



# Photometric Test Report



## Jade

280 W Hybrid beam/spot moving light

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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:

8866 lm

Peak candela output:

1056605 cd

Light quality:

CRI: 74,9

Color temperature:

7118 K

## PRODUCT NAME:

Jade

## MEASUREMENT CONDITIONS:

Beam angle:

Max Zoom

Target:

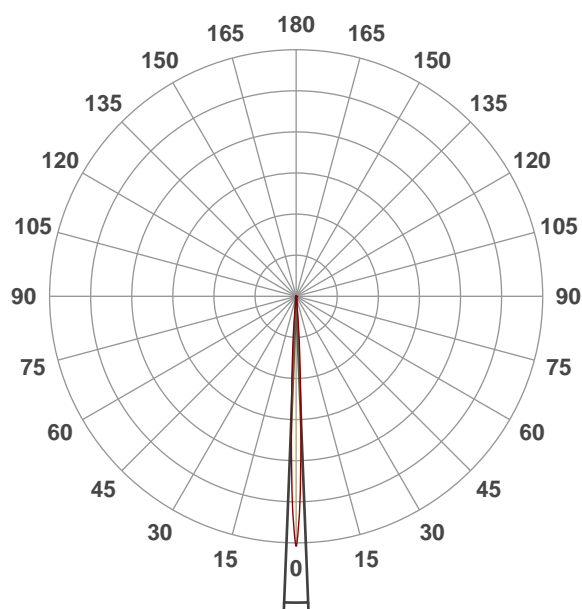
Full On

Operator:

Paolo Carvone

Date and time:

13/03/2020 10:59:59

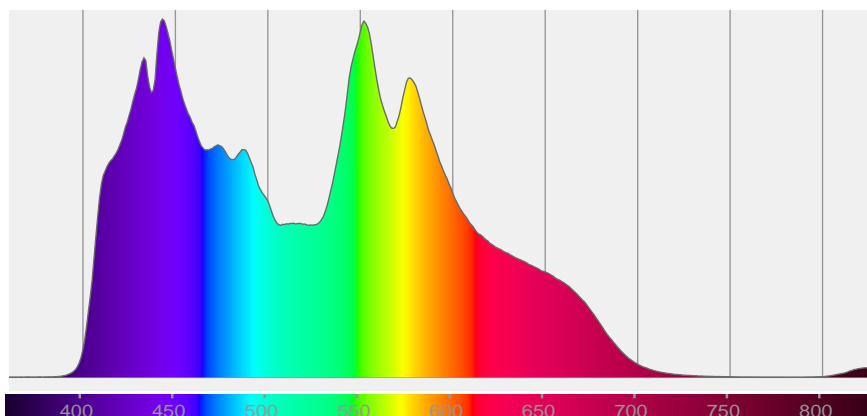


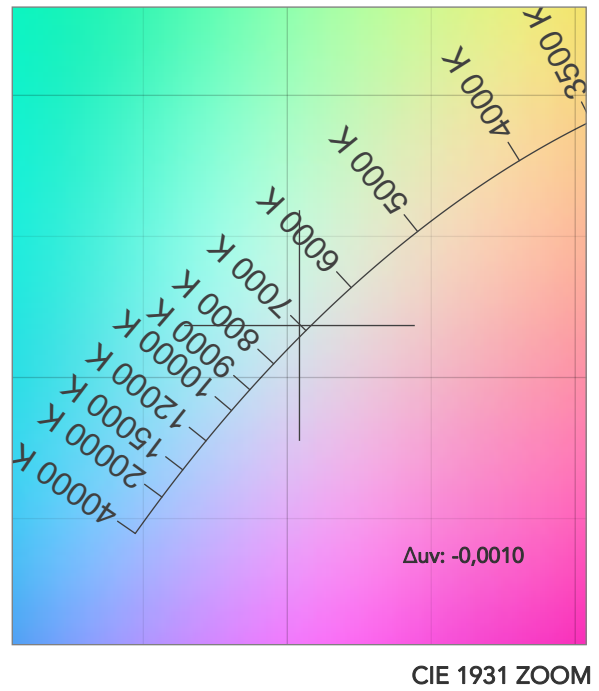
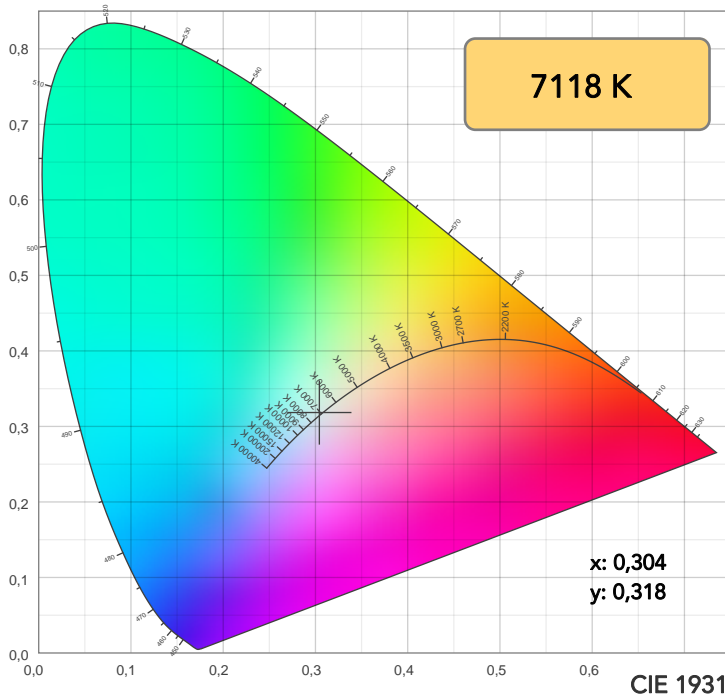
Beam angle 50%: 4,5°

Field angle 10%: 9,5°

Cut off angle 2.5%: 11,5°

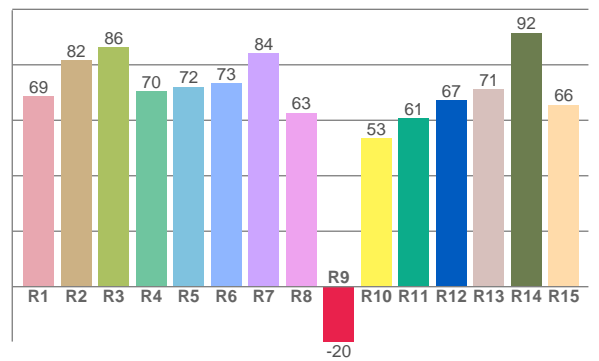
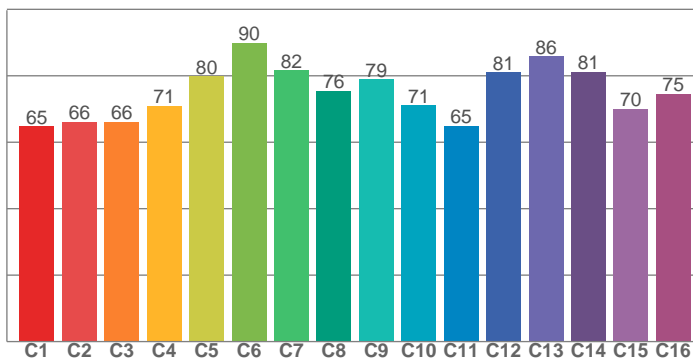
## Spectra





TM30: 75,3

CRI: 74,9 (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
68,6	81,6	86,3	70,4	72,1	73,3	84,1	62,7	-19,8	53,4	60,7	67,2	71,3	91,6	65,6

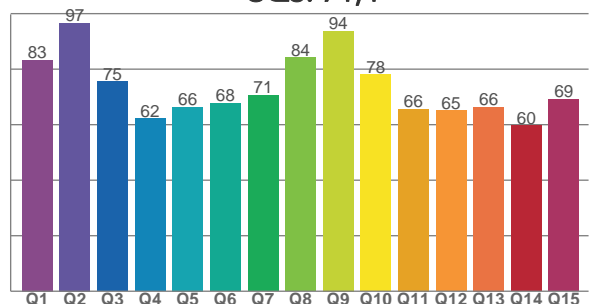
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
64,7	66,2	66,2	70,9	79,8	89,9	81,6	75,5	79,0	71,1	64,9	81,0	85,8	81,2	70,0	74,5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83,2	96,7	75,5	62,2	66,4	67,7	70,6	84,2	93,7	78,1	65,6	65,1	66,3	59,7	69,1

CQS: 71,4



## COLOR PARAMETERS

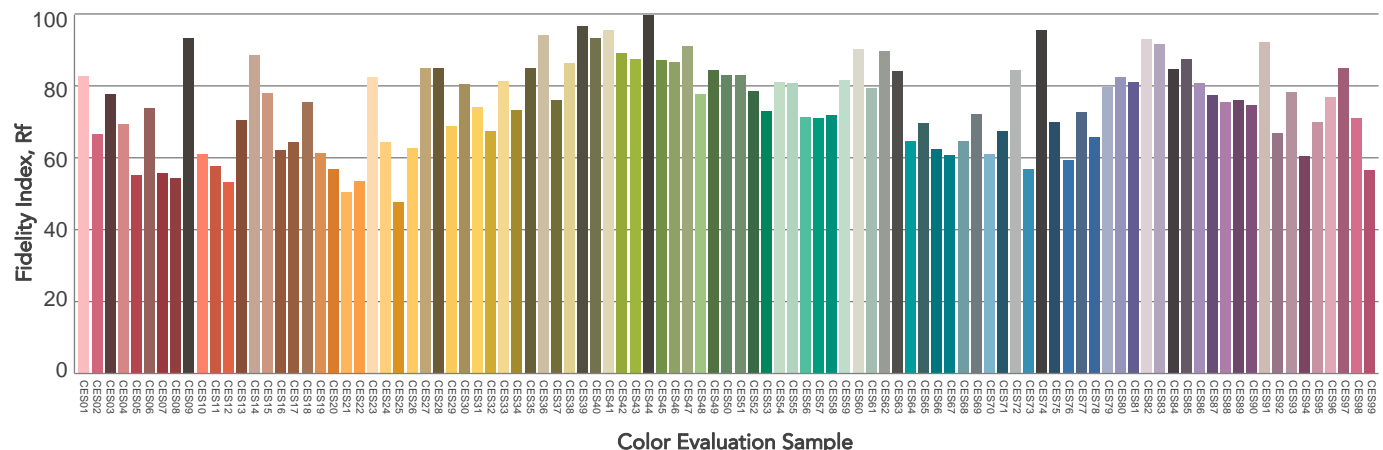
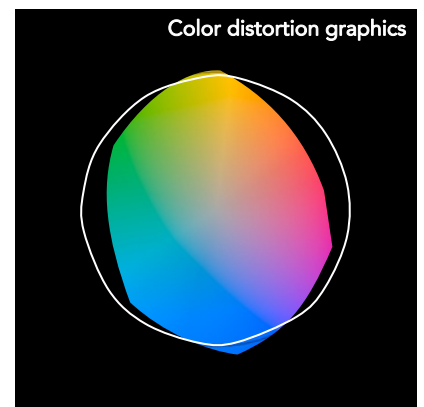
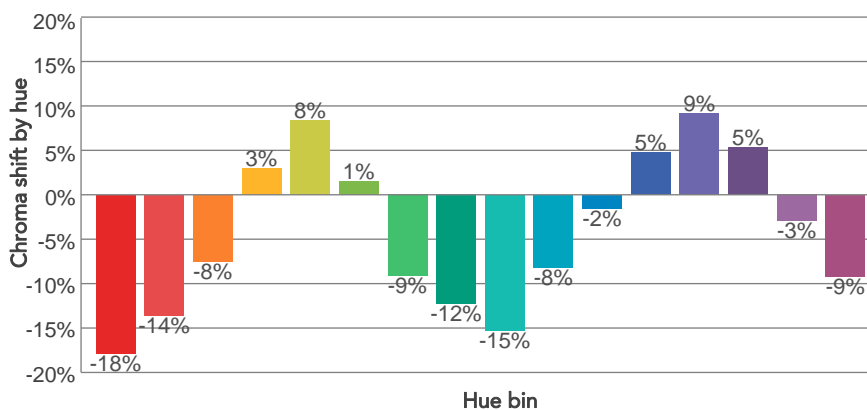
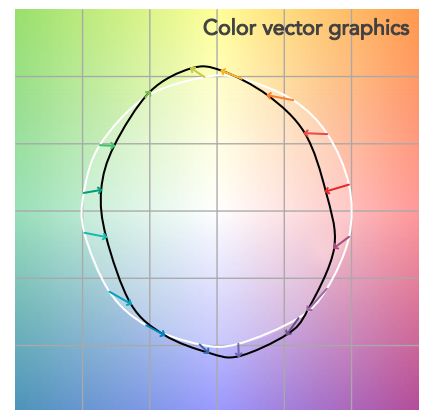
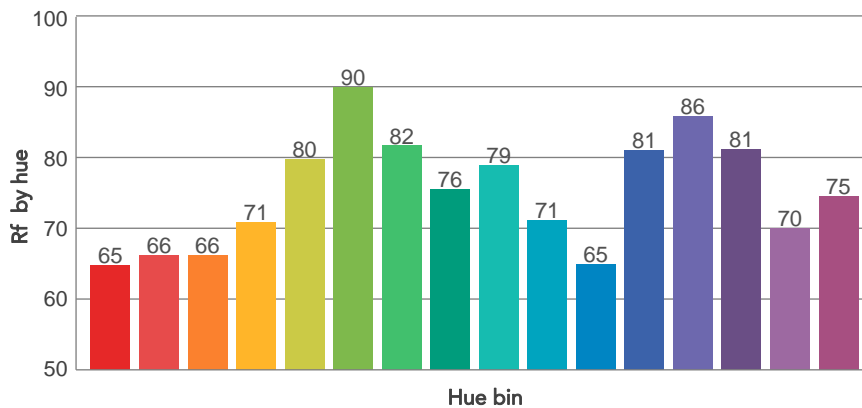
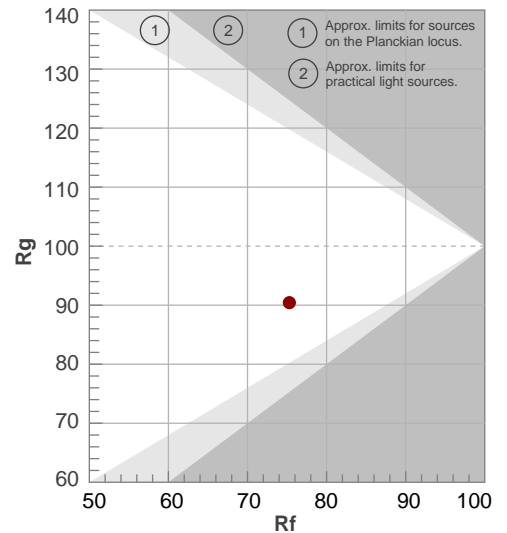
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
7118 K	74,9	-19,8	75,3	90,4	71,4	47	0,304	0,318	-0,0010

# TM30 DETAILS

**Rf 75,3**  
Fidelity index Rf

**Rg 90,4**  
Gammut index

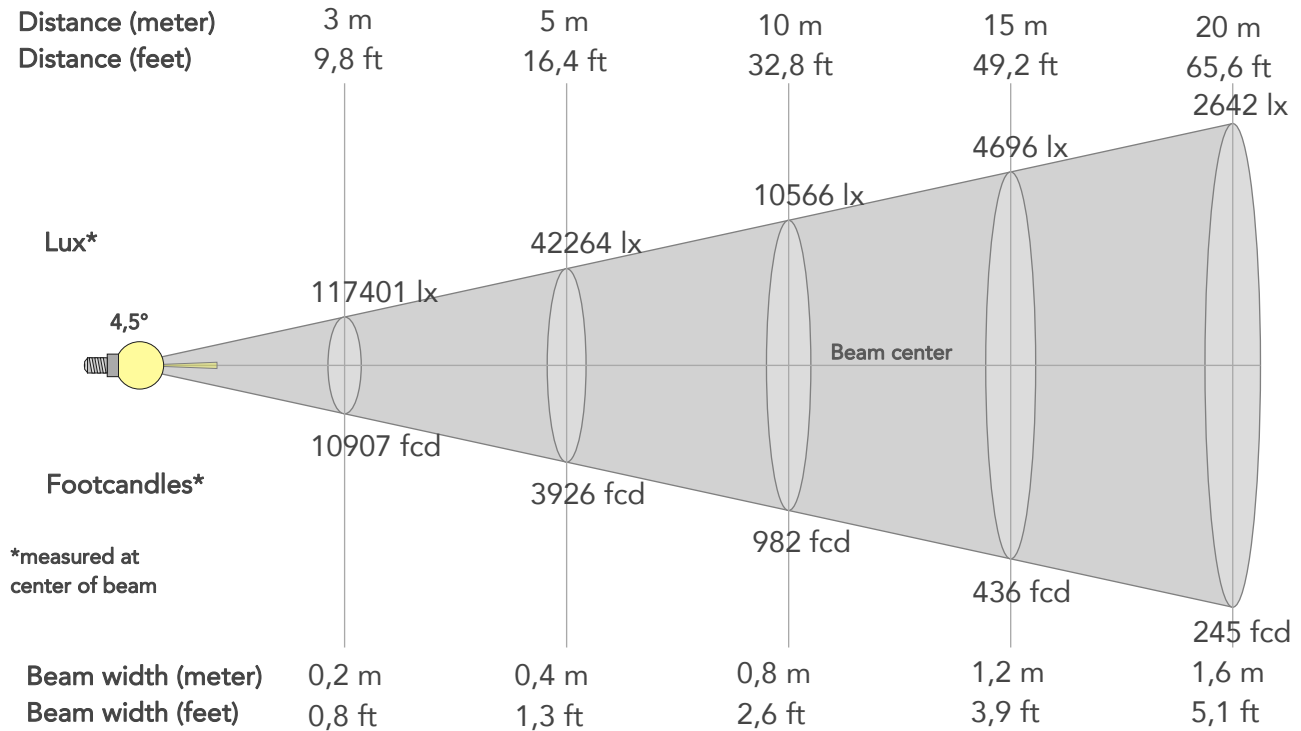
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	65	-18%	-2%
2	66	-14%	10%
3	66	-8%	18%
4	71	3%	16%
5	80	8%	8%
6	90	1%	-5%
7	82	-9%	-5%
8	76	-12%	-5%
9	79	-15%	6%
10	71	-8%	16%
11	65	-2%	15%
12	81	5%	8%
13	86	9%	-1%
14	81	5%	-14%
15	70	-3%	-21%
16	75	-9%	-10%



## BEAM DETAILS



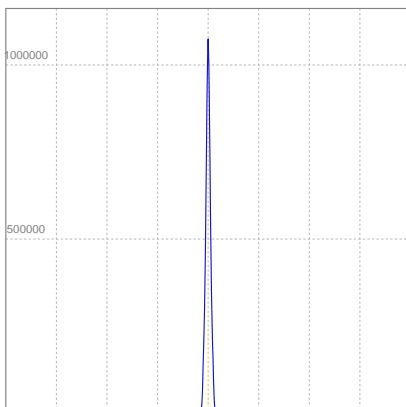
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
4,5°	9,5°	11,5°	96,7%	96,5%



### 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
<b>Lux</b>	105660lx	26415lx	117401lx	66038lx	42264lx	18784lx	10566lx	4696lx	2642lx	1691lx	1174lx	660lx	423lx
<b>Footcand.</b>	98162fcd	24540fcd	10907fcd	6135fcd	3926fcd	1745fcd	982fcd	436fcd	245fcd	157fcd	109fcd	61fcd	39fcd
<b>Beam wid.</b>	0,1m	0,2m	0,2m	0,3m	0,4m	0,6m	0,8m	1,2m	1,6m	2m	2,4m	3,1m	3,9m
<b>Beam wid.</b>	0,3ft	0,5ft	0,8ft	1ft	1,3ft	1,9ft	2,6ft	3,9ft	5,1ft	6,4ft	7,7ft	10,3ft	12,8ft

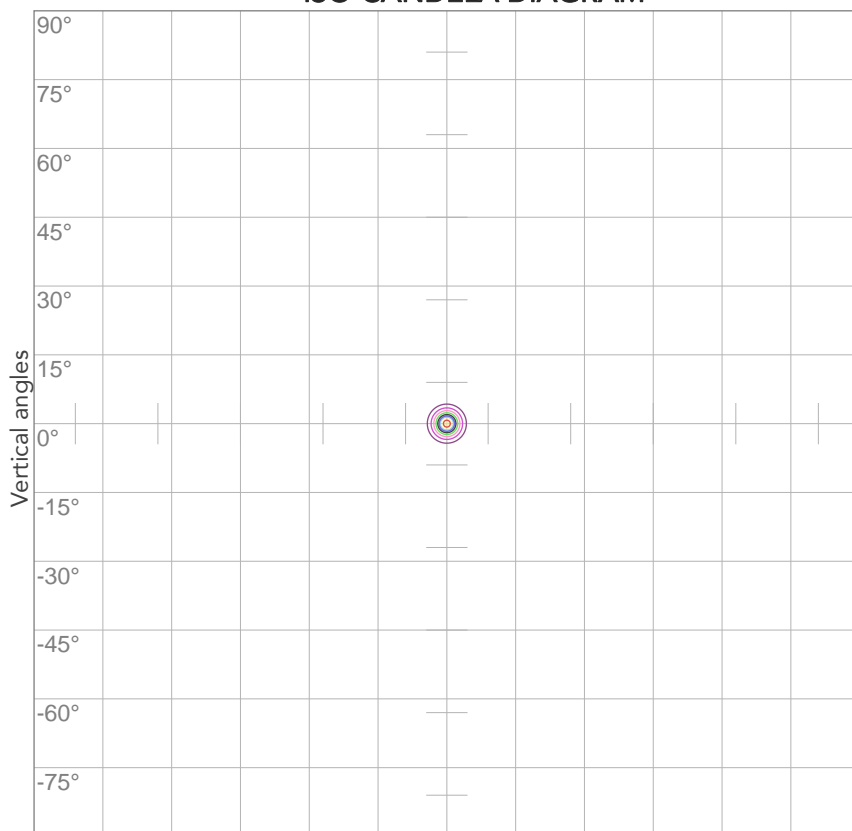
### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
223V	1,66A	366W	24lm/W
<b>Power Fc</b>			
0,99			

## ISO CANDELA DIAGRAM



Horizontal angles

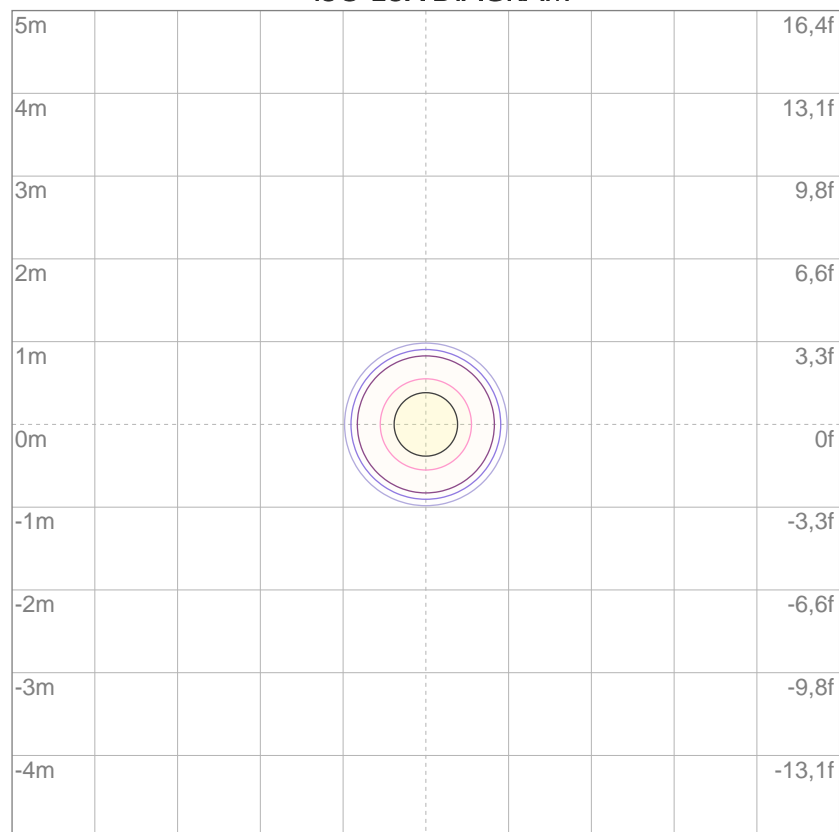
10%	105661 cd
20%	211321 cd
30%	316982 cd
40%	422642 cd
50%	528303 cd
60%	633963 cd
70%	739624 cd
80%	845284 cd

### Conditions:

Number of c-planes: 2

Candela at center: 1056605 cd

## ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	317 lx
5%	528 lx
10%	1057 lx
30%	3170 lx
50%	5283 lx

### Conditions:

Number of c-planes: 2

Lux at center: 10,6K lx

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





Total lumen output:

5627 lm

Peak candela output:

7200782 cd

Light quality:

CRI: 73,9

Color temperature:

7365 K

## PRODUCT NAME:

Jade

## MEASUREMENT CONDITIONS:

Beam angle:

Min Zoom

Target:

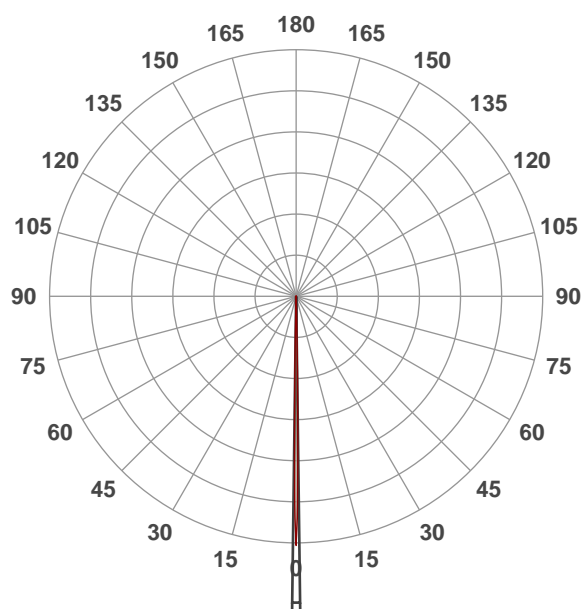
Full On

Operator:

Paolo Carvone

Date and time:

13/03/2020 11:04:09

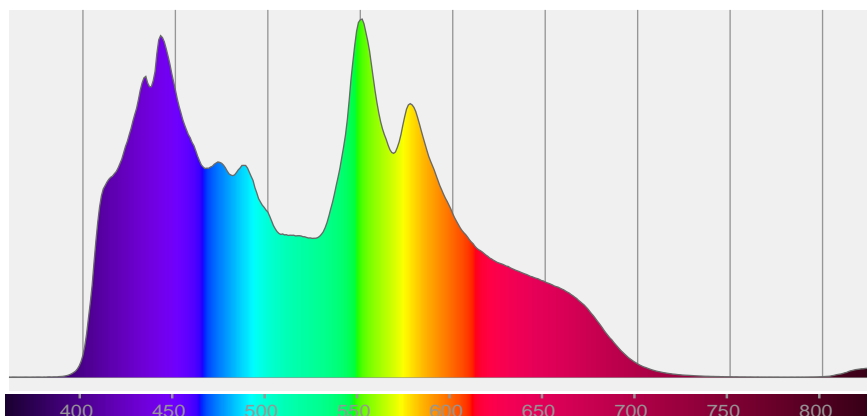


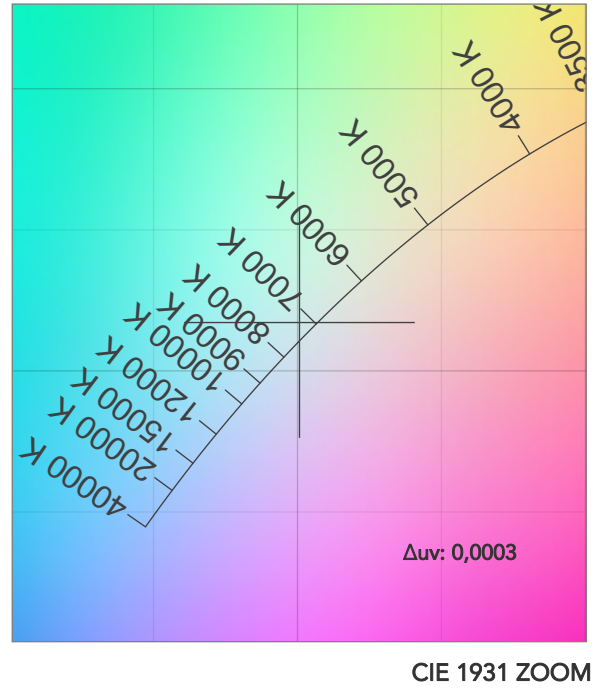
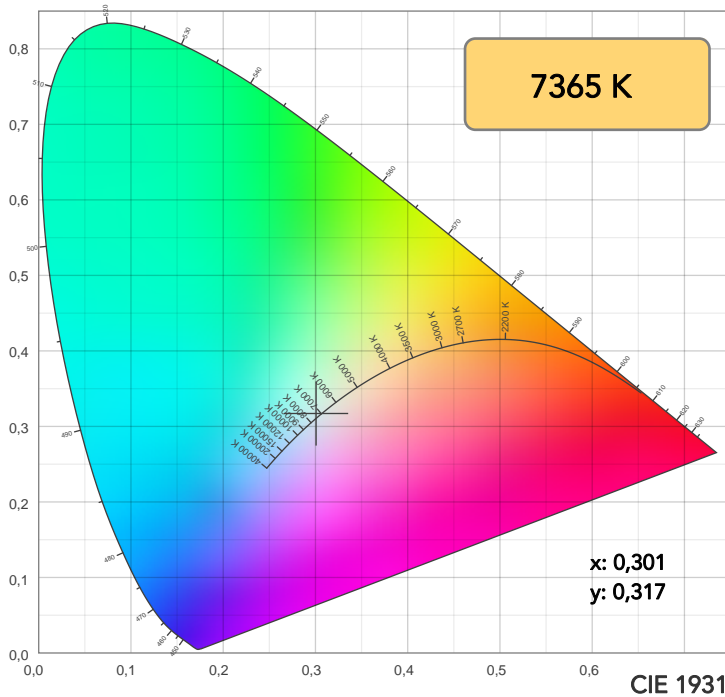
Beam angle 50%: 1,5°

Field angle 10%: 2,7°

Cut off angle 2.5%: 3,1°

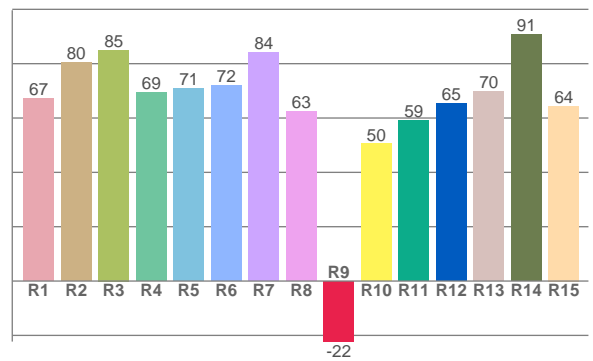
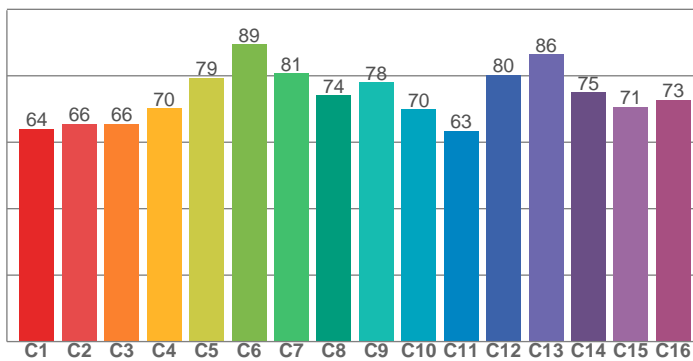
## Spectra





TM30: 74,5

CRI: 73,9 (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
67,2	80,4	85,0	69,3	70,9	71,8	84,1	62,5	-22,3	50,5	59,0	65,3	69,9	90,7	64,4

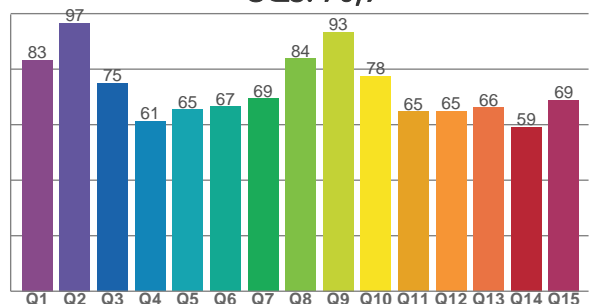
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
64,0	65,6	65,5	70,2	79,4	89,4	80,7	74,1	78,0	69,9	63,3	80,3	86,4	75,1	70,7	72,7

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83,4	96,6	75,1	61,2	65,4	66,6	69,4	83,8	93,4	77,5	64,8	64,8	66,1	59,2	69,0

CQS: 70,9



## COLOR PARAMETERS

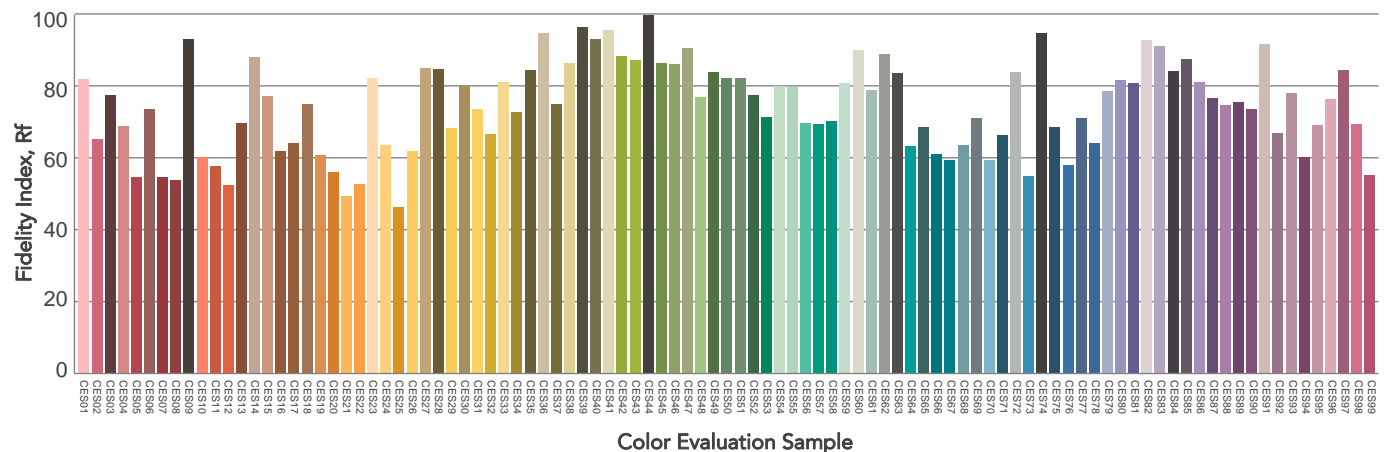
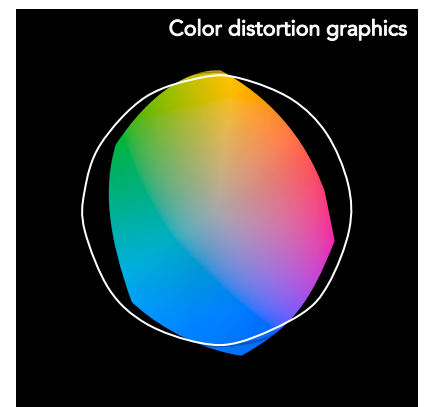
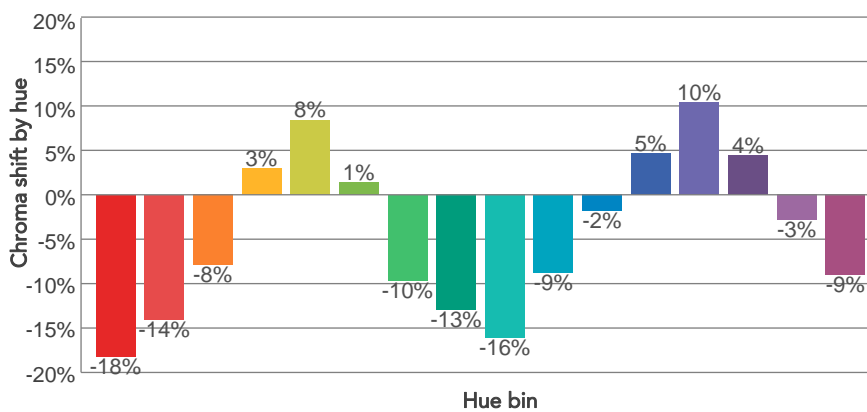
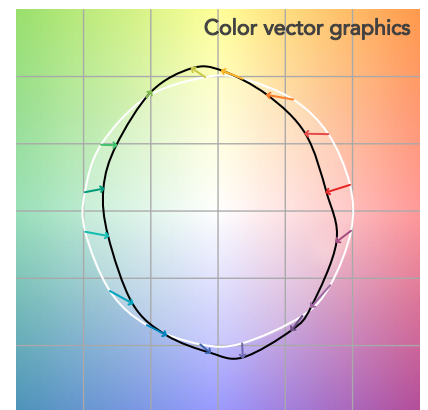
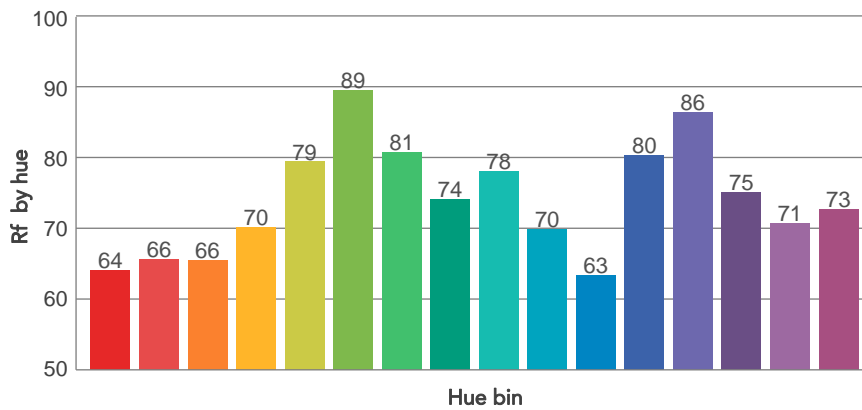
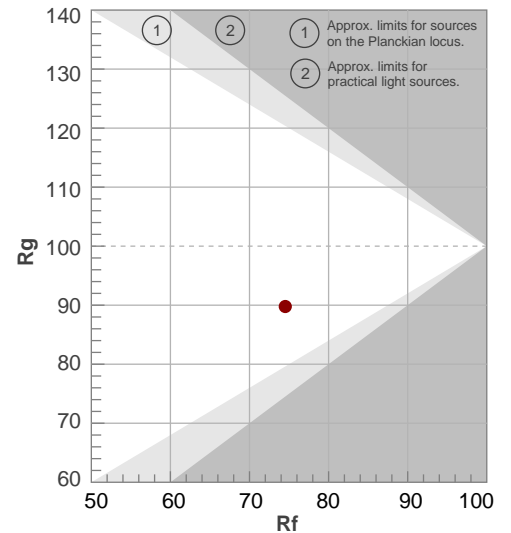
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	$\Delta uv$
7365 K	73,9	-22,3	74,5	89,8	70,9	46	0,301	0,317	0,0003

# TM30 DETAILS

**Rf 74,5**  
Fidelity index Rf

**Rg 89,8**  
Gammut index

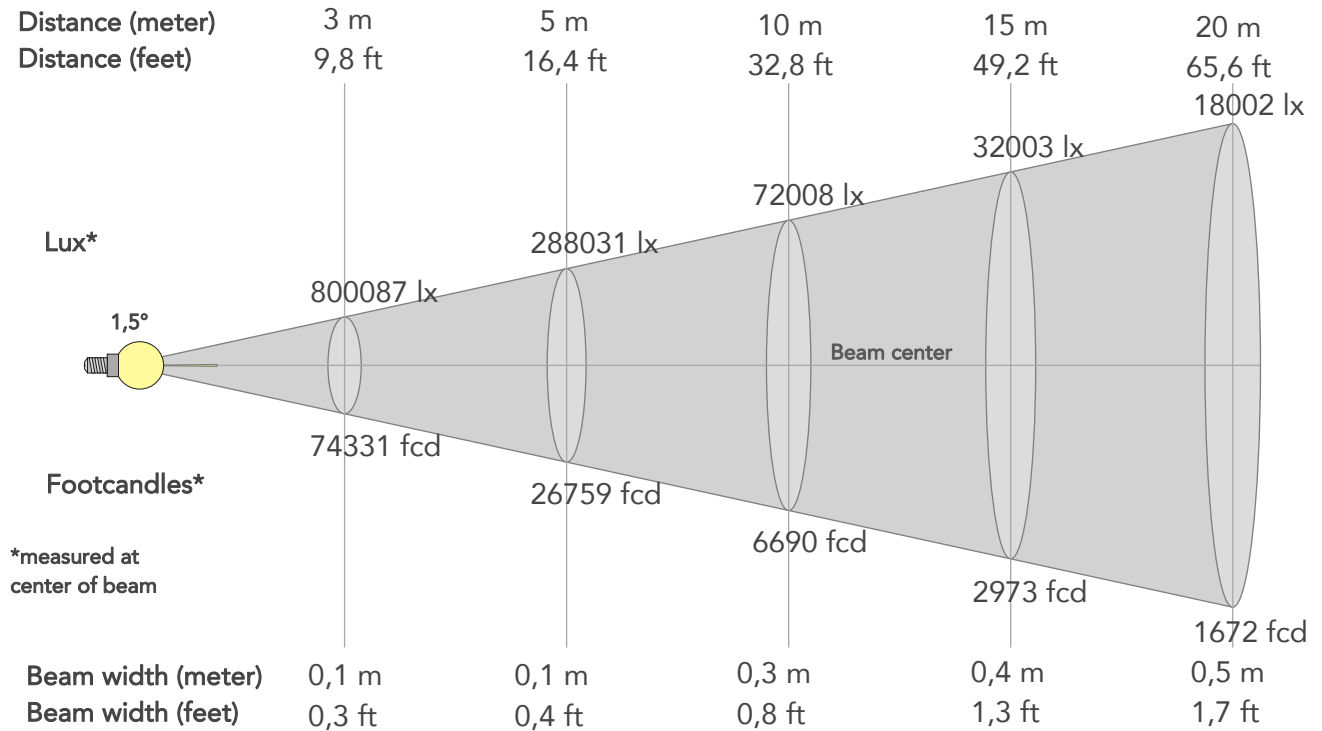
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	64	-18%	-2%
2	66	-14%	10%
3	66	-8%	18%
4	70	3%	16%
5	79	8%	9%
6	89	1%	-5%
7	81	-10%	-6%
8	74	-13%	-5%
9	78	-16%	6%
10	70	-9%	17%
11	63	-2%	16%
12	80	5%	8%
13	86	10%	-2%
14	75	4%	-13%
15	71	-3%	-21%
16	73	-9%	-10%



# BEAM DETAILS



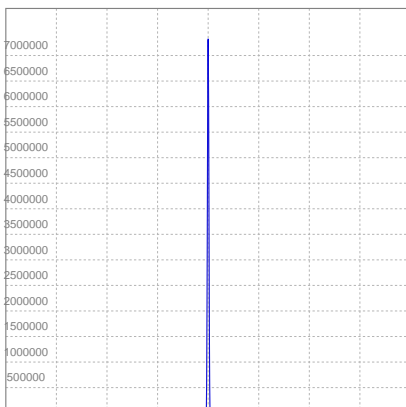
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
1,5°	2,7°	3,1°	97,3%	95,7%



## 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	7200782lx	1800195lx	800087lx	450049lx	288031lx	128014lx	72008lx	32003lx	18002lx	11521lx	8001lx	4500lx	2880lx
Footcand.	668975fcd	167244fcd	74331fcd	41811fcd	26759fcd	11893fcd	6690fcd	2973fcd	1672fcd	1070fcd	743fcd	418fcd	268fcd
Beam wid.	0m	0,1m	0,1m	0,1m	0,1m	0,2m	0,3m	0,4m	0,5m	0,6m	0,8m	1m	1,3m
Beam wid.	0,1ft	0,2ft	0,3ft	0,3ft	0,4ft	0,6ft	0,8ft	1,3ft	1,7ft	2,1ft	2,5ft	3,4ft	4,2ft

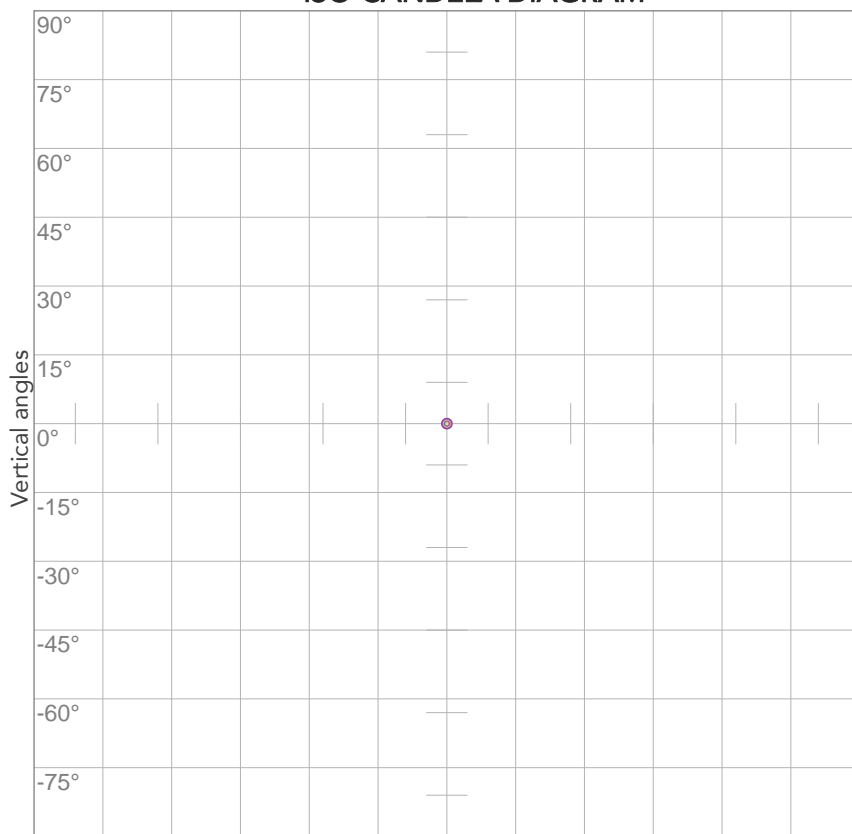
## LINEAR DISTRIBUTION DIAGRAM



## ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
223V	1,66A	366W	15lm/W
Power Fc			
0,99			

## ISO CANDELA DIAGRAM



Horizontal angles

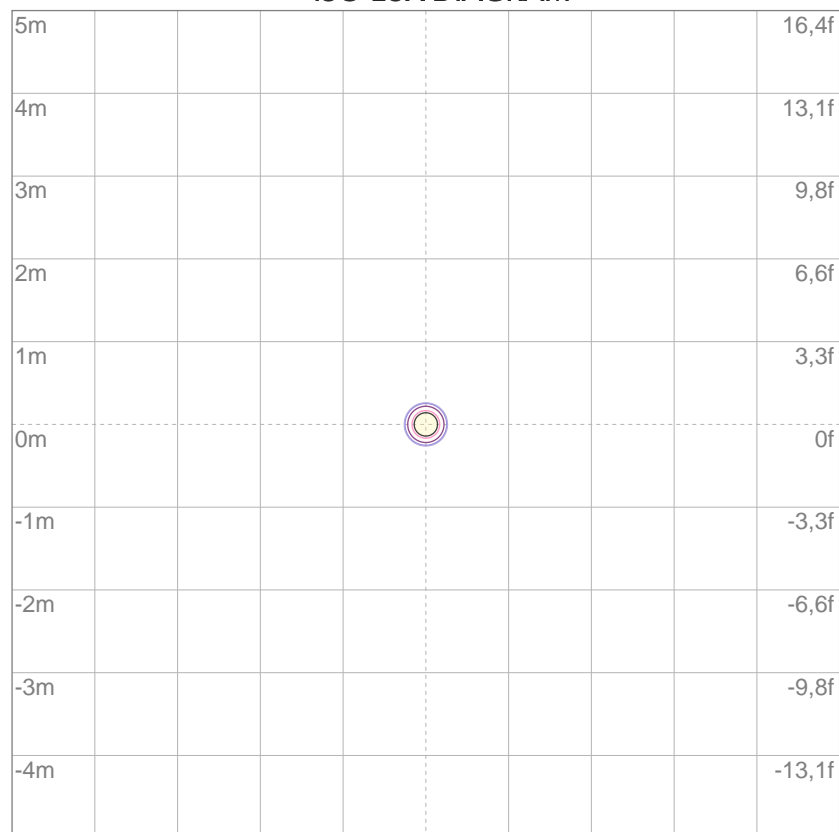
10%	720078 cd
20%	1440156 cd
30%	2160235 cd
40%	2880313 cd
50%	3600391 cd
60%	4320469 cd
70%	5040547 cd
80%	5760625 cd

### Conditions:

Number of c-planes: 2

Candela at center: 7200782 cd

## ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	2160 lx
5%	3600 lx
10%	7201 lx
30%	21,6K lx
50%	36,0K lx

### Conditions:

Number of c-planes: 2

Lux at center: 72,0K lx

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