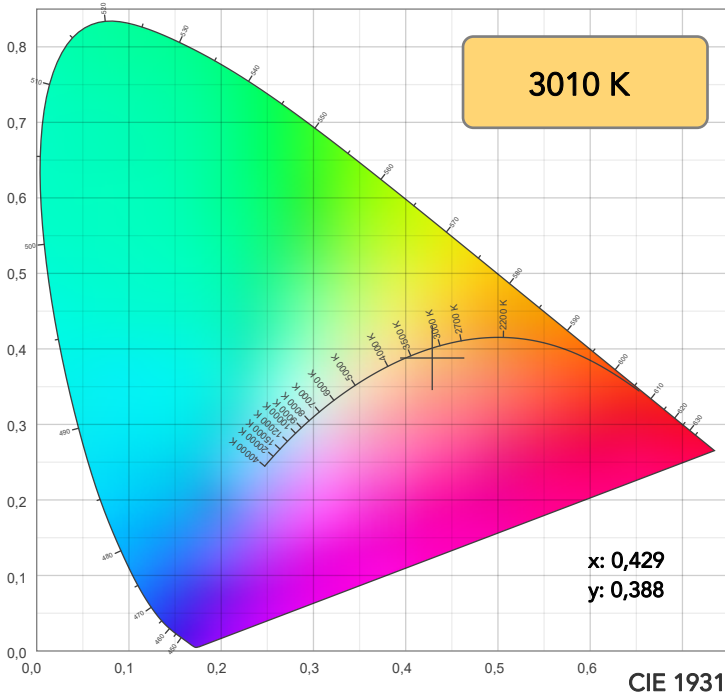
Beam angle 50%: 20,1°

Field angle 10%: 38,7°

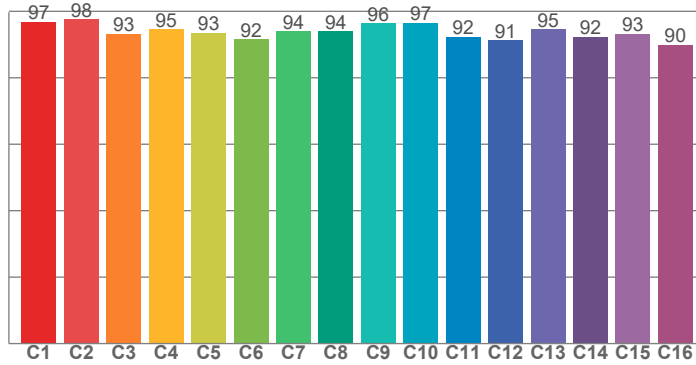
Cut off angle 2.5%: 55,3°

Spectra

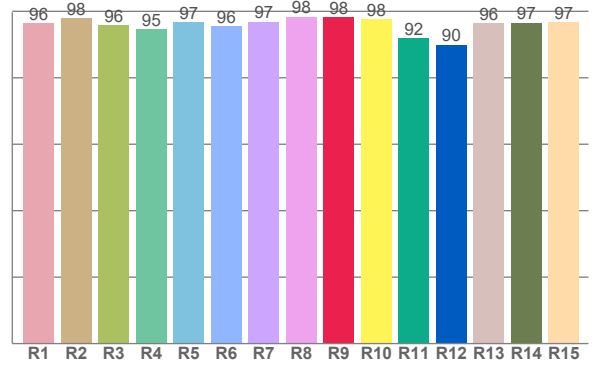




TM30: 94,1



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
96,5	97,9	95,8	94,6	96,8	95,6	96,9	98,4	98,2	97,6	91,8	89,9	96,5	96,5	96,8

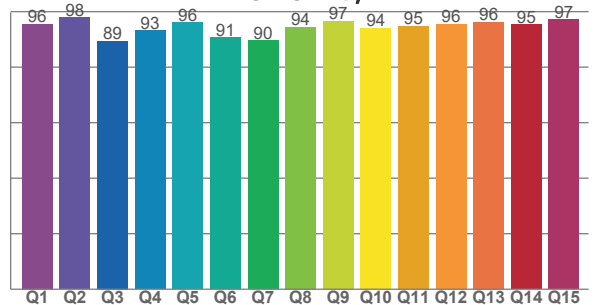
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
96,8	97,6	93,2	94,5	93,5	91,6	94,0	94,0	96,3	96,5	92,3	91,3	94,5	92,3	93,3	89,8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
95,6	97,9	89,3	93,2	96,1	90,6	89,6	94,4	96,7	94,1	94,8	95,5	96,2	95,3	97,2

CQS: 93,7



COLOR PARAMETERS

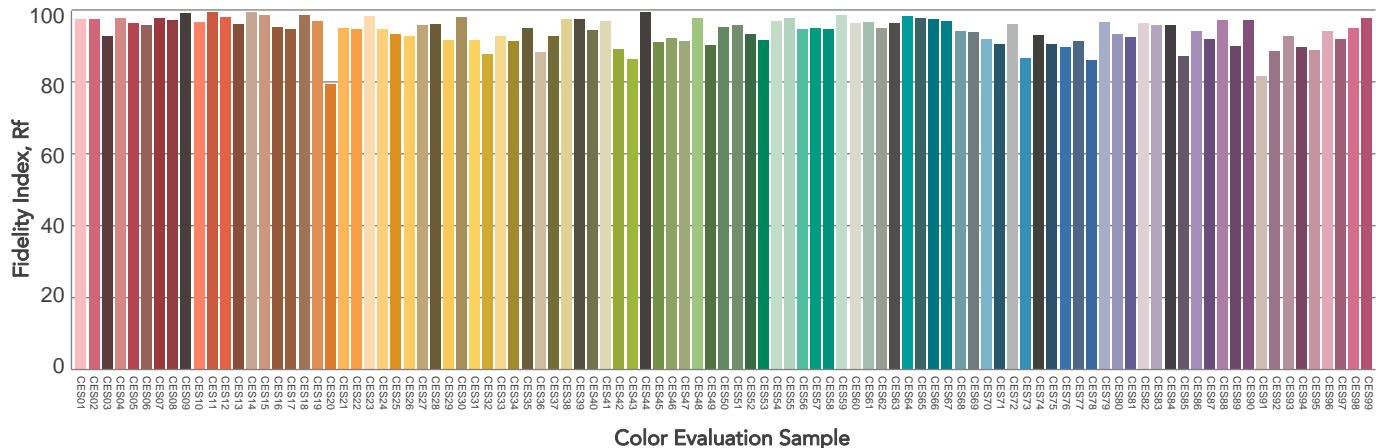
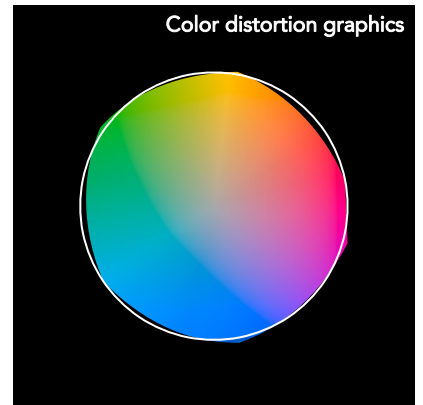
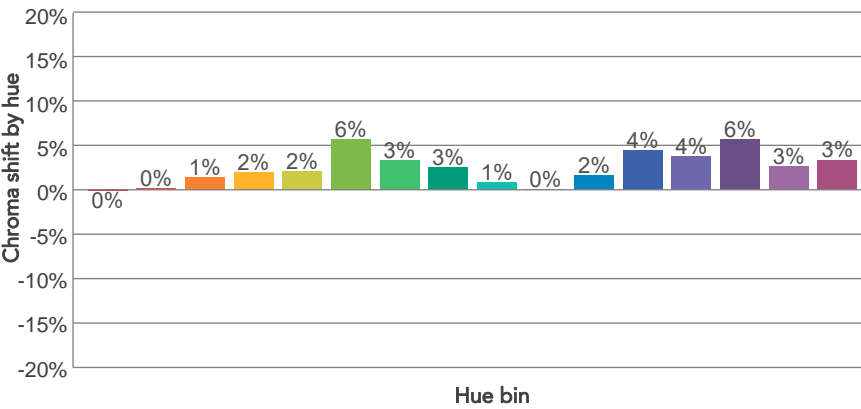
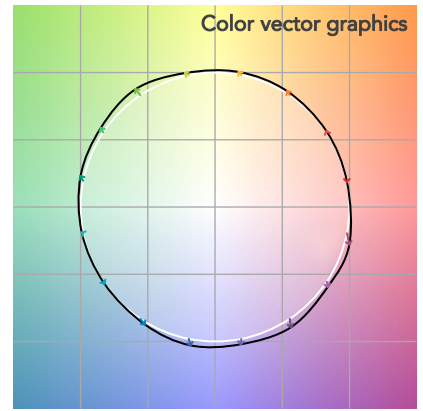
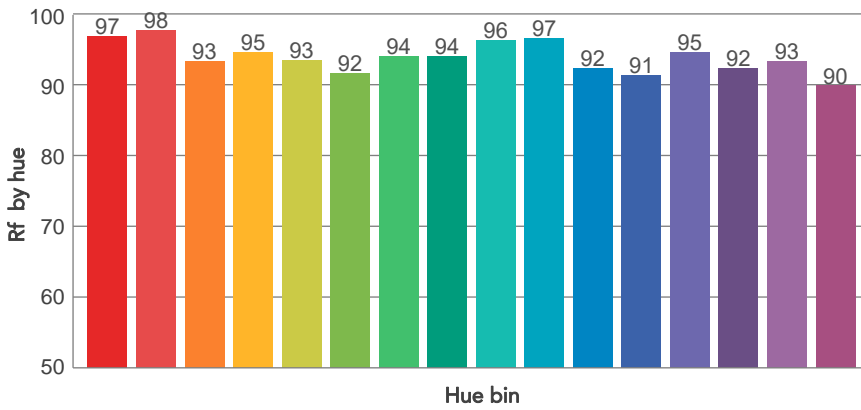
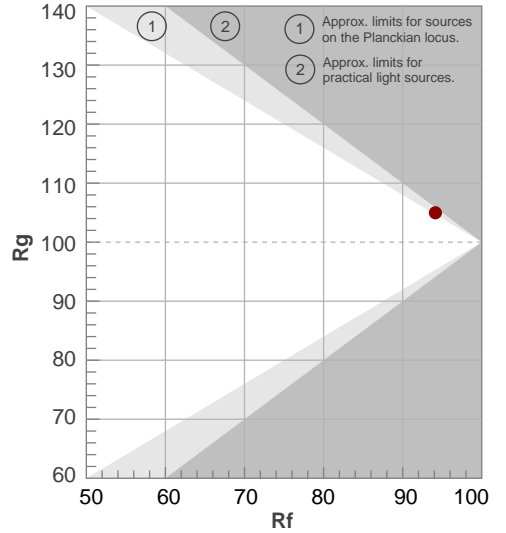
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
3010 K	96,6	98,2	94,1	105,0	93,7	95	0,429	0,388	-0,0054

# TM30 DETAILS

**Rf 94,1**  
Fidelity index Rf

**Rg 105,0**  
Gammut index

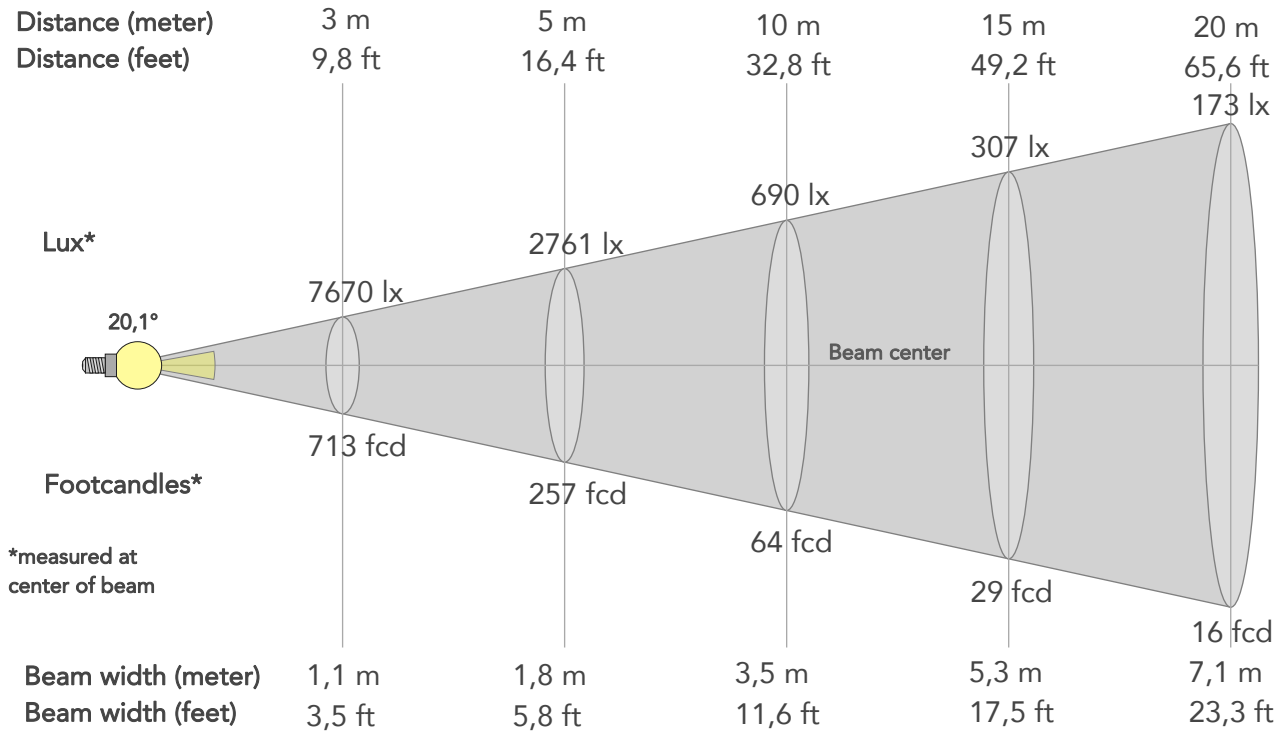
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	97	0%	-1%
2	98	0%	1%
3	93	1%	3%
4	95	2%	2%
5	93	2%	3%
6	92	6%	1%
7	94	3%	-2%
8	94	3%	-3%
9	96	1%	-1%
10	97	0%	2%
11	92	2%	5%
12	91	4%	2%
13	95	4%	-1%
14	92	6%	-3%
15	93	3%	-3%
16	90	3%	-8%



# BEAM DETAILS



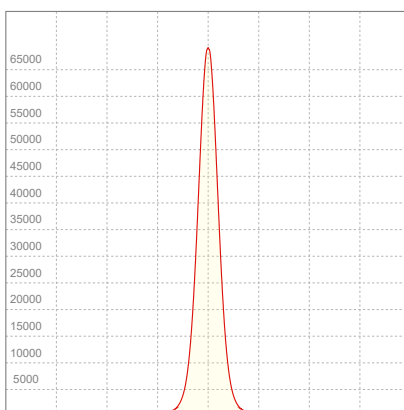
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
20,1°	38,7°	55,3°	100,0%	98,8%



## 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	69027lx	17257lx	7670lx	4314lx	2761lx	1227lx	690lx	307lx	173lx	110lx	77lx	43lx	28lx
Footcand.	6413fcd	1603fcd	713fcd	401fcd	257fcd	114fcd	64fcd	29fcd	16fcd	10fcd	7fcd	4fcd	3fcd
Beam wid.	0,4m	0,7m	1,1m	1,4m	1,8m	2,7m	3,5m	5,3m	7,1m	8,9m	10,6m	14,2m	17,7m
Beam wid.	1,2ft	2,3ft	3,5ft	4,6ft	5,8ft	8,7ft	11,6ft	17,5ft	23,3ft	29,1ft	34,9ft	46,6ft	58,2ft

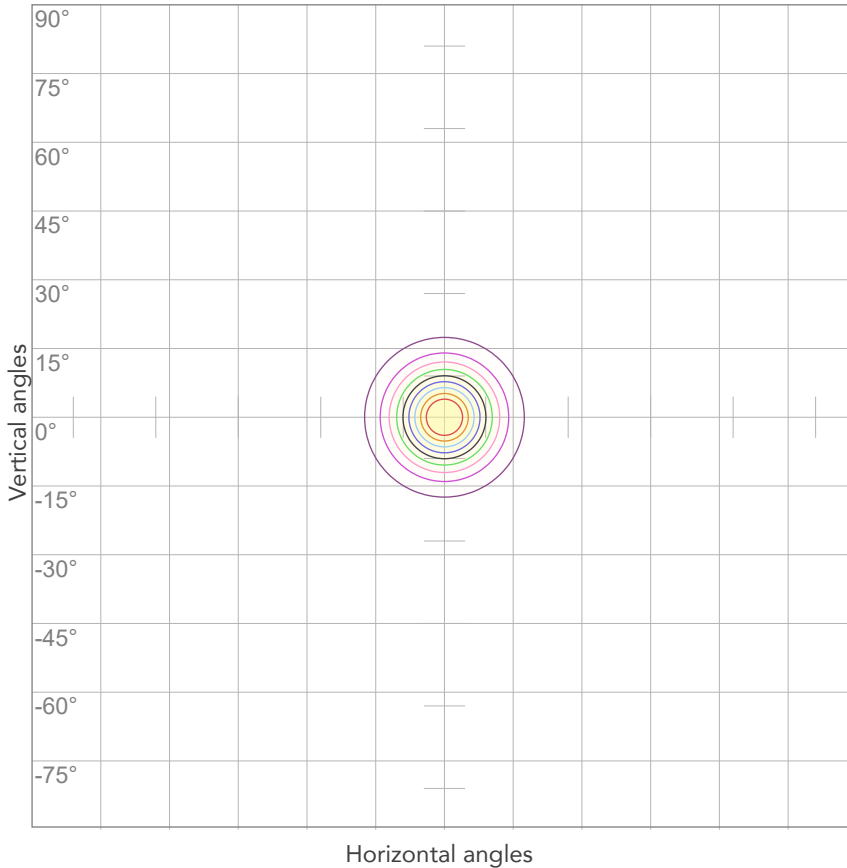
## LINEAR DISTRIBUTION DIAGRAM



## ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,831A	181W	62lm/W

## ISO CANDELA DIAGRAM



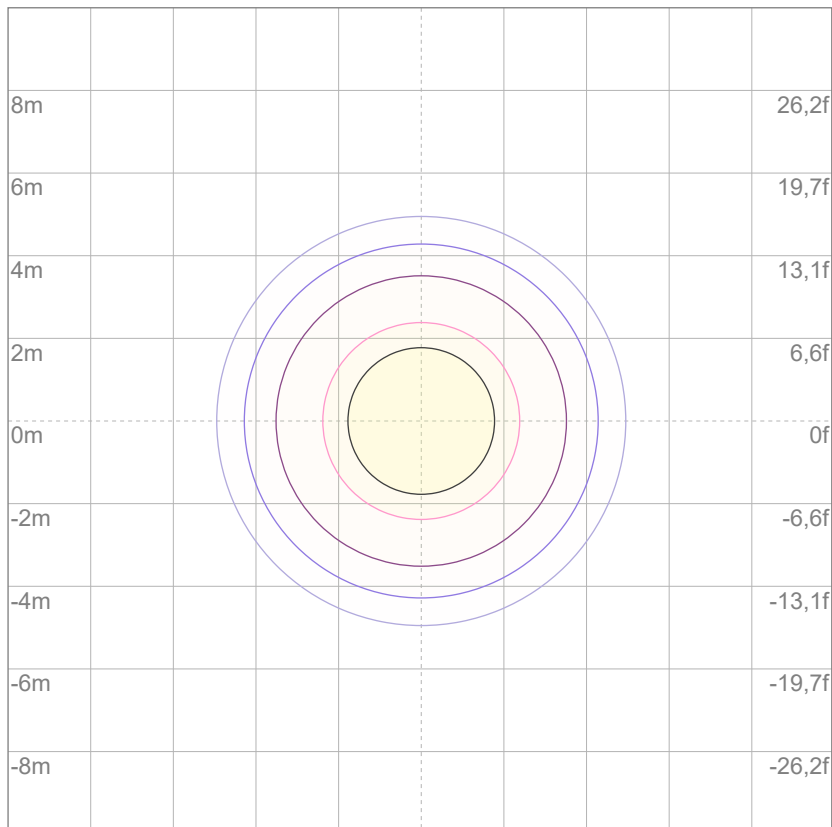
10%	6903 cd
20%	13805 cd
30%	20708 cd
40%	27611 cd
50%	34514 cd
60%	41416 cd
70%	48319 cd
80%	55222 cd

Conditions:

Number of c-planes: 2

Candela at center: 69027 cd

## ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	20,7 lx
5%	34,5 lx
10%	69,0 lx
30%	207 lx
50%	345 lx

Conditions:

Number of c-planes: 2

Lux at center: 690 lx

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





Total lumen output:

11760 lm

Peak candela output:

24339 cd

Light quality:

CRI: 96,6

Color temperature:

3010 K

**PRODUCT NAME:**

ECLPENDANT TU

**MEASURAMENT CONDITIONS:**

Beam angle:

40°

Target:

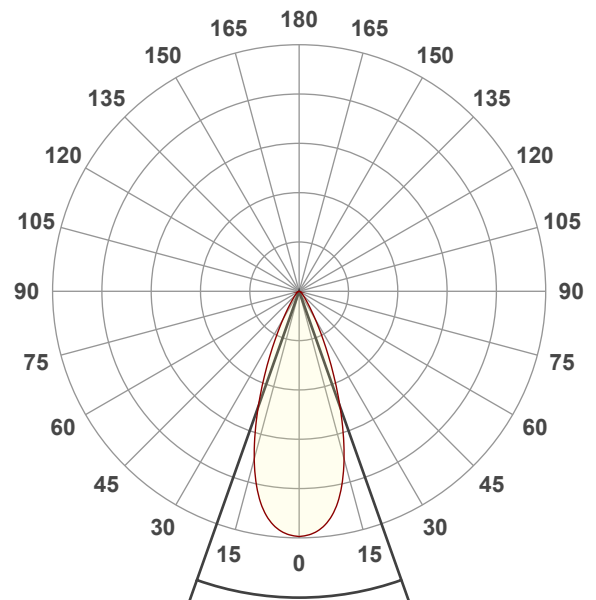
Full On

Operator:

Paolo Carvone

Date and time:

13/10/2022 10:54:31

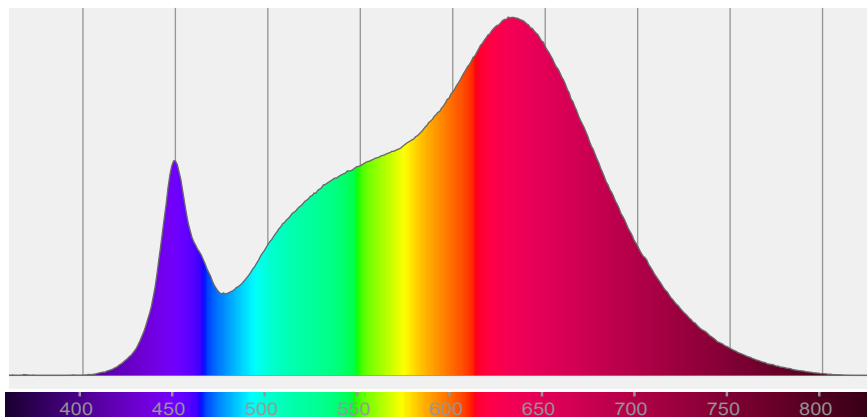


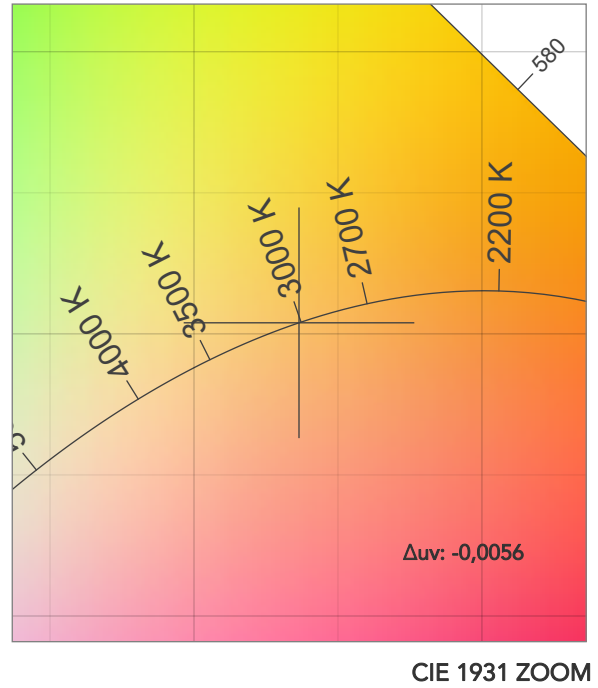
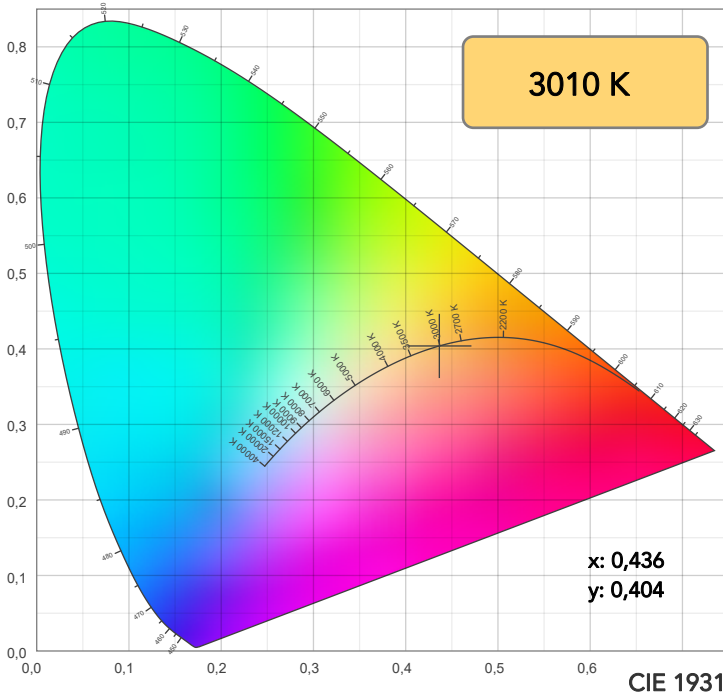
Beam angle 50%: 39°

Field angle 10%: 63,9°

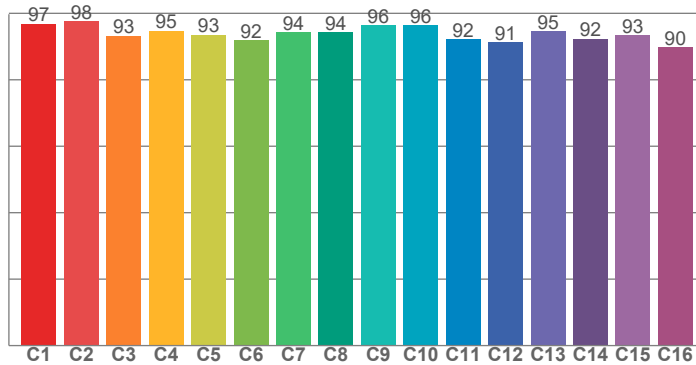
Cut off angle 2.5%: 88,4°

Spectra

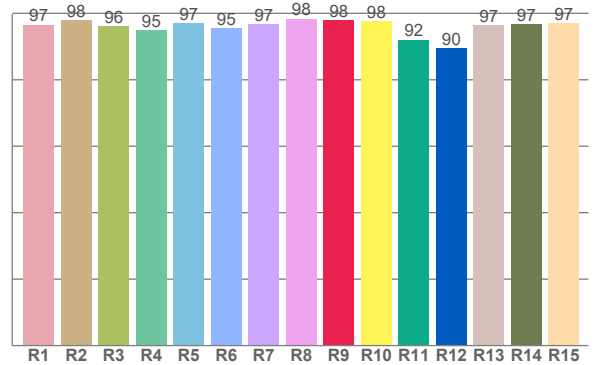




TM30: 94,2



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
96,6	97,8	96,1	94,8	96,9	95,4	96,8	98,4	97,9	97,5	92,1	89,5	96,5	96,7	97,0

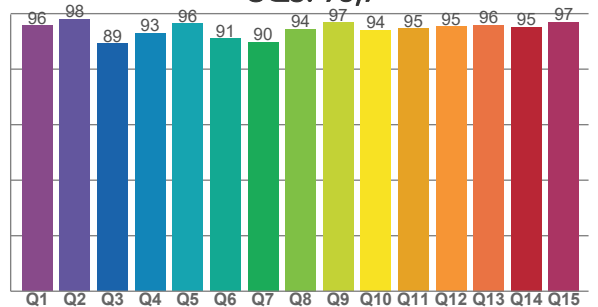
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
96,8	97,5	93,2	94,7	93,5	91,8	94,3	94,3	96,4	96,3	92,1	91,3	94,5	92,2	93,3	89,8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
95,6	97,9	89,2	92,9	96,4	91,1	89,8	94,4	96,8	94,1	94,7	95,3	96,0	95,3	97,0

CQS: 93,7



COLOR PARAMETERS

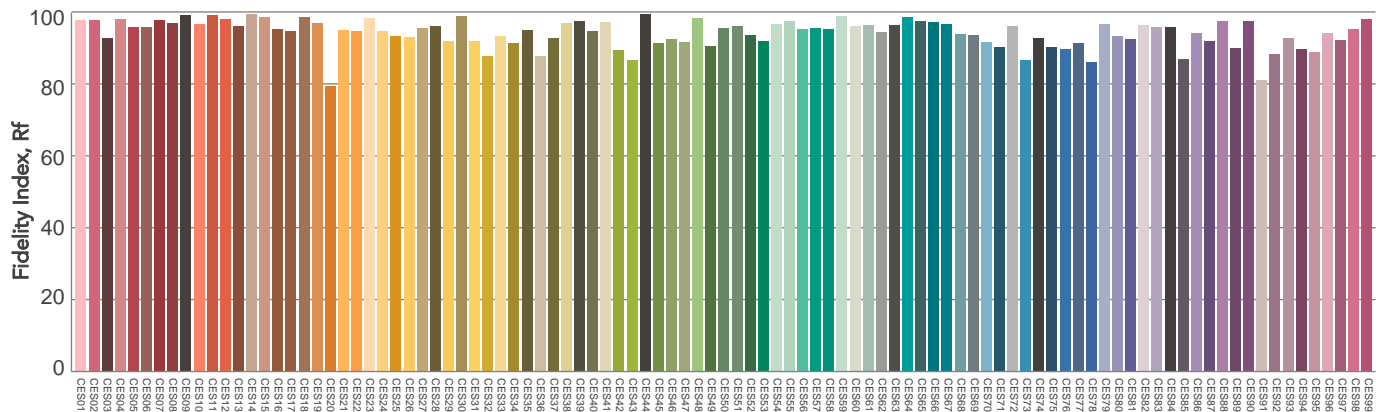
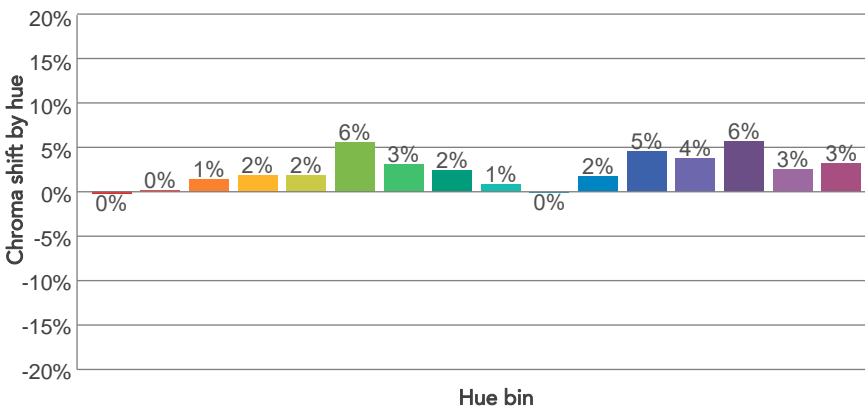
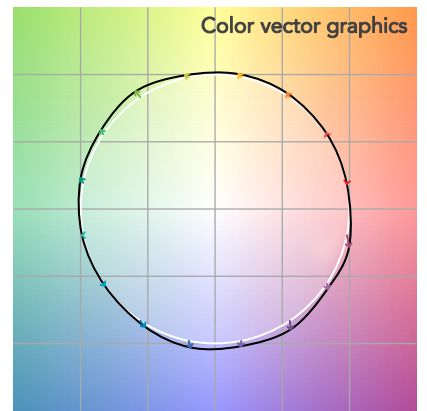
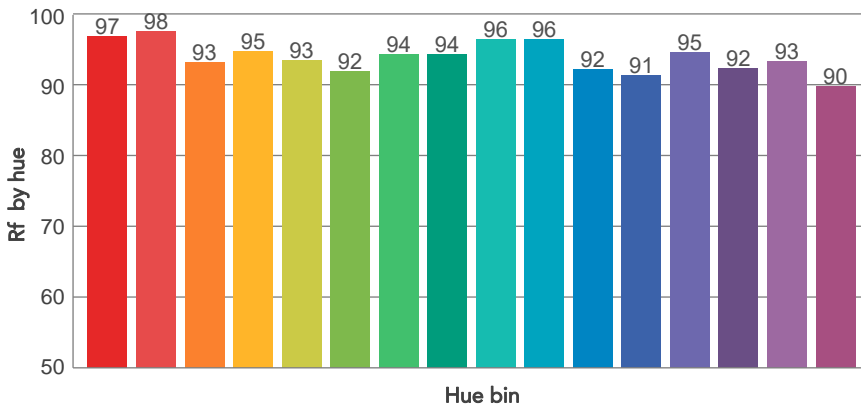
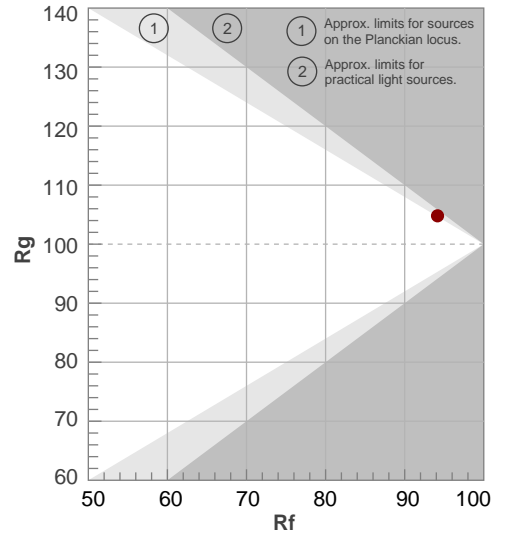
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
3010 K	96,6	97,9	94,2	104,8	93,7	95	0,436	0,404	-0,0056

# TM30 DETAILS

**Rf 94,2**  
Fidelity index Rf

**Rg 104,8**  
Gammut index

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	97	0%	-1%
2	98	0%	1%
3	93	1%	3%
4	95	2%	2%
5	93	2%	3%
6	92	6%	1%
7	94	3%	-2%
8	94	2%	-3%
9	96	1%	0%
10	96	0%	2%
11	92	2%	5%
12	91	5%	2%
13	95	4%	-1%
14	92	6%	-3%
15	93	3%	-3%
16	90	3%	-8%

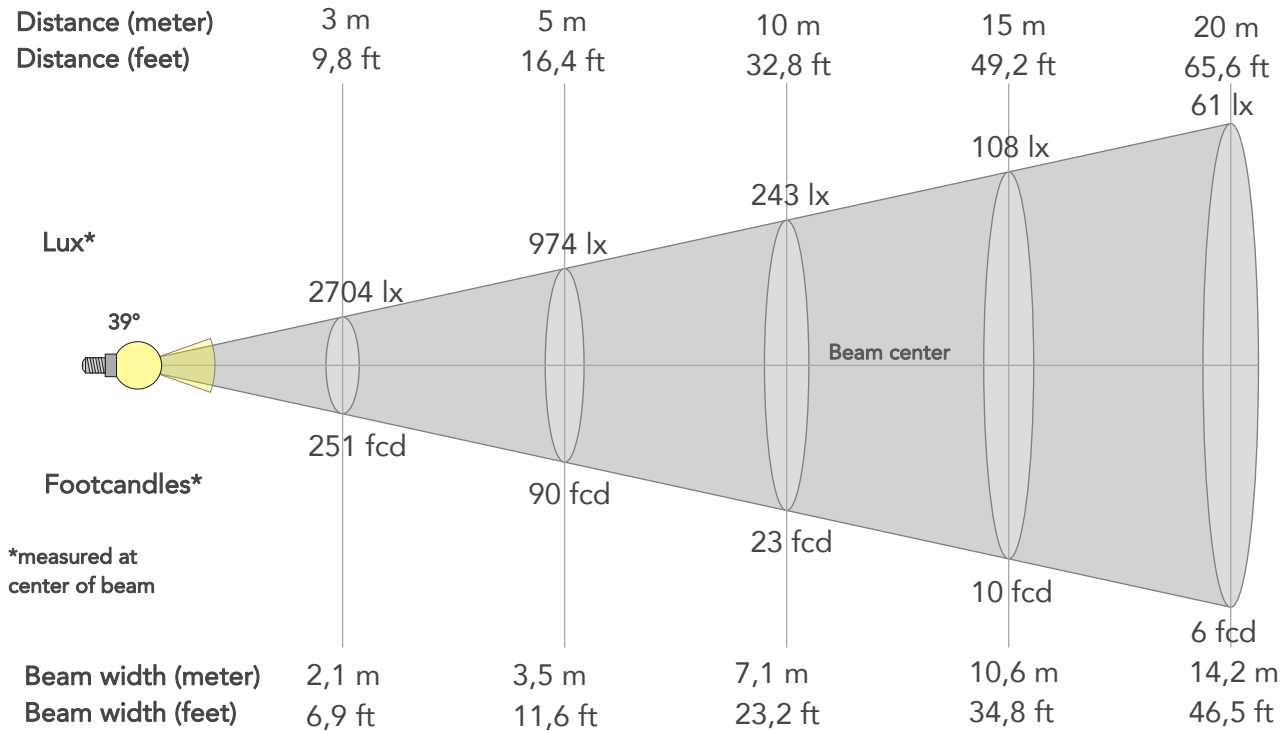


Color Evaluation Sample

# BEAM DETAILS



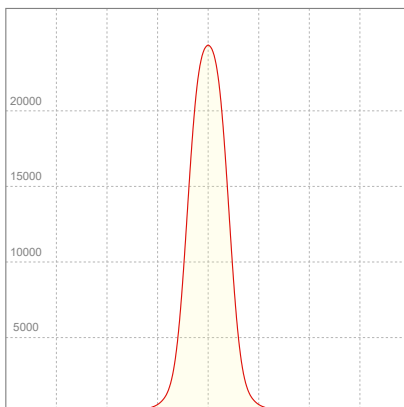
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
39°	63,9°	88,4°	99,2%	95,5%



## 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	24339lx	6085lx	2704lx	1521lx	974lx	433lx	243lx	108lx	61lx	39lx	27lx	15lx	10lx
Footcand.	2261fcd	565fcd	251fcd	141fcd	90fcd	40fcd	23fcd	10fcd	6fcd	4fcd	3fcd	1fcd	1fcd
Beam wid.	0,7m	1,4m	2,1m	2,8m	3,5m	5,3m	7,1m	10,6m	14,2m	17,7m	21,2m	28,3m	35,4m
Beam wid.	2,3ft	4,7ft	6,9ft	9,3ft	11,6ft	17,4ft	23,2ft	34,8ft	46,5ft	58,1ft	69,7ft	92,9ft	116,2ft

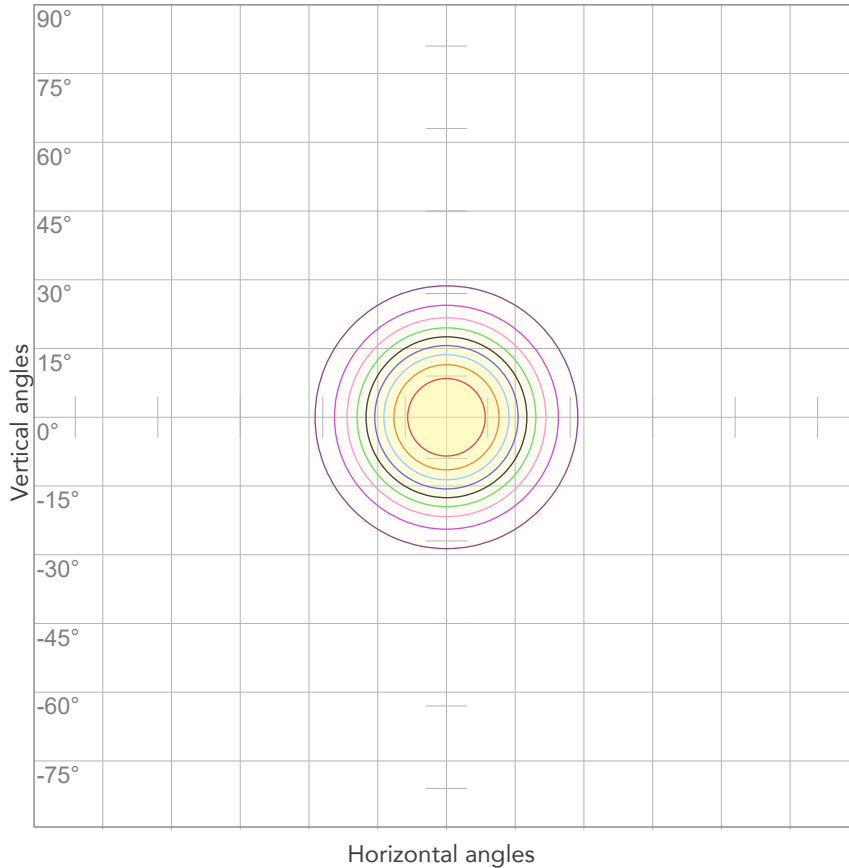
## LINEAR DISTRIBUTION DIAGRAM



## ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,825A	180W	65lm/W

## ISO CANDELA DIAGRAM



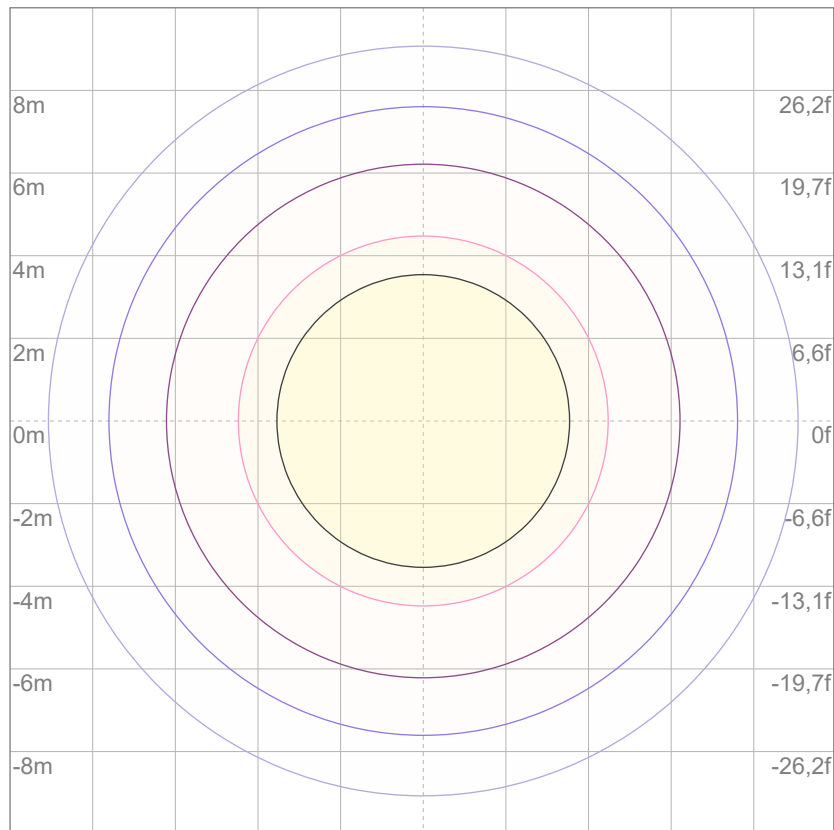
10%	2434 cd
20%	4868 cd
30%	7302 cd
40%	9736 cd
50%	12170 cd
60%	14603 cd
70%	17037 cd
80%	19471 cd

Conditions:

Number of c-planes: 2

Candela at center: 24339 cd

## ISO LUX DIAGRAM



3%	7,30 lx
5%	12,2 lx
10%	24,3 lx
30%	73,0 lx
50%	122 lx

Conditions:

Number of c-planes: 2

Lux at center: 243 lx

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

Mounting height: 10 meters (33 feet)



Total lumen output:

10981 lm

Peak candela output:

12894 cd

Light quality:

CRI: 96,6

Color temperature:

3010 K

**PRODUCT NAME:**

ECLPENDANT TU

**MEASURAMENT CONDITIONS:**

Beam angle:

60°

Target:

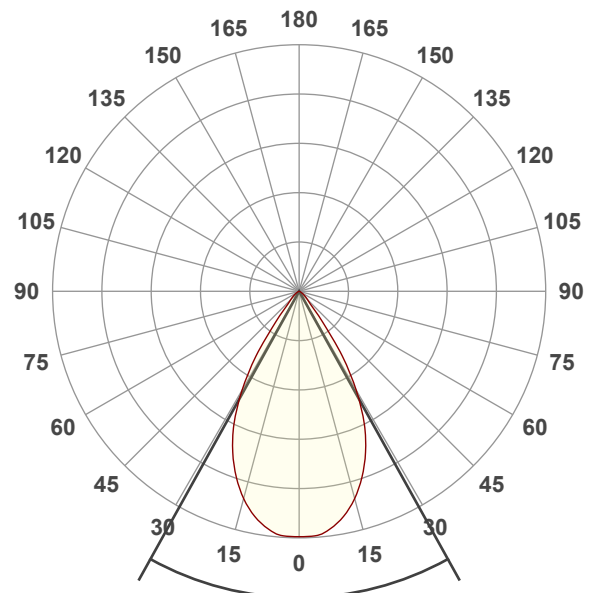
Full On

Operator:

Paolo Carvone

Date and time:

13/10/2022 10:56:47

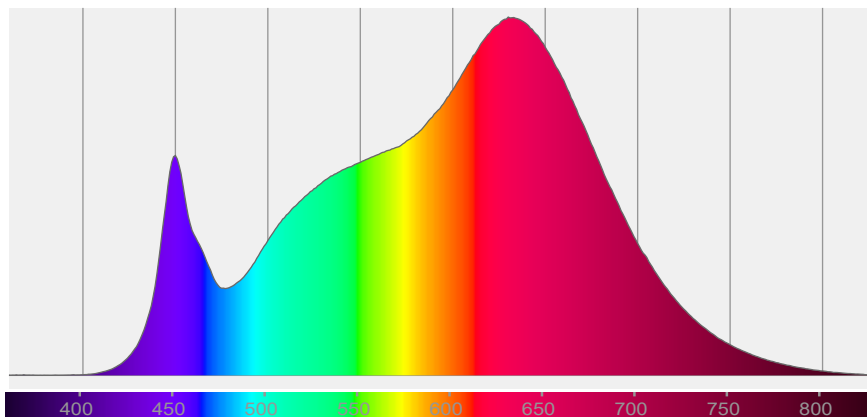


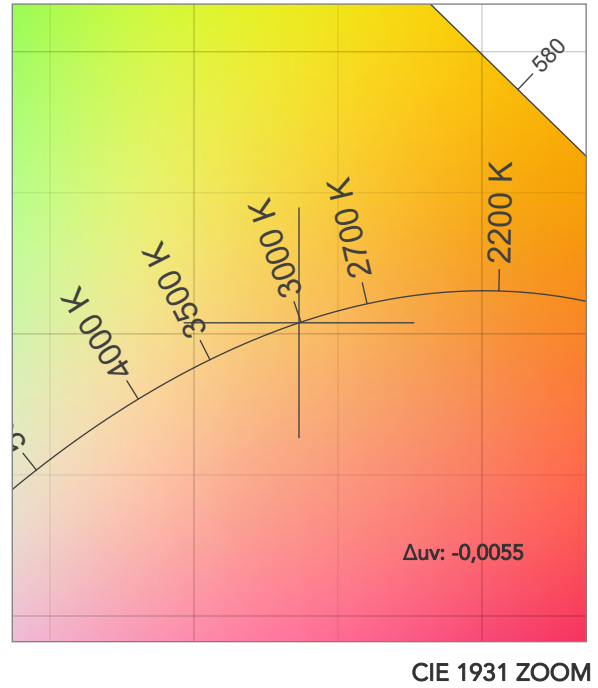
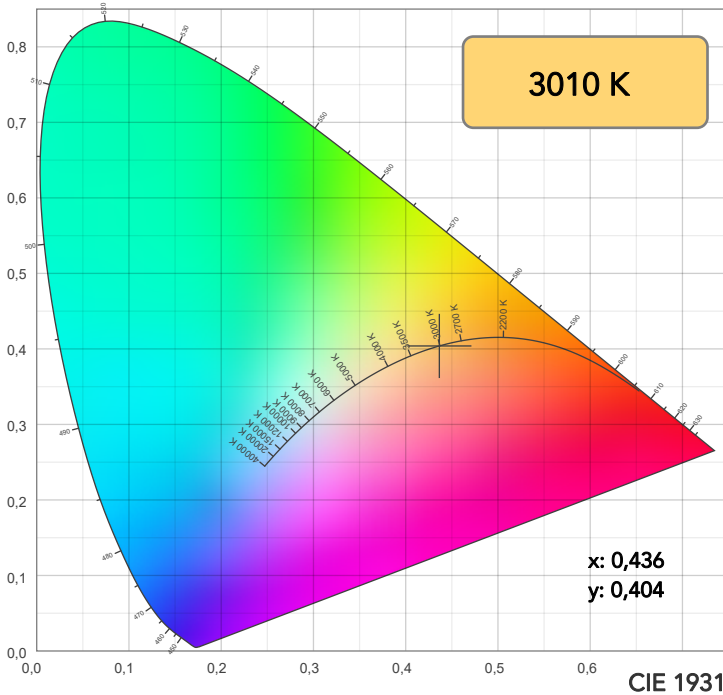
Beam angle 50%: 58,1°

Field angle 10%: 79,8°

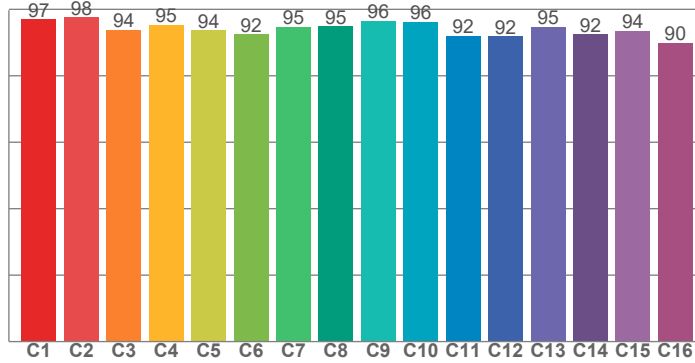
Cut off angle 2.5%: 105,1°

Spectra

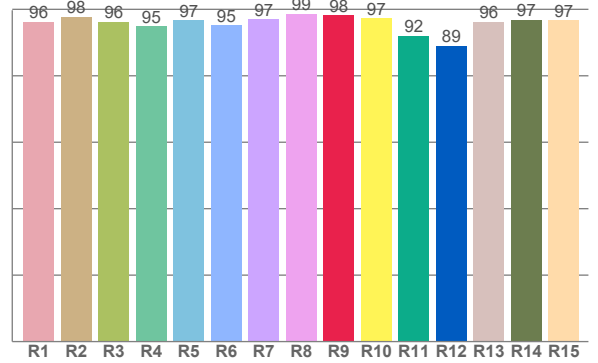




TM30: 94,4



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
96,3	97,7	96,3	94,9	96,7	95,3	97,1	98,6	98,2	97,4	92,0	89,1	96,3	96,8	96,7

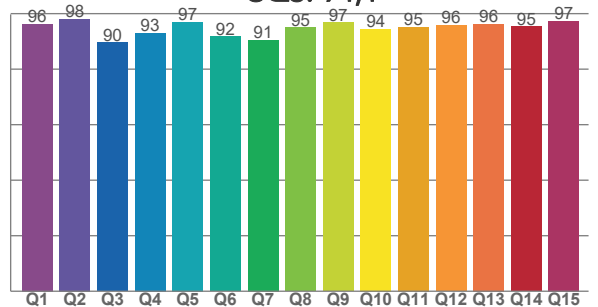
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
96,9	97,6	93,8	95,4	93,7	92,5	94,7	94,8	96,5	96,2	91,9	91,9	94,8	92,5	93,5	89,9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
96,3	98,0	89,6	93,1	97,0	91,8	90,6	94,9	96,8	94,5	95,1	95,8	96,3	95,4	97,3

CQS: 94,1



COLOR PARAMETERS

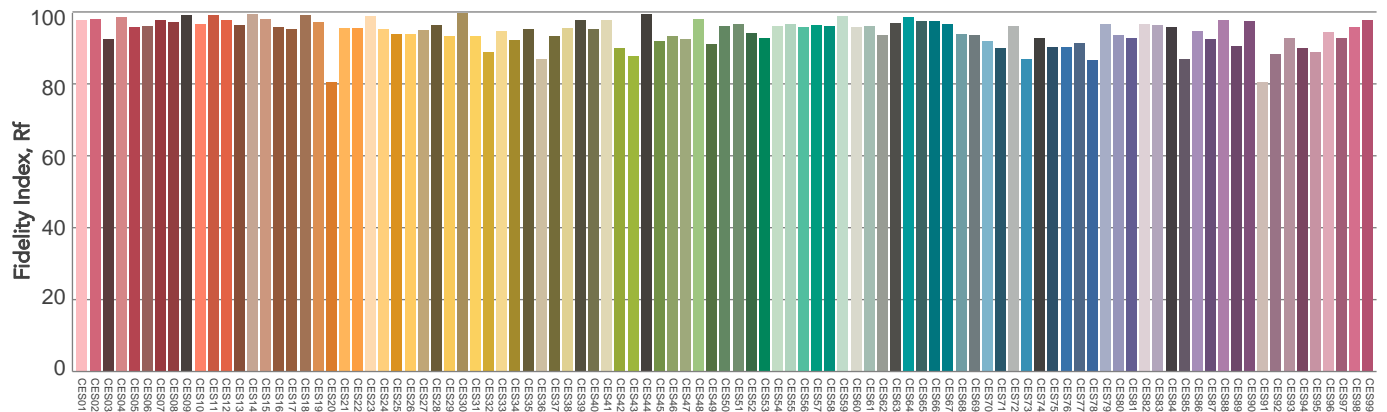
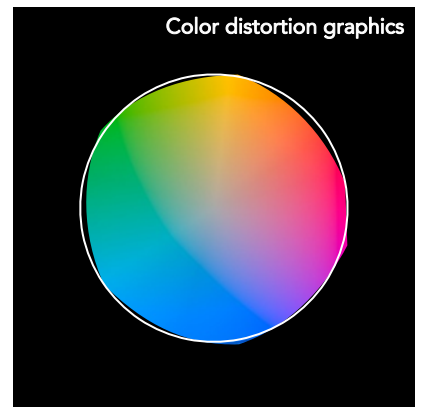
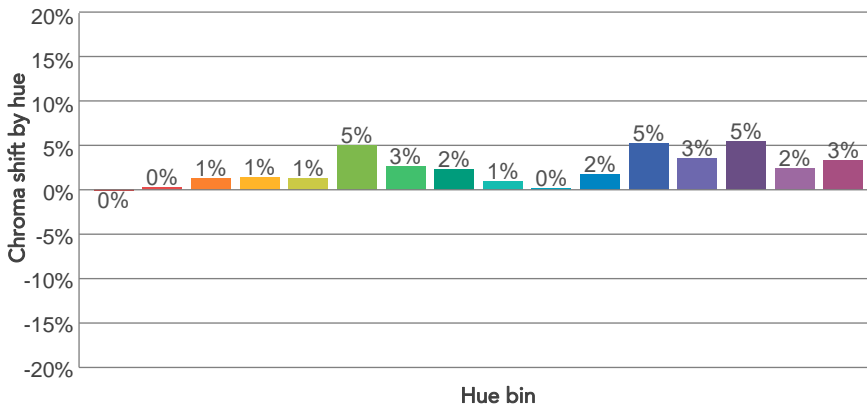
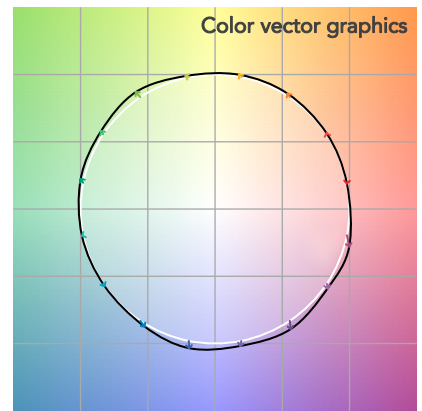
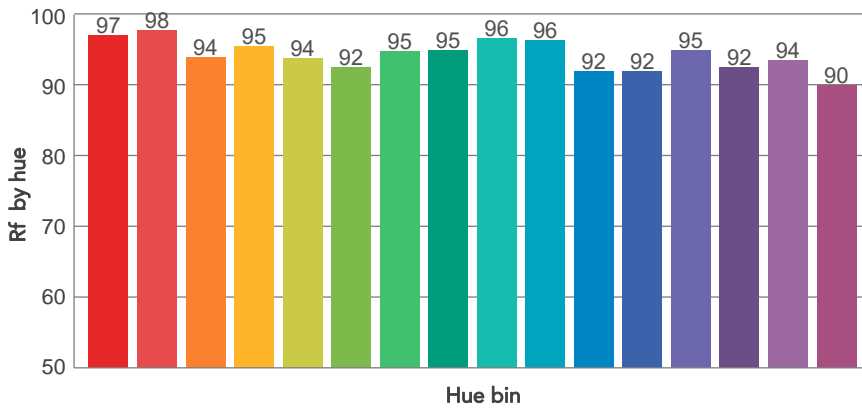
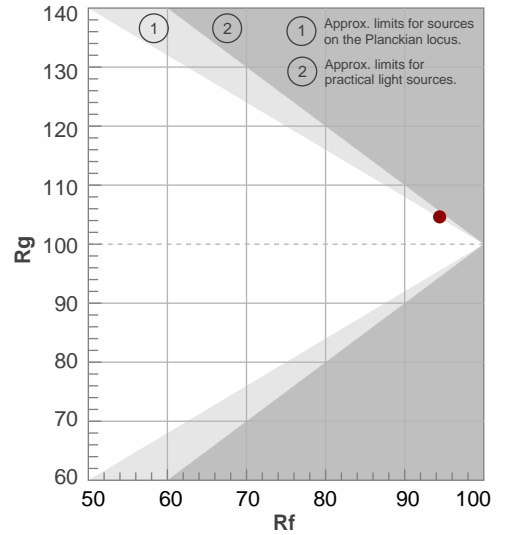
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
3010 K	96,6	98,2	94,4	104,6	94,1	95	0,436	0,404	-0,0055

# TM30 DETAILS

**Rf 94,4**  
Fidelity index Rf

**Rg 104,6**  
Gammut index

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	97	0%	-1%
2	98	0%	1%
3	94	1%	3%
4	95	1%	2%
5	94	1%	2%
6	92	5%	1%
7	95	3%	-1%
8	95	2%	-2%
9	96	1%	0%
10	96	0%	2%
11	92	2%	5%
12	92	5%	1%
13	95	3%	-1%
14	92	5%	-3%
15	94	2%	-3%
16	90	3%	-8%



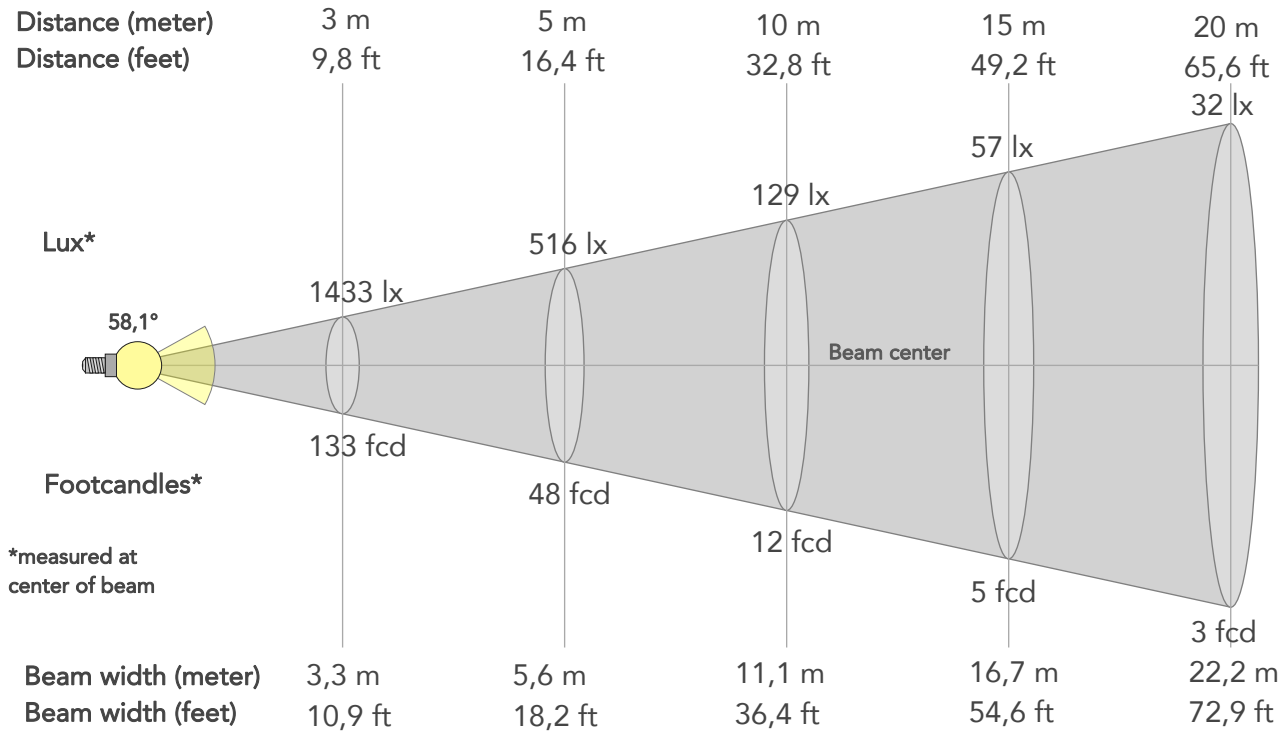
Color Evaluation Sample



# BEAM DETAILS



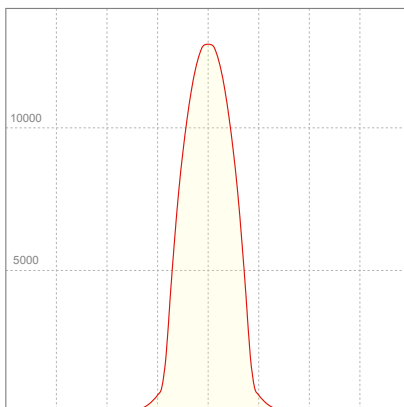
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
58,1°	79,8°	105,1°	99,0%	95,0%



## 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	12894lx	3224lx	1433lx	806lx	516lx	229lx	129lx	57lx	32lx	21lx	14lx	8lx	5lx
Footcand.	1198fcd	299fcd	133fcd	75fcd	48fcd	21fcd	12fcd	5fcd	3fcd	2fcd	1fcd	1fcd	0fcd
Beam wid.	1,1m	2,2m	3,3m	4,4m	5,6m	8,3m	11,1m	16,7m	22,2m	27,8m	33,3m	44,4m	55,5m
Beam wid.	3,7ft	7,3ft	10,9ft	14,5ft	18,2ft	27,3ft	36,4ft	54,6ft	72,9ft	91,1ft	109,3ft	145,7ft	182,1ft

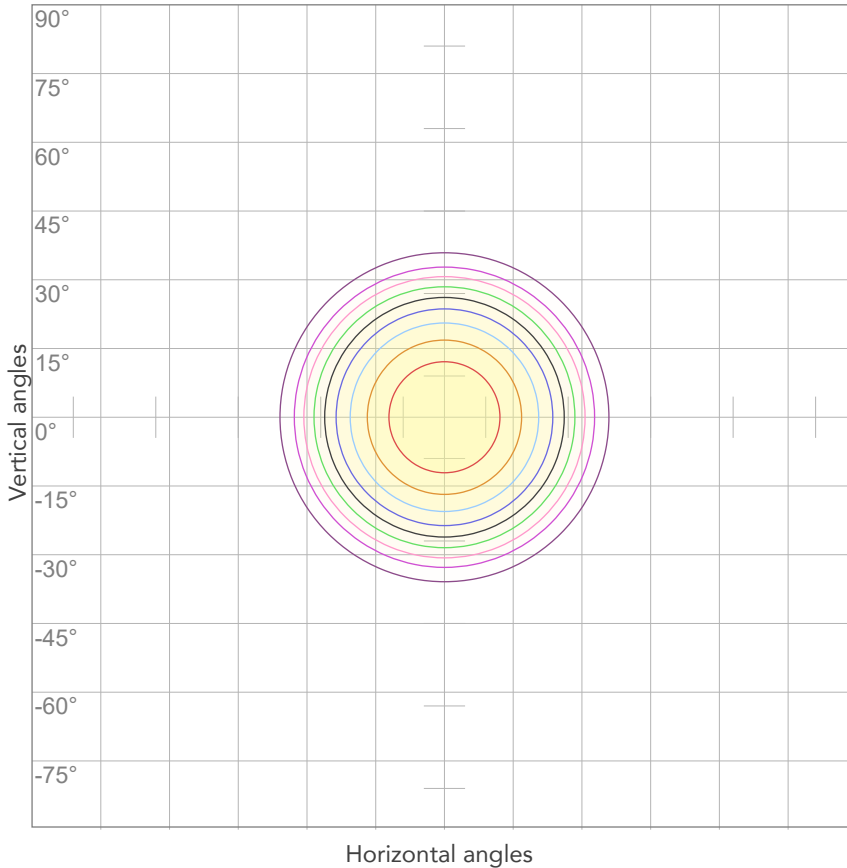
## LINEAR DISTRIBUTION DIAGRAM



## ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,823A	179,5W	61lm/W

## ISO CANDELA DIAGRAM



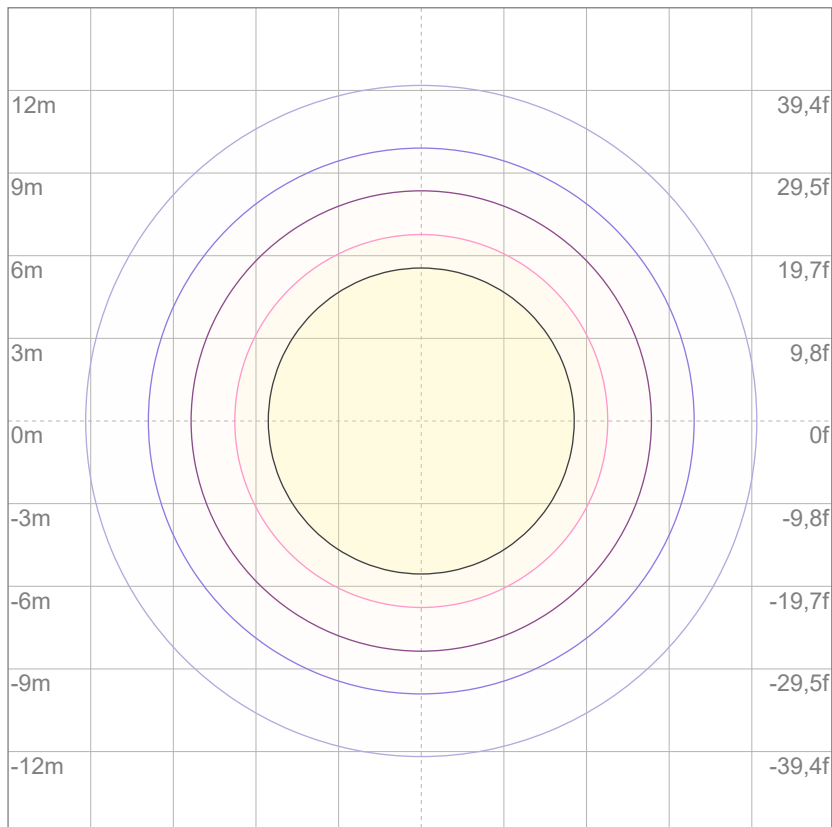
10%	1289 cd
20%	2579 cd
30%	3868 cd
40%	5158 cd
50%	6447 cd
60%	7737 cd
70%	9026 cd
80%	10316 cd

Conditions:

Number of c-planes: 2

Candela at center: 12894 cd

## ISO LUX DIAGRAM



3%	3,87 lx
5%	6,45 lx
10%	12,9 lx
30%	38,7 lx
50%	64,5 lx

Conditions:

Number of c-planes: 2

Lux at center: 129 lx

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

Mounting height: 10 meters (33 feet)