



Photometric Test Report



STUDIOCOBPLUSDY2

150 W IP65 rated Daylight White COB LED PAR

CONTENTS

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

9191 lm

Peak candela output:

11693 cd

Light quality:

CRI: 83,5

Color temperature:

5091 K

PRODUCT NAME:
STUDIOCOBPLUSDY

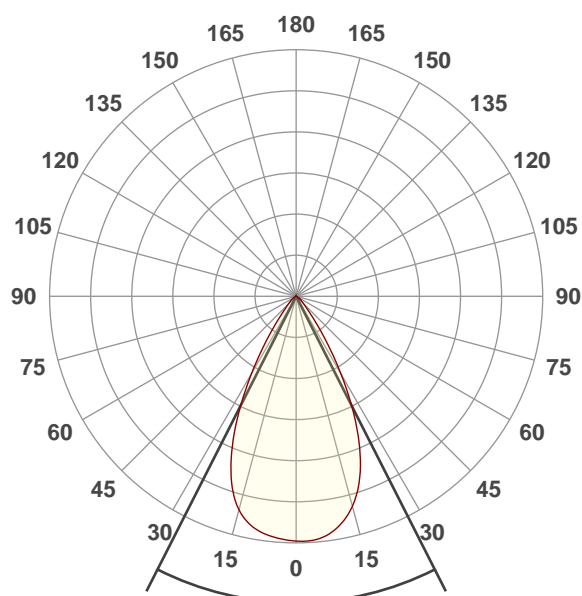
MEASURAMENT CONDITIONS:

Beam angle:
Wide Beam

Target:
Full On

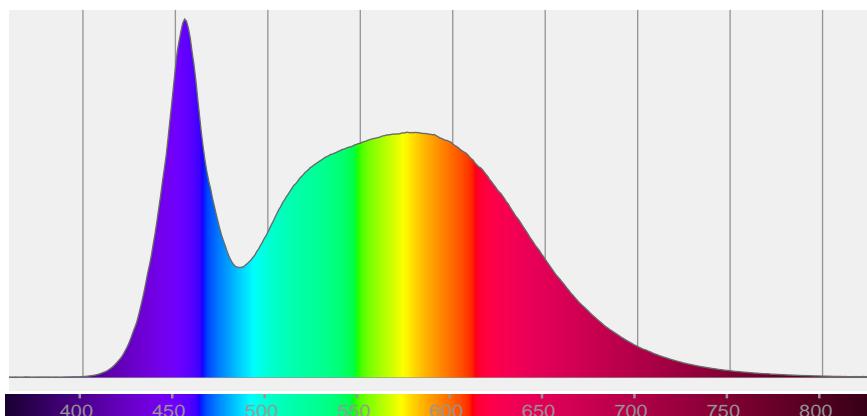
Operator:
Paolo Carvone

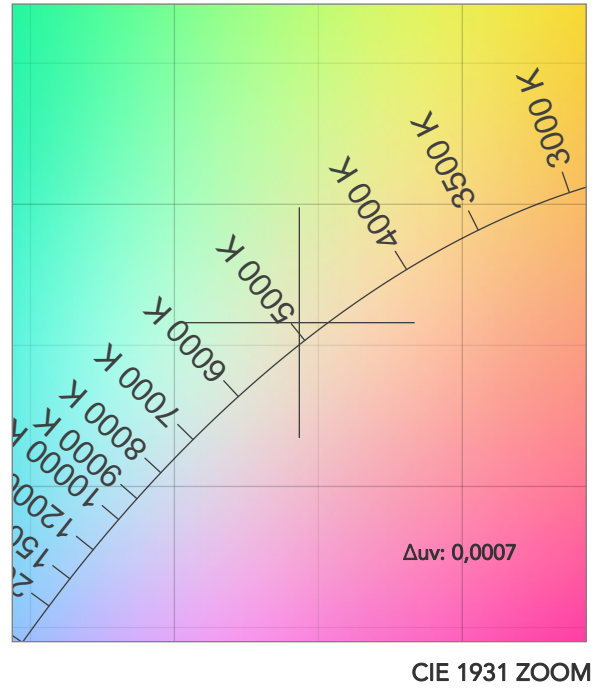
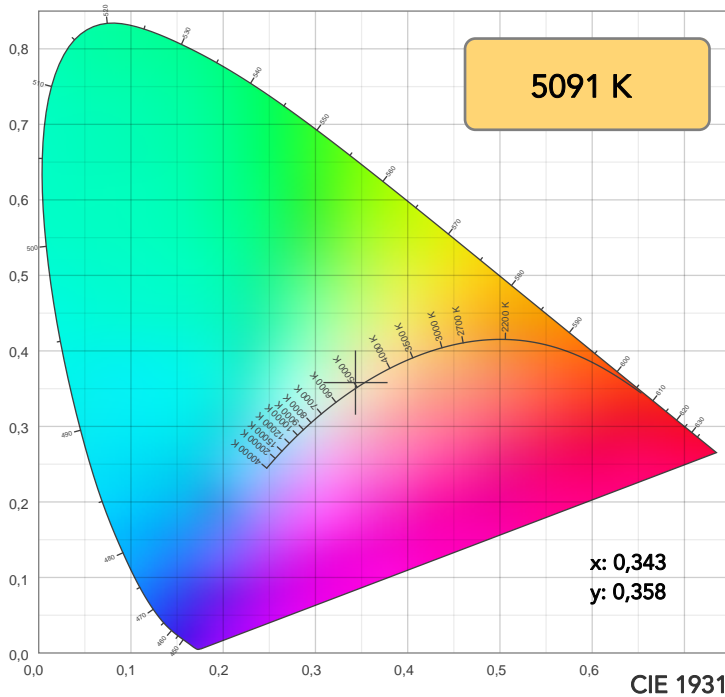
Date and time:
30/06/2020 09:26:45



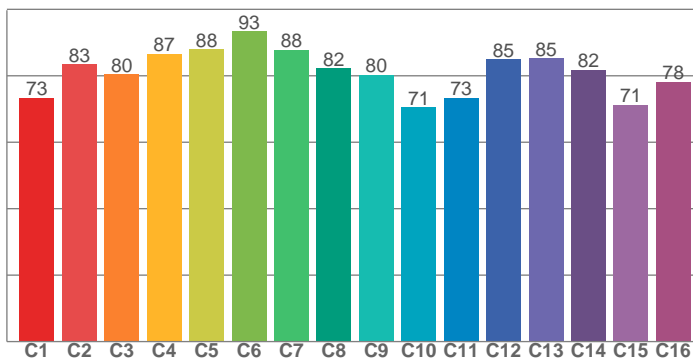
Beam angle 50%: 53,8°
Field angle 10%: 77,6°
Cut off angle 2.5%: 102,1°

Spectra

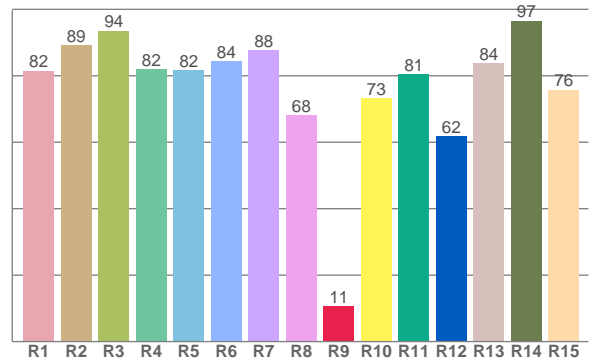




TM30: 81,7



CRI: 83,5 (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
81,5	89,1	93,5	82,0	81,6	84,3	87,6	68,1	10,6	73,3	80,5	61,8	83,7	96,6	75,8

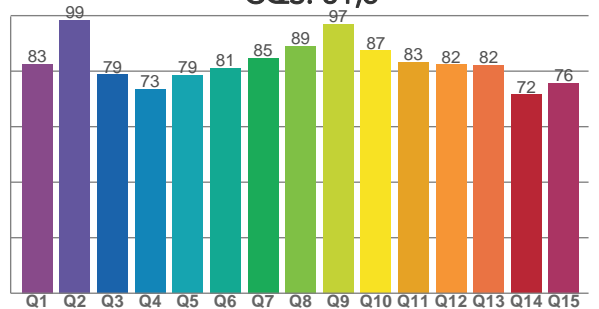
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
73,4	83,4	80,4	86,6	88,0	93,3	87,8	82,3	80,2	70,5	73,4	85,0	85,3	81,8	71,2	78,1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82,6	98,5	78,7	73,5	78,5	81,1	84,7	89,0	97,0	87,5	83,3	82,3	82,2	71,5	75,8

CQS: 81,5



COLOR PARAMETERS

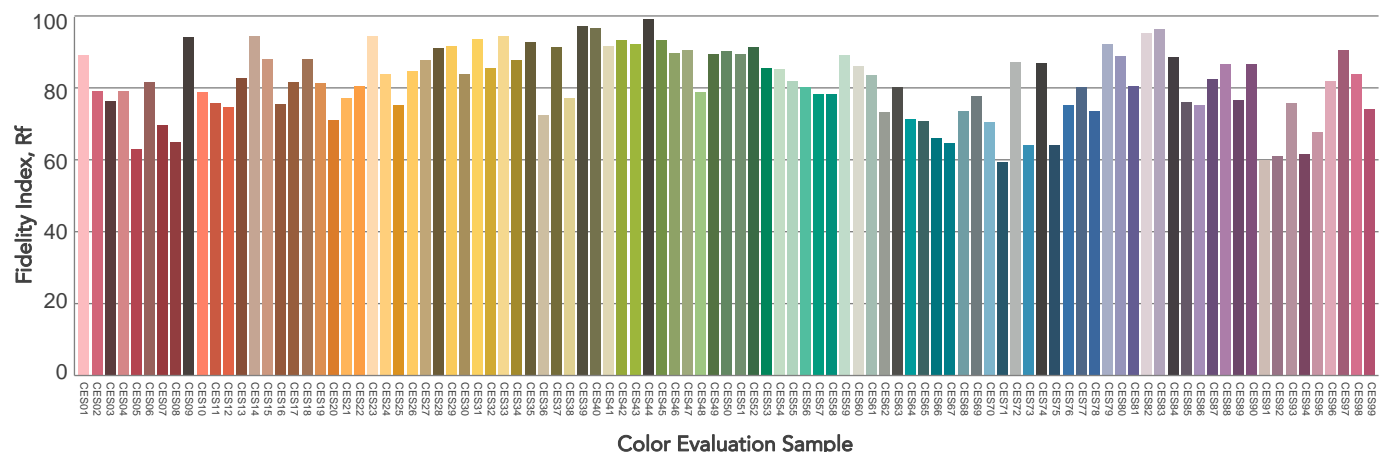
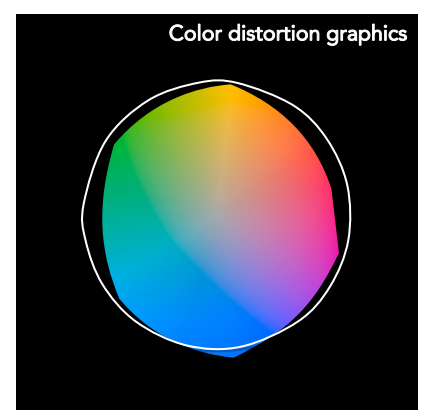
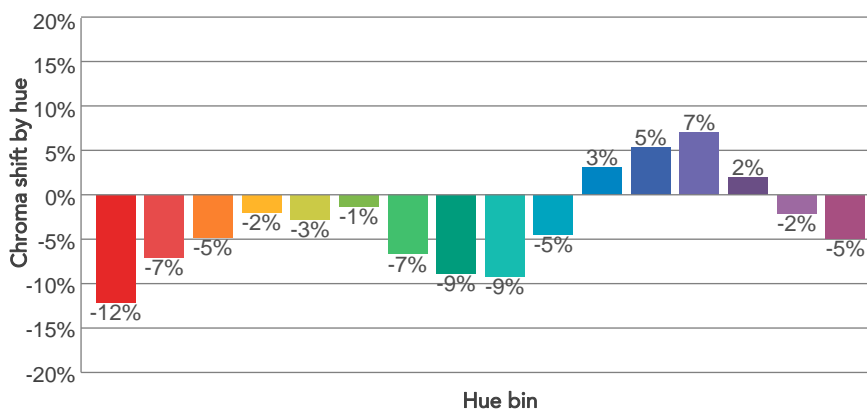
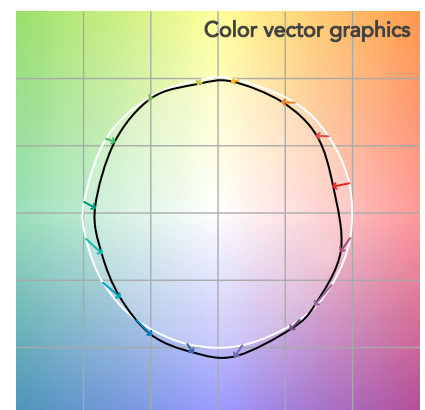
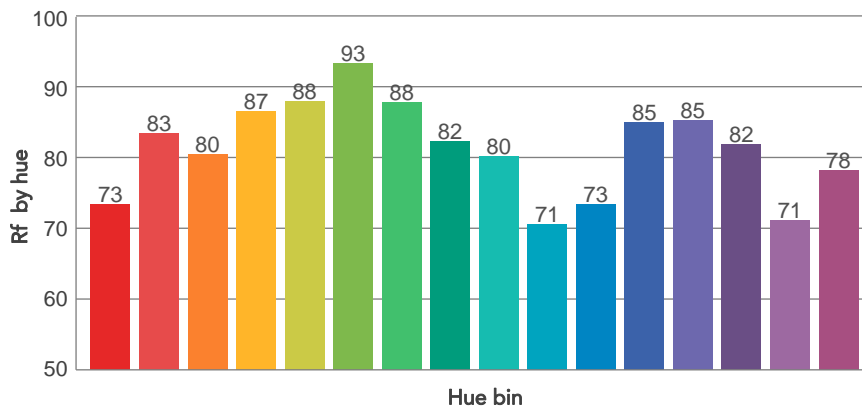
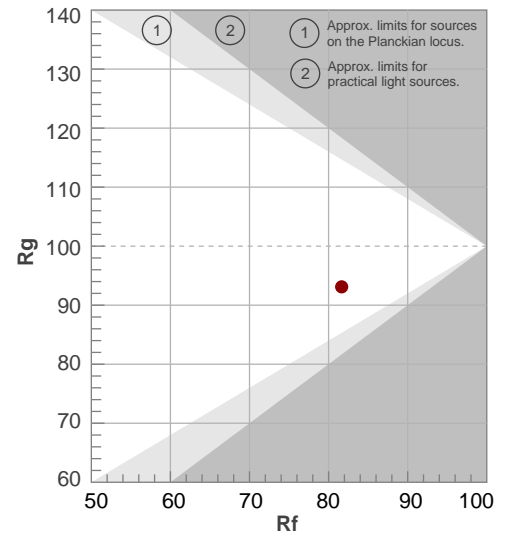
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5091 K	83,5	10,6	81,7	93,1	81,5	72	0,343	0,358	0,0007

TM30 DETAILS

Rf 81,7
Fidelity index Rf

Rg 93,1
Gammut index

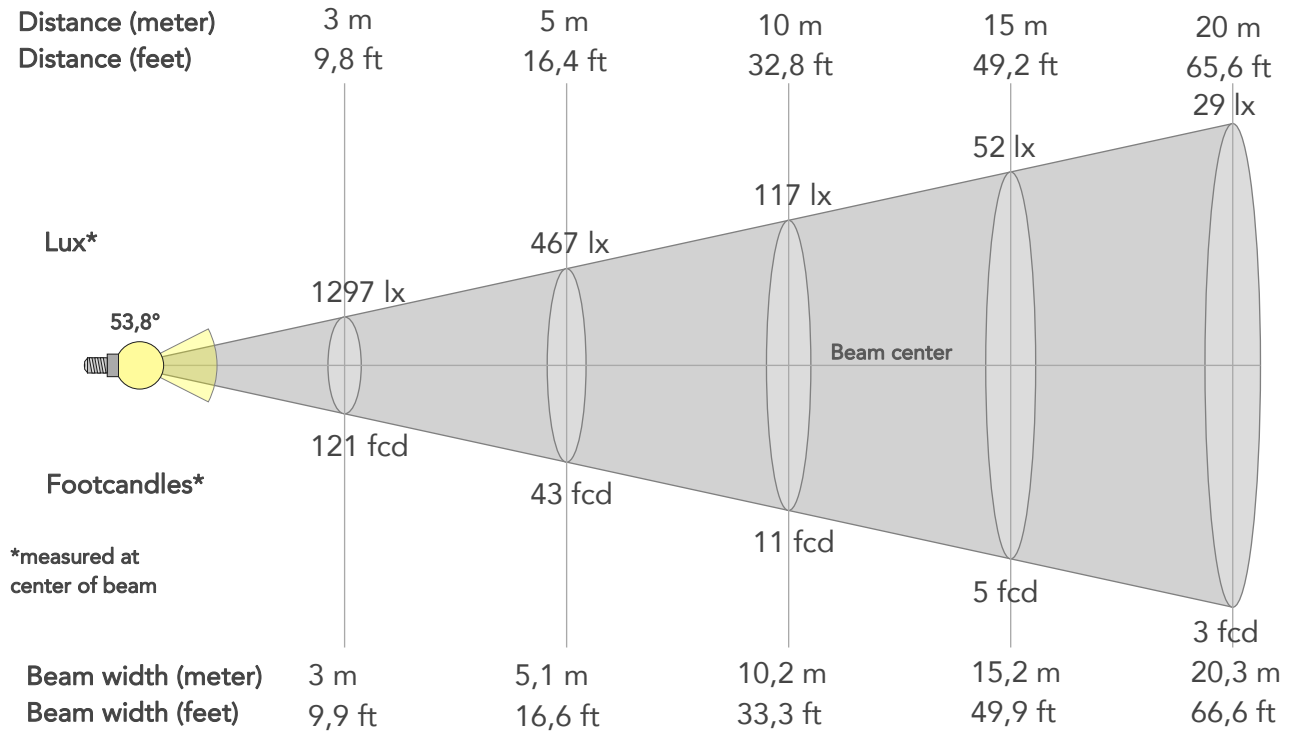
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	73	-12%	0%
2	83	-7%	5%
3	80	-5%	8%
4	87	-2%	5%
5	88	-3%	2%
6	93	-1%	-1%
7	88	-7%	-2%
8	82	-9%	3%
9	80	-9%	13%
10	71	-5%	16%
11	73	3%	15%
12	85	5%	5%
13	85	7%	-7%
14	82	2%	-9%
15	71	-2%	-19%
16	78	-5%	-11%



BEAM DETAILS



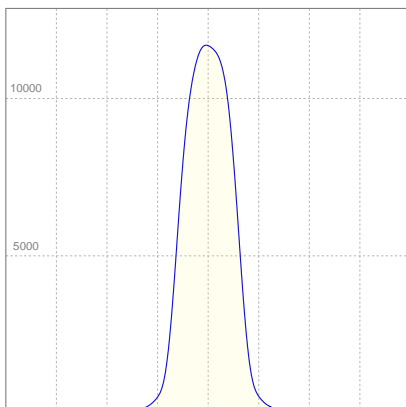
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
53,8°	77,6°	102,1°	98,7%	94,8%



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	11677lx	2919lx	1297lx	730lx	467lx	208lx	117lx	52lx	29lx	19lx	13lx	7lx	5lx
Footcand.	1085fcd	271fcd	121fcd	68fcd	43fcd	19fcd	11fcd	5fcd	3fcd	2fcd	1fcd	1fcd	0fcd
Beam wid.	1m	2m	3m	4,1m	5,1m	7,6m	10,2m	15,2m	20,3m	25,4m	30,5m	40,6m	50,8m
Beam wid.	3,3ft	6,7ft	9,9ft	13,3ft	16,6ft	25ft	33,3ft	49,9ft	66,6ft	83,2ft	99,9ft	133,2ft	166,5ft

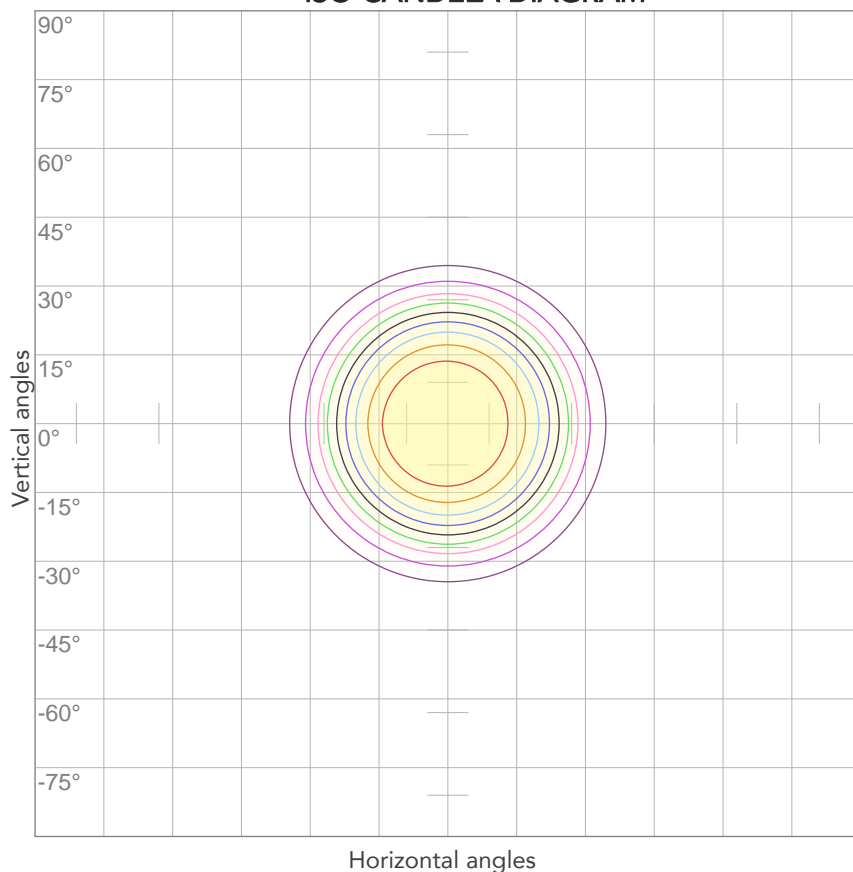
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
223V	0,759A	164,2W	56lm/W
Power Fc			
0,97			

ISO CANDELA DIAGRAM



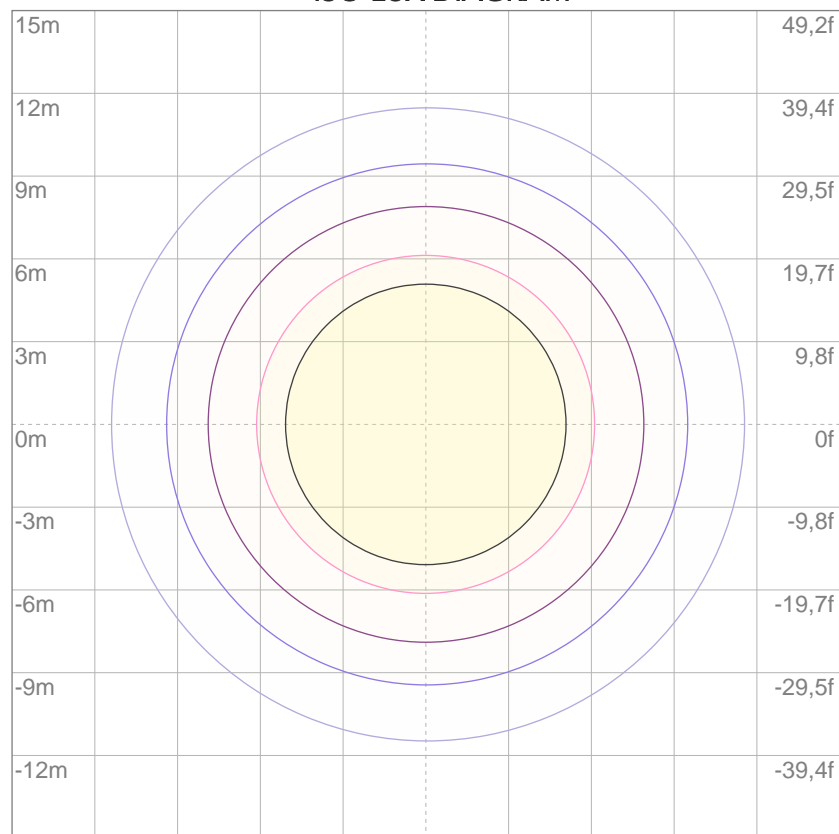
10%	1168 cd
20%	2335 cd
30%	3503 cd
40%	4671 cd
50%	5838 cd
60%	7006 cd
70%	8174 cd
80%	9341 cd

Conditions:

Number of c-planes: 2

Candela at center: 11677 cd

ISO LUX DIAGRAM



3%	3,50 lx
5%	5,84 lx
10%	11,7 lx
30%	35,0 lx
50%	58,4 lx

Conditions:

Number of c-planes: 2

Lux at center: 117 lx

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



Total lumen output:

8595 lm

Peak candela output:

15004 cd

Light quality:

CRI: 83,5

Color temperature:

5092 K

PRODUCT NAME:
STUDIOCOBPLUSDY

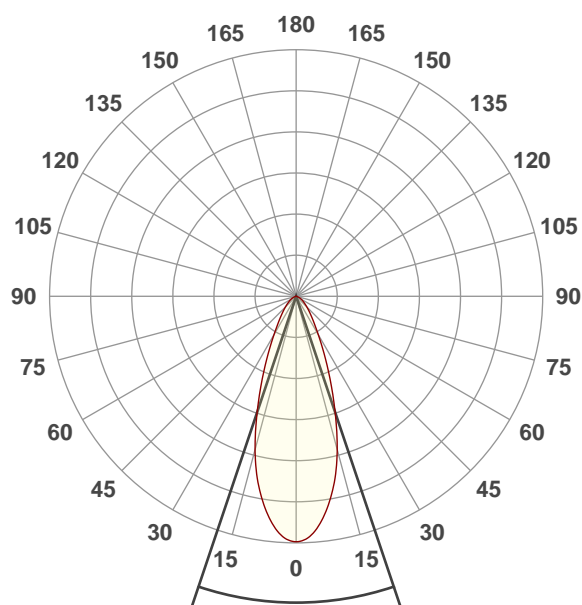
MEASURAMENT CONDITIONS:

Beam angle:
Medium Beam

Target:
Full On

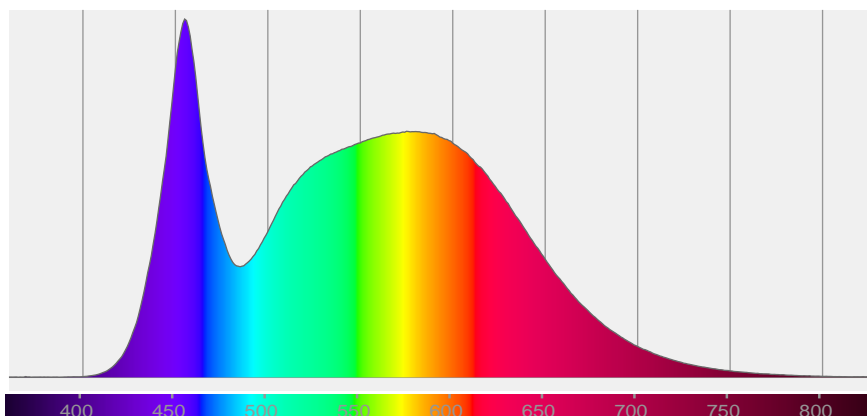
Operator:
Paolo Carvone

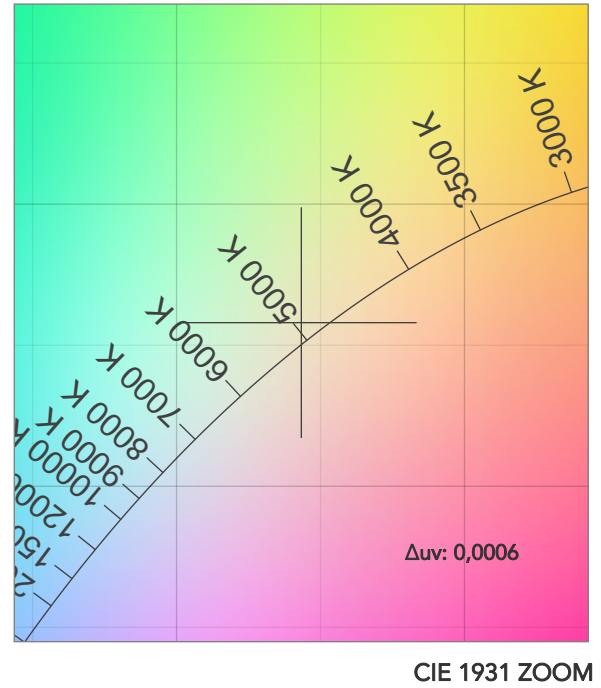
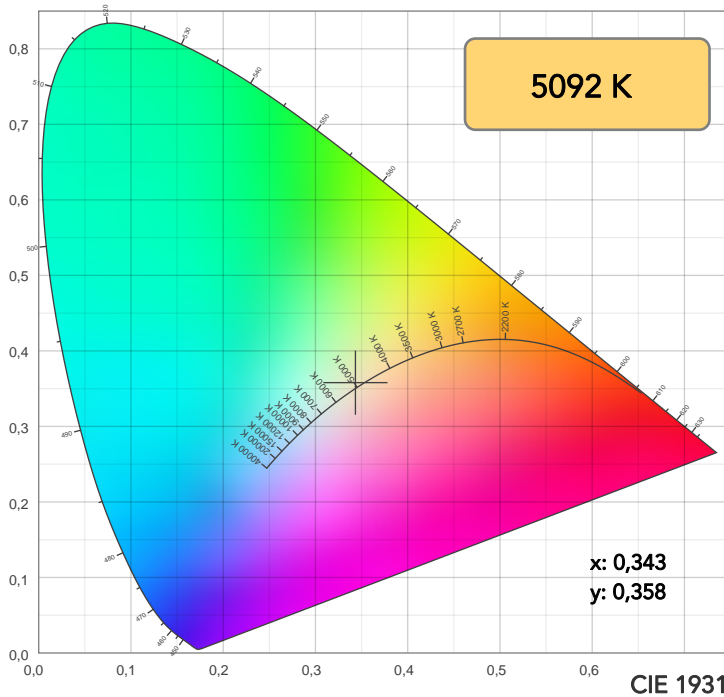
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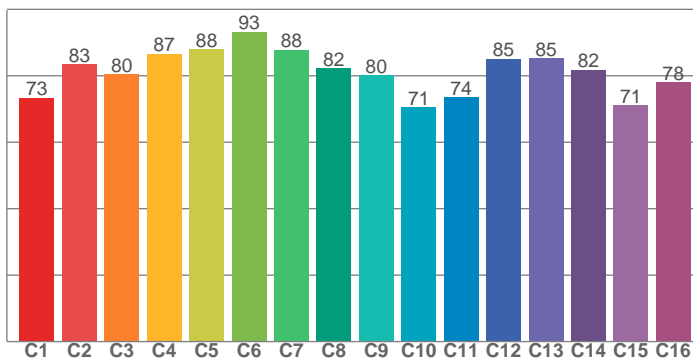
Beam angle 50%: 37,2°
Field angle 10%: 75,5°
Cut off angle 2.5%: 118,8°

Spectra

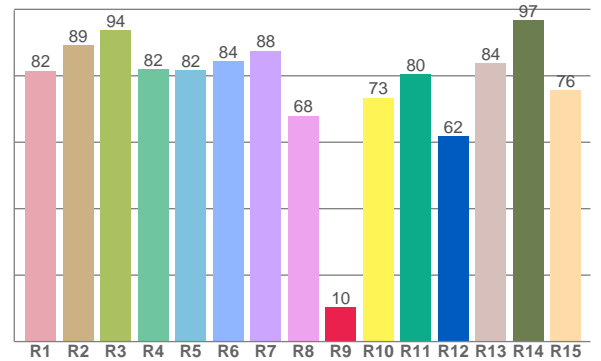




TM30: 81,6



CRI: 83,5 (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
81,5	89,2	93,6	81,9	81,6	84,4	87,5	67,9	10,3	73,4	80,4	61,9	83,8	96,7	75,7

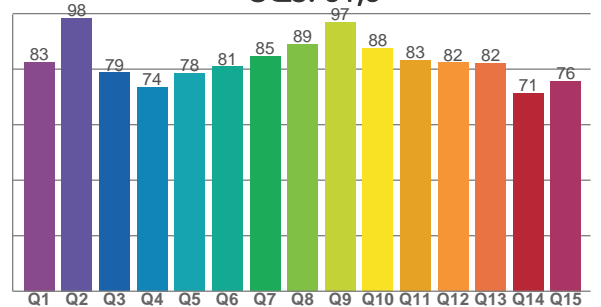
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
73,3	83,4	80,4	86,6	88,0	93,3	87,7	82,2	80,2	70,5	73,5	85,1	85,2	81,8	71,1	78,1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82,5	98,5	78,8	73,5	78,5	81,0	84,6	89,0	97,1	87,5	83,3	82,3	82,2	71,5	75,7

CQS: 81,5



COLOR PARAMETERS

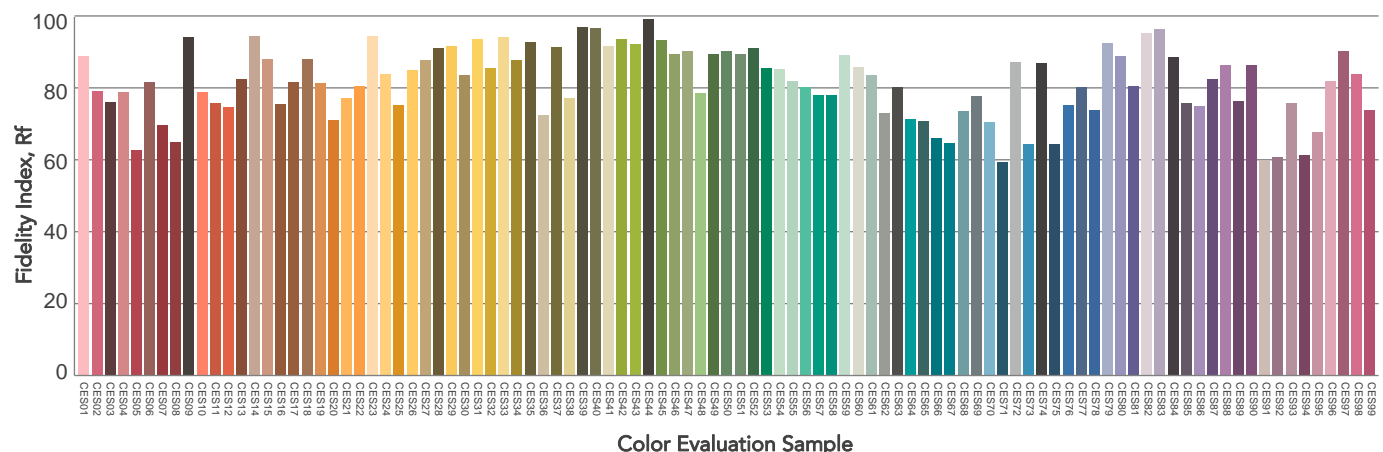
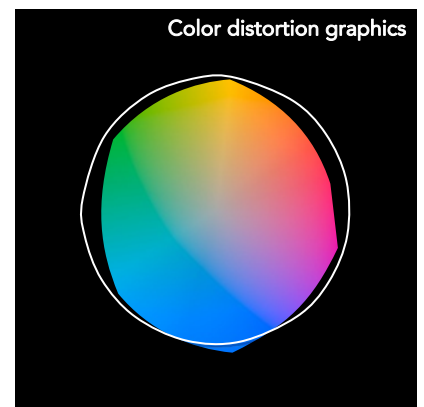
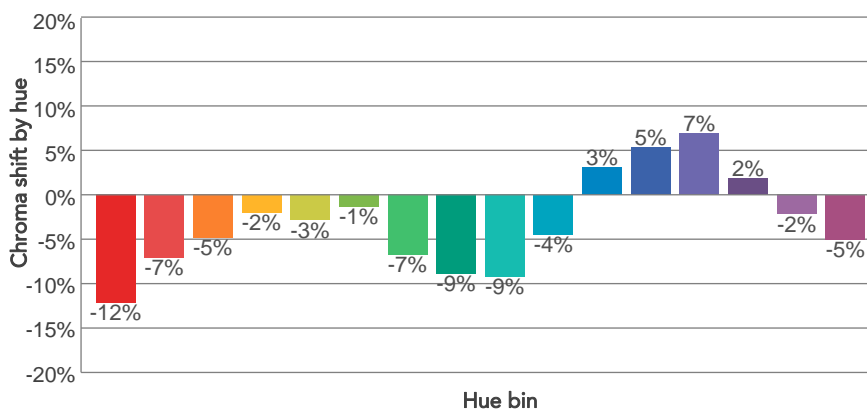
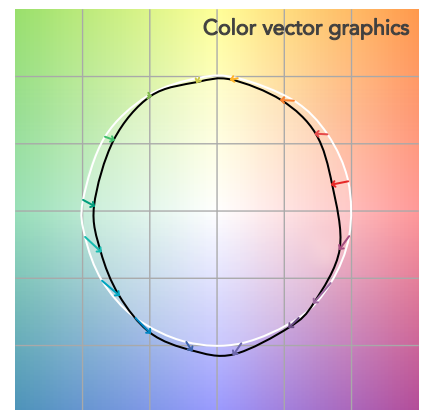
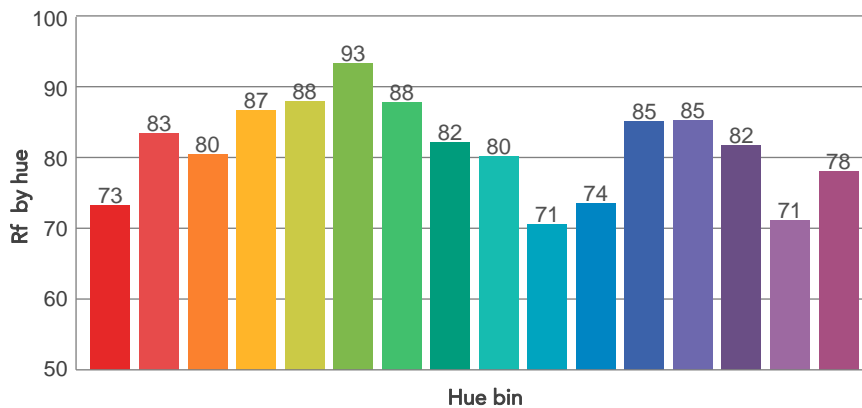
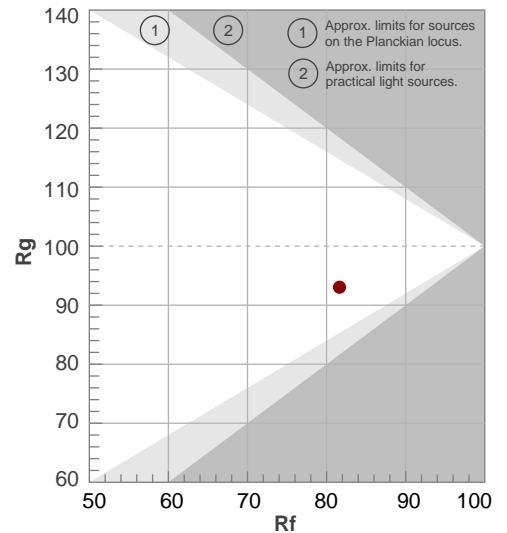
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5092 K	83,5	10,3	81,6	93,0	81,5	72	0,343	0,358	0,0006

TM30 DETAILS

Rf 81,6
Fidelity index Rf

Rg 93,0
Gammut index

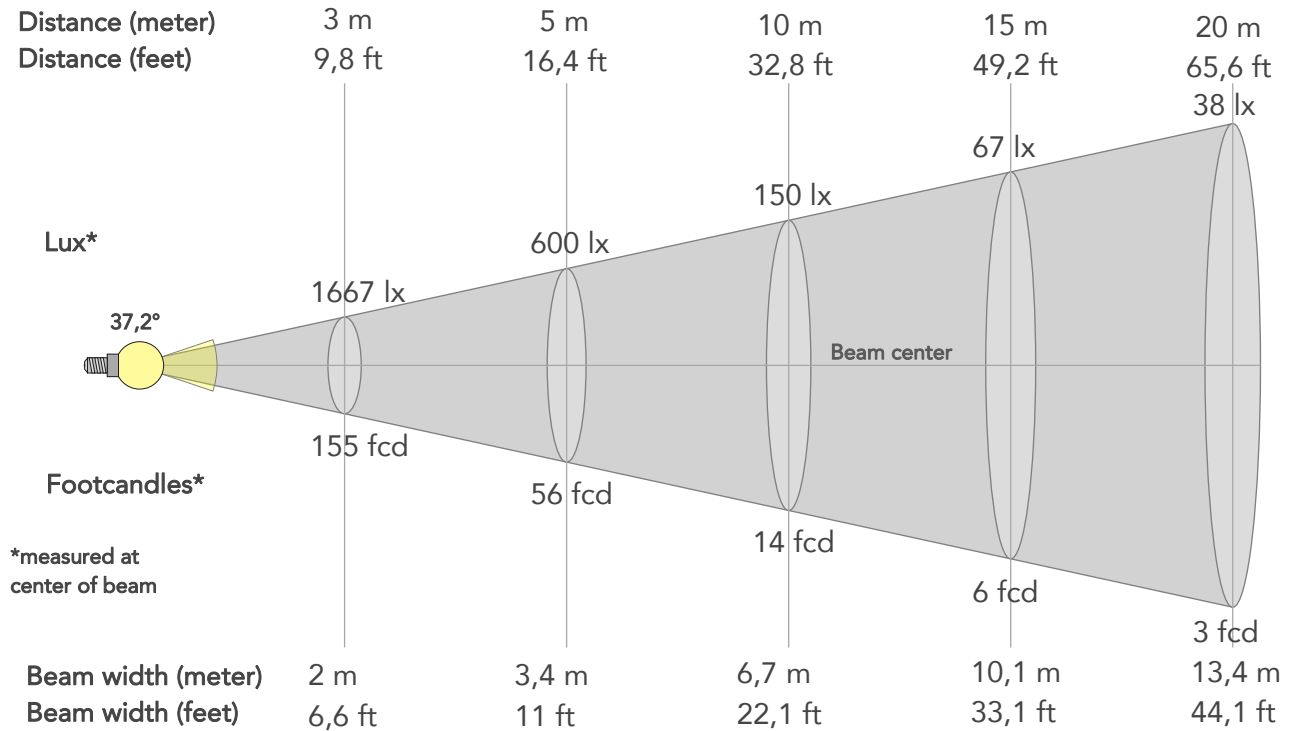
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	73	-12%	0%
2	83	-7%	5%
3	80	-5%	8%
4	87	-2%	5%
5	88	-3%	2%
6	93	-1%	-1%
7	88	-7%	-2%
8	82	-9%	3%
9	80	-9%	13%
10	71	-4%	16%
11	74	3%	15%
12	85	5%	5%
13	85	7%	-7%
14	82	2%	-10%
15	71	-2%	-19%
16	78	-5%	-11%



BEAM DETAILS



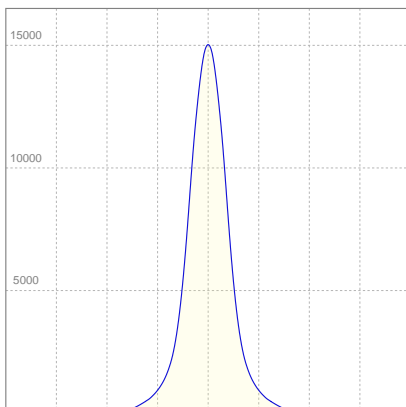
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
37,2°	75,5°	118,8°	96,3%	87,3%



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	15004lx	3751lx	1667lx	938lx	600lx	267lx	150lx	67lx	38lx	24lx	17lx	9lx	6lx
Footcand.	1394fcd	348fcd	155fcd	87fcd	56fcd	25fcd	14fcd	6fcd	3fcd	2fcd	2fcd	1fcd	1fcd
Beam wid.	0,7m	1,3m	2m	2,7m	3,4m	5m	6,7m	10,1m	13,4m	16,8m	20,2m	26,9m	33,6m
Beam wid.	2,2ft	4,4ft	6,6ft	8,8ft	11ft	16,5ft	22,1ft	33,1ft	44,1ft	55,1ft	66,2ft	88,2ft	110,3ft

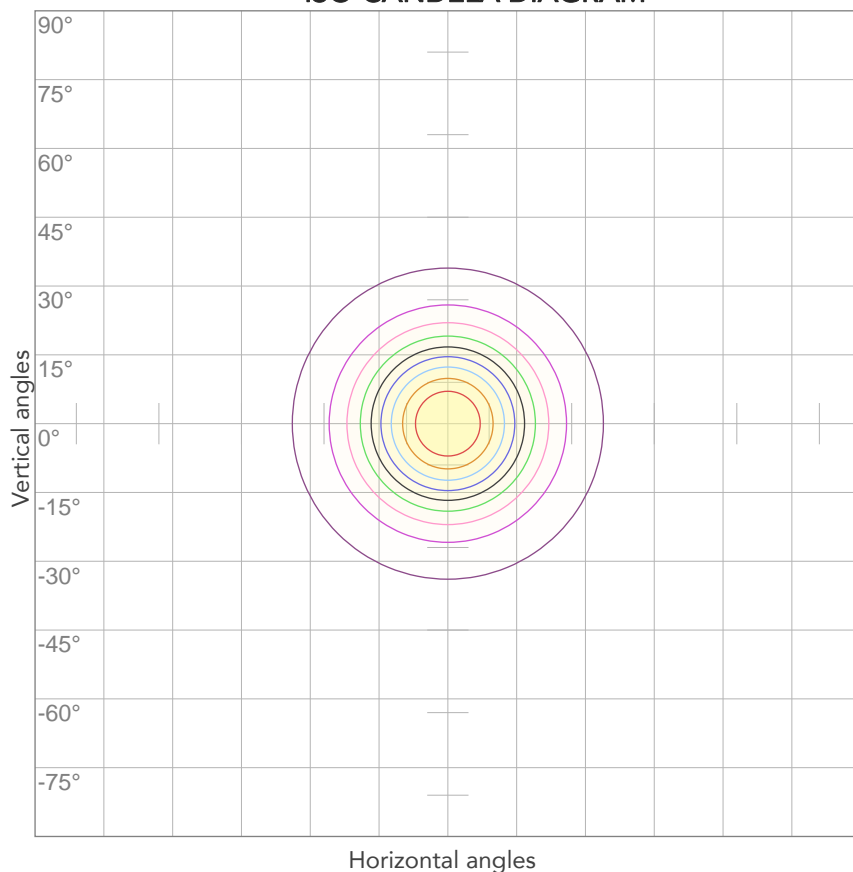
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
223V	0,760A	164,2W	52lm/W
Power Fc			
0,97			

ISO CANDELA DIAGRAM



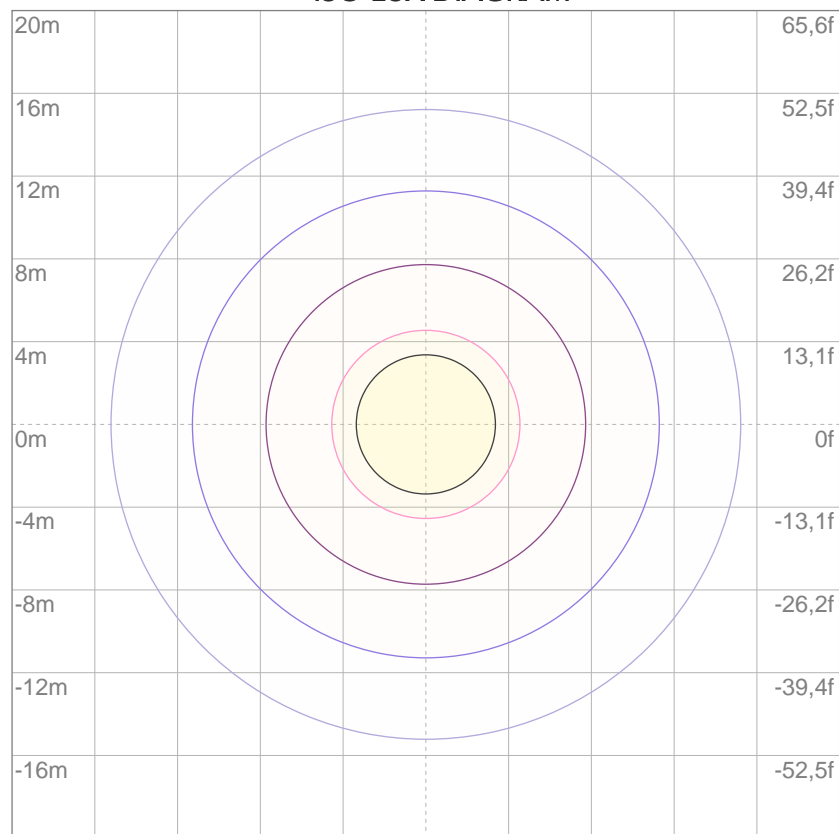
10%	1500 cd
20%	3001 cd
30%	4501 cd
40%	6002 cd
50%	7502 cd
60%	9002 cd
70%	10503 cd
80%	12003 cd

Conditions:

Number of c-planes: 2

Candela at center: 15004 cd

ISO LUX DIAGRAM



3%	4,50 lx
5%	7,50 lx
10%	15,0 lx
30%	45,0 lx
50%	75,0 lx

Conditions:

Number of c-planes: 2

Lux at center: 150 lx

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



Total lumen output:

9822 lm

Peak candela output:

58422 cd

Light quality:

CRI: 83,4

Color temperature:

5043 K

PRODUCT NAME:
STUDIOCOBPLUSDY

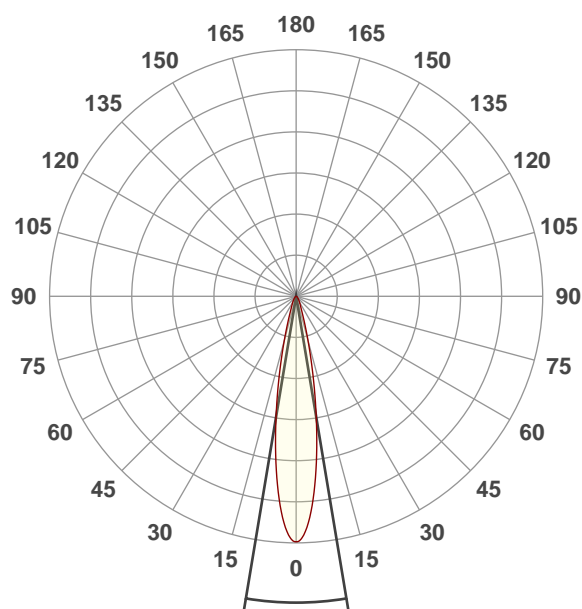
MEASURAMENT CONDITIONS:

Beam angle:
NarrowBeam

Target:
Full On

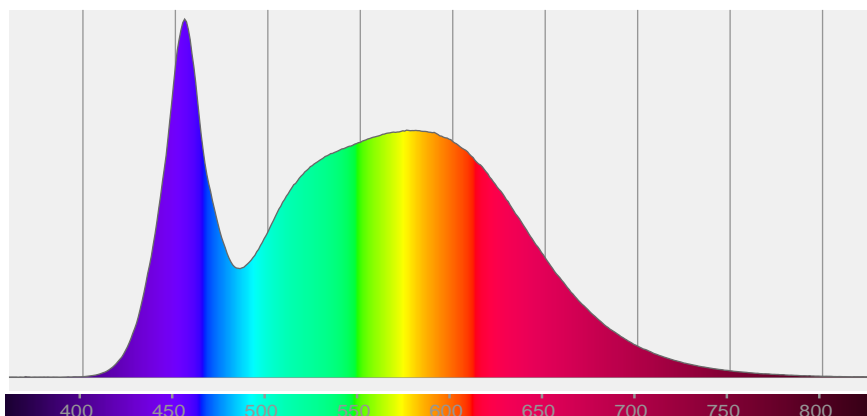
Operator:
Paolo Carvone

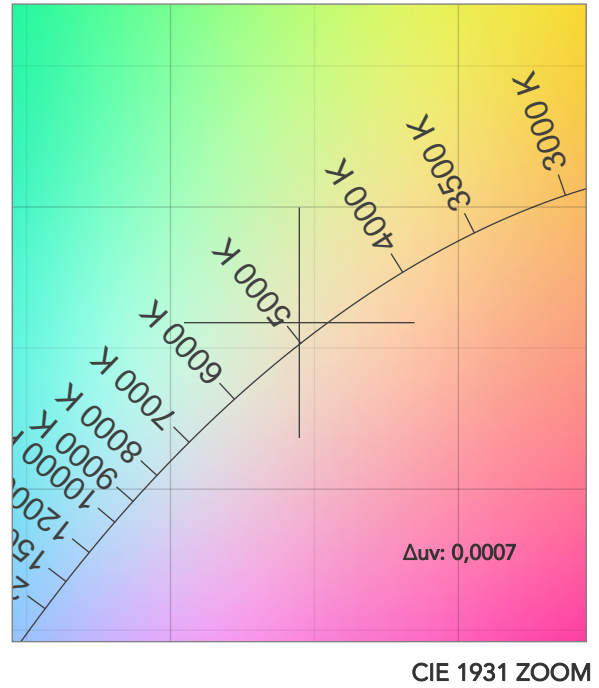
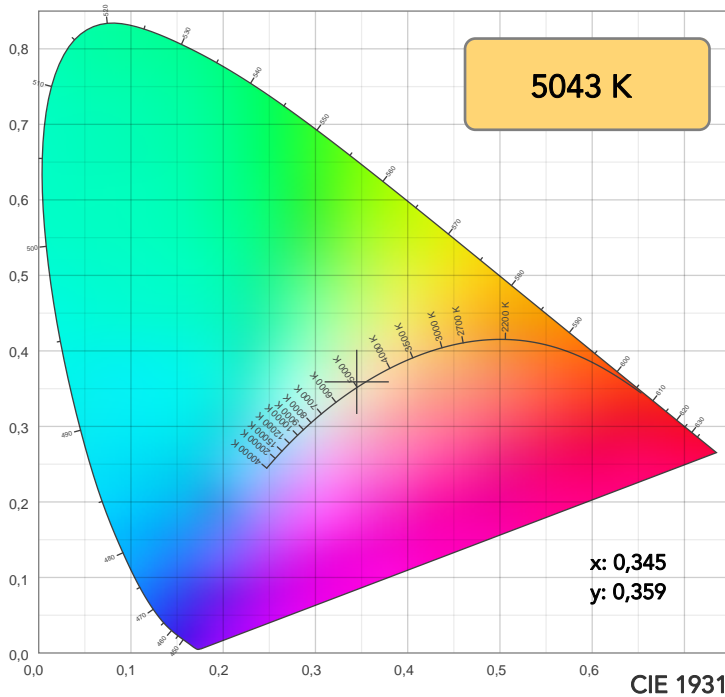
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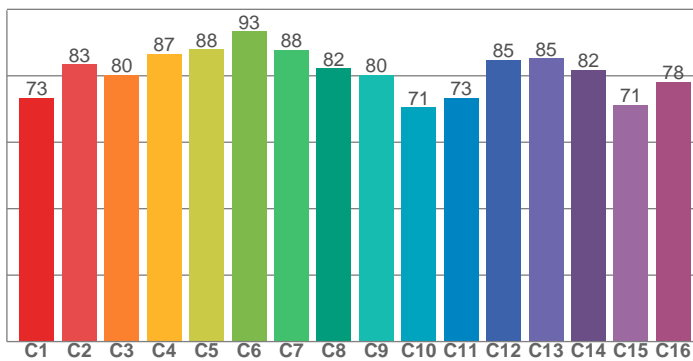
Beam angle 50%: 18,9°
Field angle 10%: 36,5°
Cut off angle 2.5%: 62,9°

Spectra

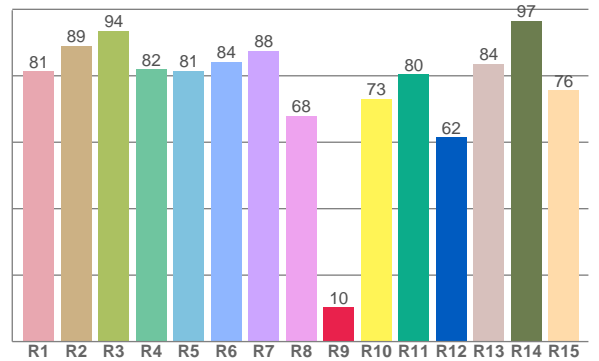




TM30: 81,6



CRI: 83,4 (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
81,4	89,1	93,5	82,0	81,5	84,2	87,6	67,9	10,4	73,1	80,4	61,5	83,6	96,6	75,7

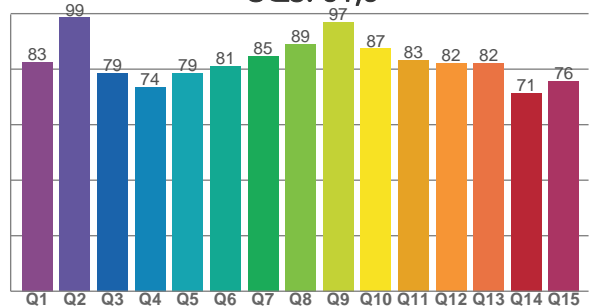
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
73,4	83,5	80,4	86,5	87,9	93,3	87,9	82,3	80,2	70,5	73,3	84,9	85,3	81,8	71,2	78,1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82,6	98,5	78,6	73,5	78,6	81,1	84,7	89,0	97,0	87,4	83,2	82,2	82,1	71,5	75,7

CQS: 81,5



COLOR PARAMETERS

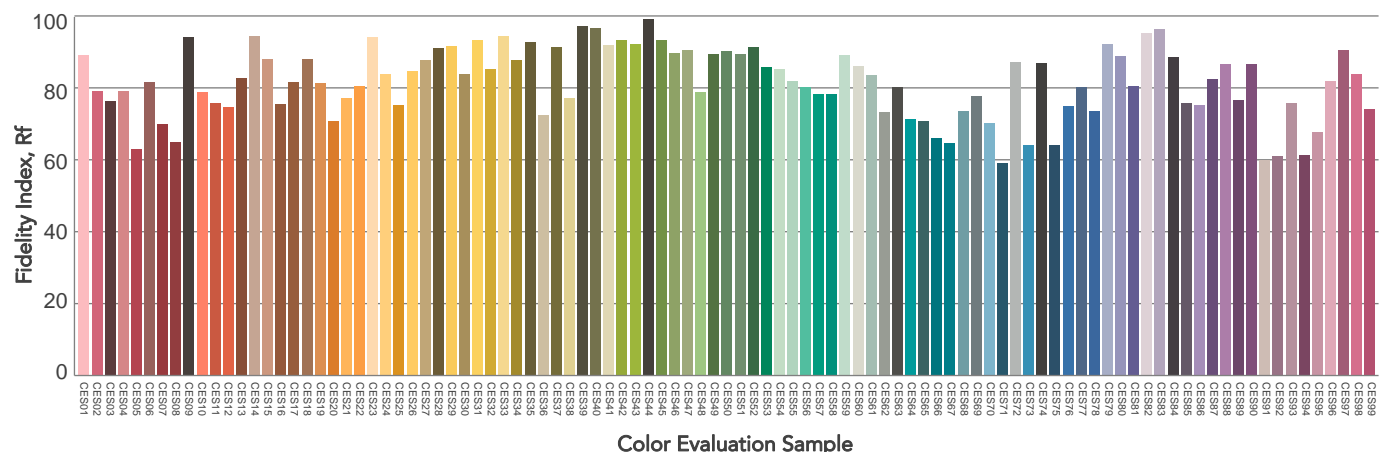
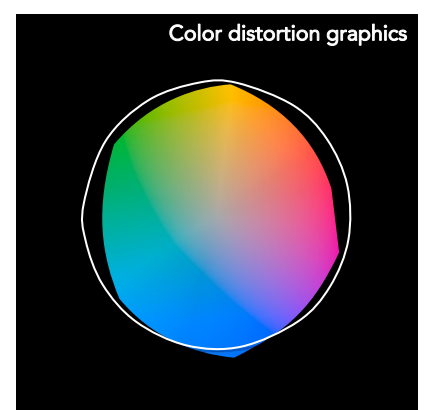
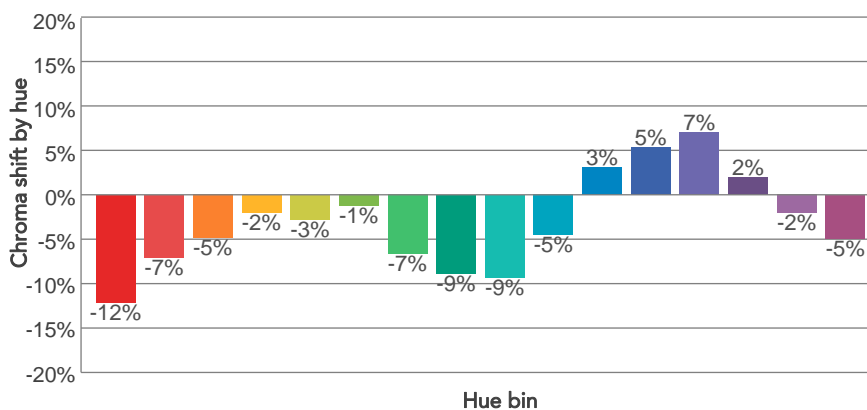
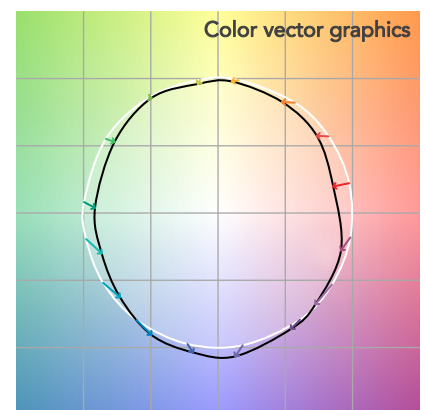
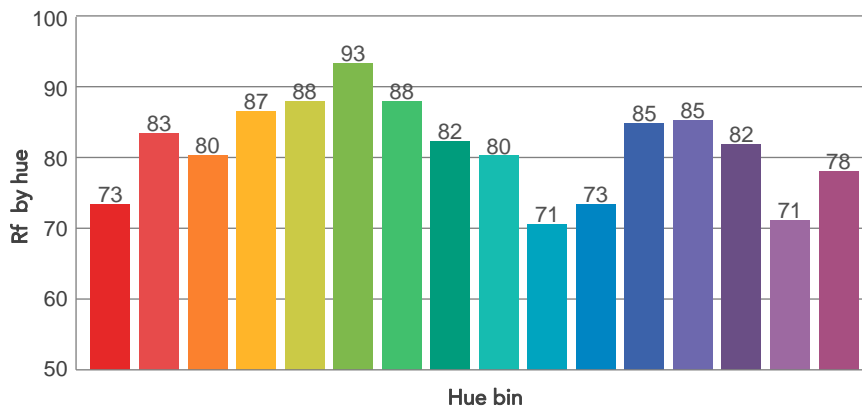
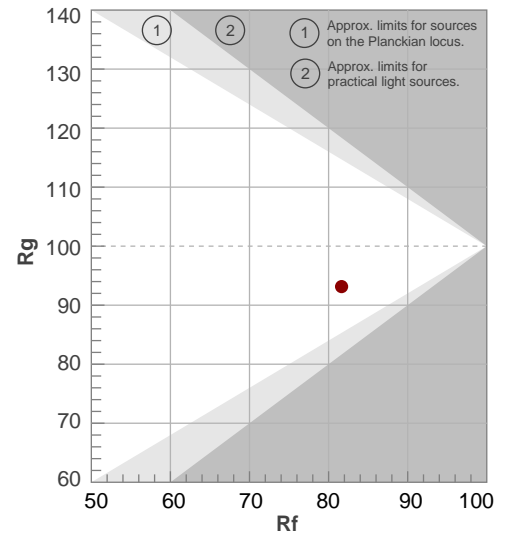
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5043 K	83,4	10,4	81,6	93,1	81,5	72	0,345	0,359	0,0007

TM30 DETAILS

Rf 81,6
Fidelity index Rf

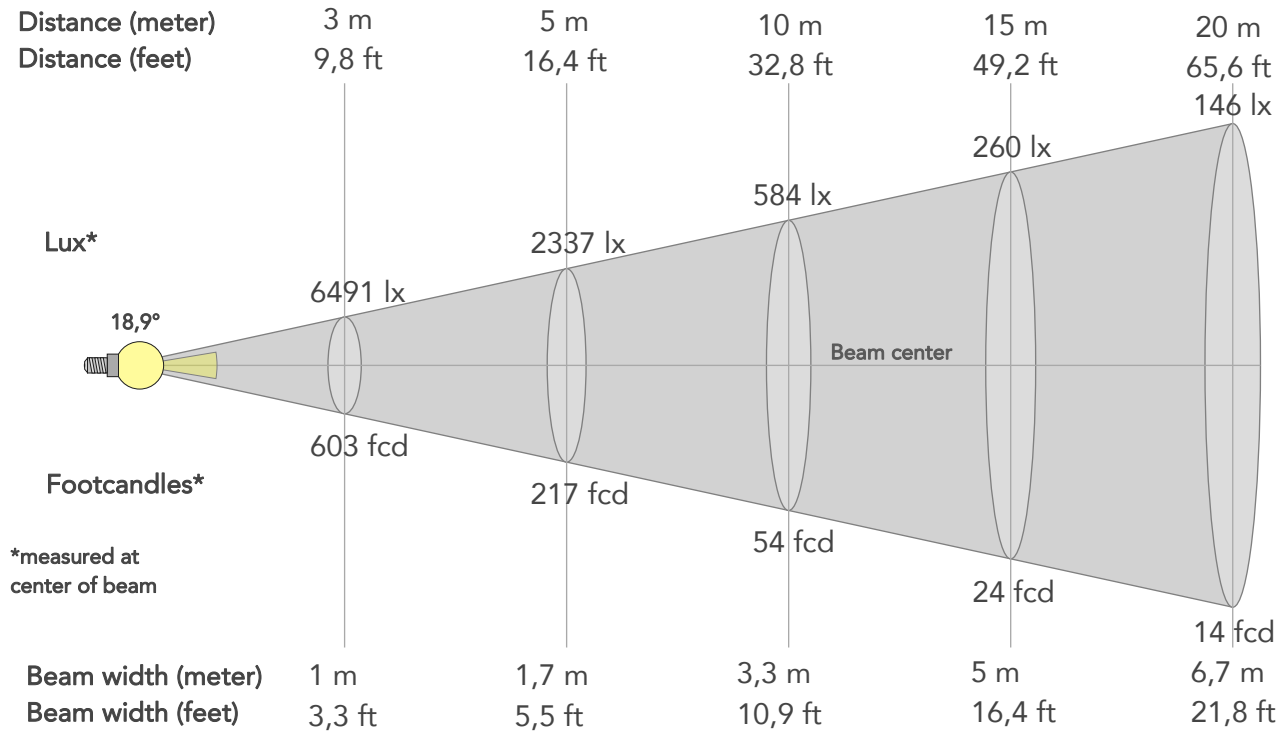
Rg 93,1
Gammut index

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	73	-12%	0%
2	83	-7%	5%
3	80	-5%	8%
4	87	-2%	5%
5	88	-3%	2%
6	93	-1%	-1%
7	88	-7%	-2%
8	82	-9%	3%
9	80	-9%	13%
10	71	-5%	16%
11	73	3%	15%
12	85	5%	5%
13	85	7%	-7%
14	82	2%	-9%
15	71	-2%	-19%
16	78	-5%	-11%



BEAM DETAILS

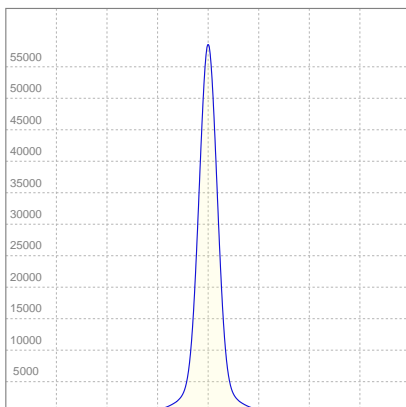
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
18,9°	36,5°	62,9°	98,2%	93,5%



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	58422lx	14605lx	6491lx	3651lx	2337lx	1039lx	584lx	260lx	146lx	93lx	65lx	37lx	23lx
Footcand.	5428fcd	1357fcd	603fcd	339fcd	217fcd	96fcd	54fcd	24fcd	14fcd	9fcd	6fcd	3fcd	2fcd
Beam wid.	0,3m	0,7m	1m	1,3m	1,7m	2,5m	3,3m	5m	6,7m	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	43,7ft	54,6ft

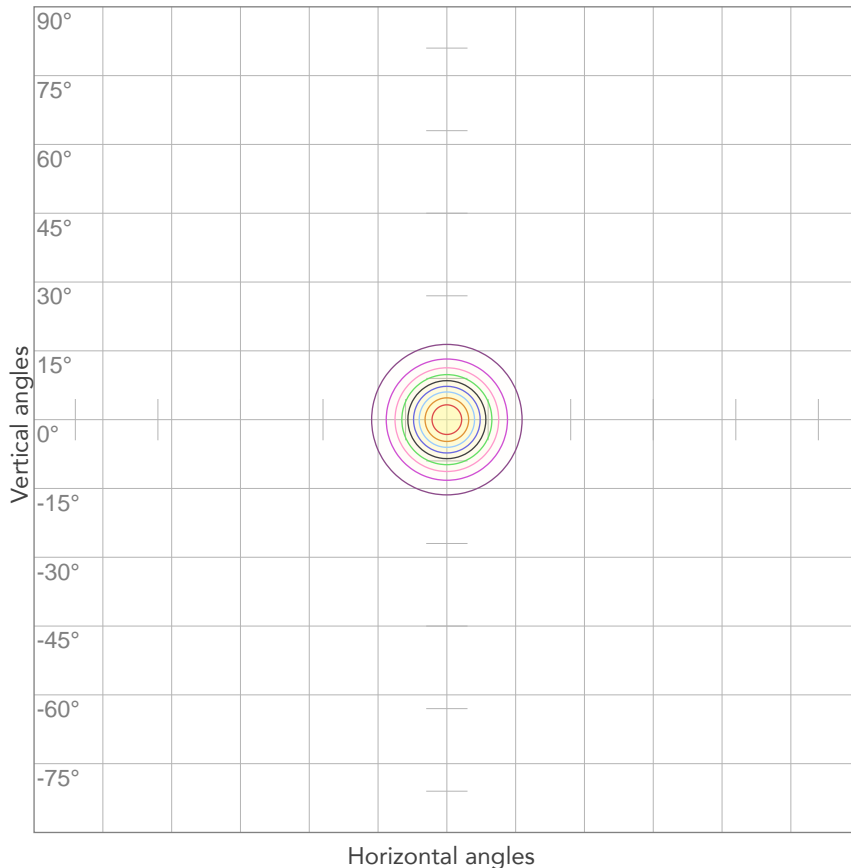
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
223V	0,760A	164,3W	60lm/W
Power Fc			
0,97			

ISO CANDELA DIAGRAM



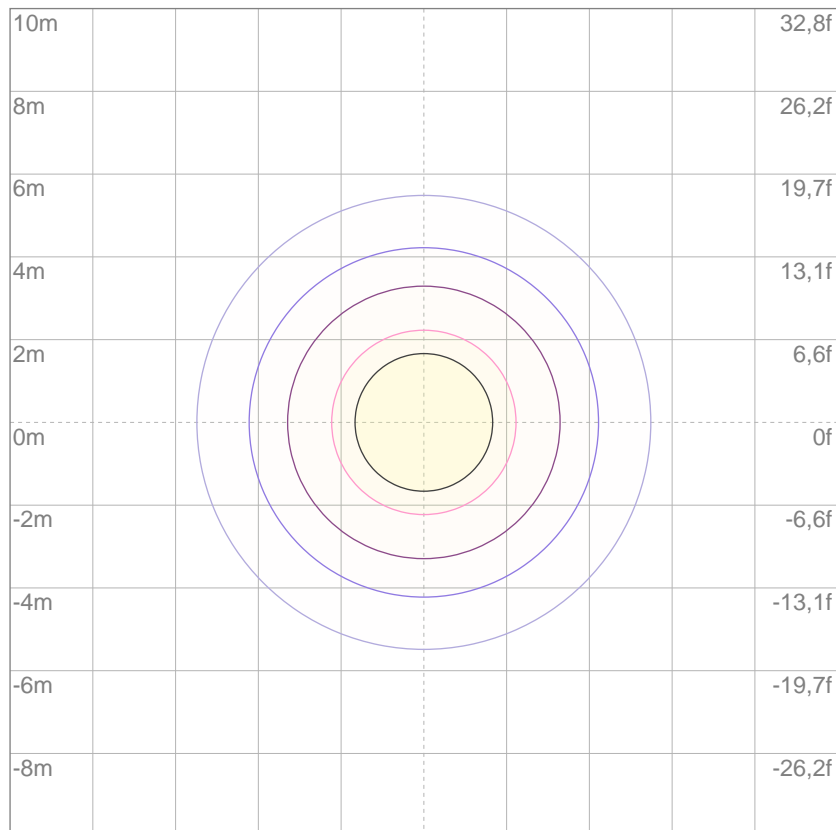
10%	5842 cd
20%	11684 cd
30%	17527 cd
40%	23369 cd
50%	29211 cd
60%	35053 cd
70%	40895 cd
80%	46737 cd

Conditions:

Number of c-planes: 2

Candela at center: 58422 cd

ISO LUX DIAGRAM



3%	17,5 lx
5%	29,2 lx
10%	58,4 lx
30%	175 lx
50%	292 lx

Conditions:

Number of c-planes: 2

Lux at center: 584 lx

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