

Photometric Test Report



ECLFWVW PRL70

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

CONTENTS

Table of contents	2
Testing process	3
Presets	
Full On	4
Cold White	9
Warm White	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:

9007 lm

Peak candela output:

9600 cd

Light quality:

CRI: 95,9

Color temperature:

3950 K

PRODUCT NAME:

ECLFWWW

MEASURAMENT CONDITIONS:

Beam angle:

PRL70

Target:

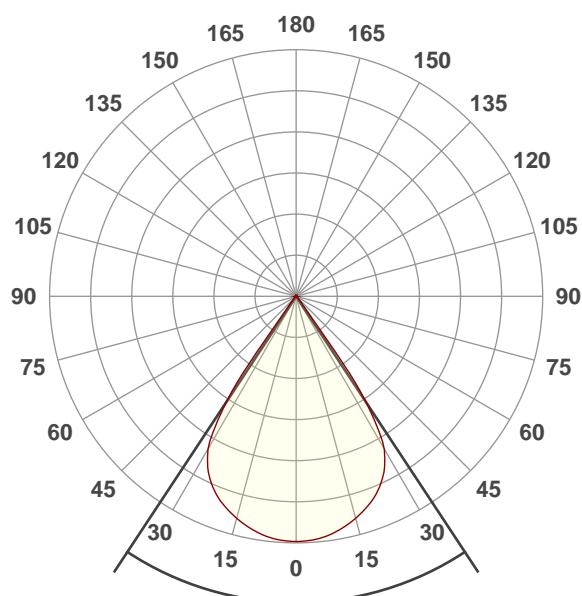
Full On

Operator:

Paolo Carvone

Date and time:

11/06/2021 14:17:21

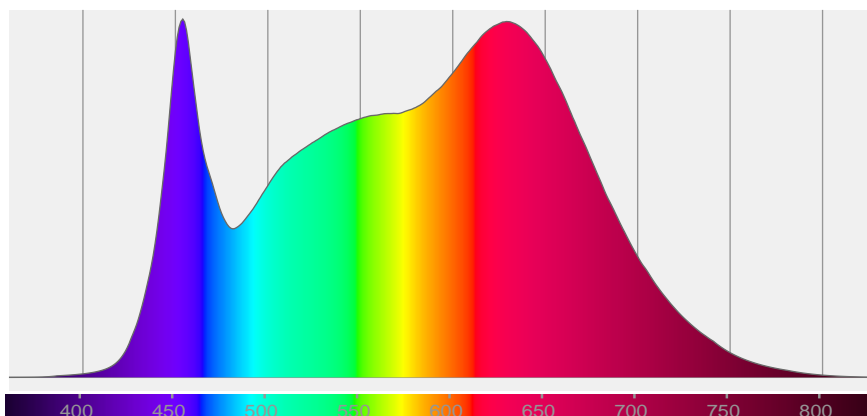


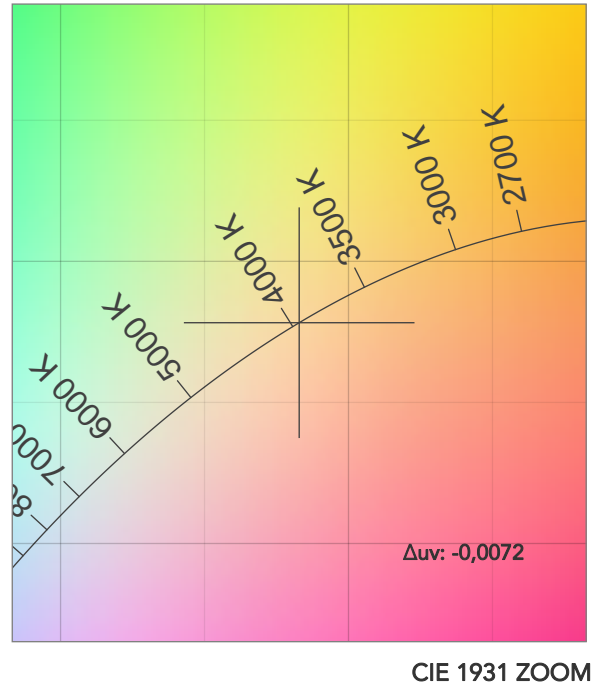
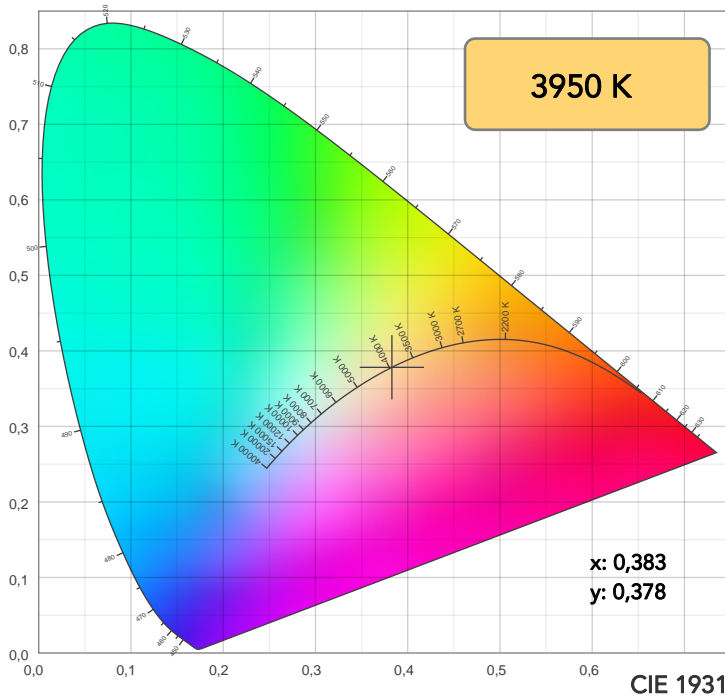
Beam angle 50%: 66,9°

Field angle 10%: 74,5°

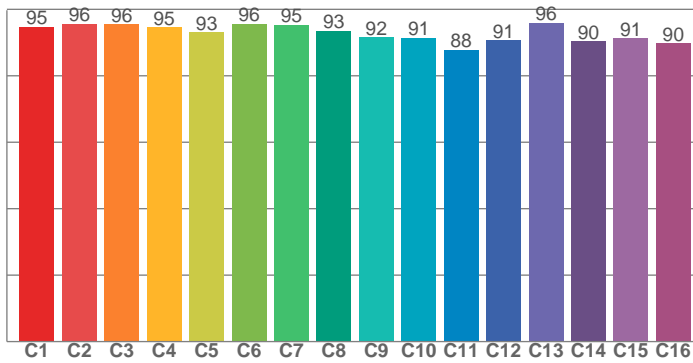
Cut off angle 2.5%: 78,4°

Spectra

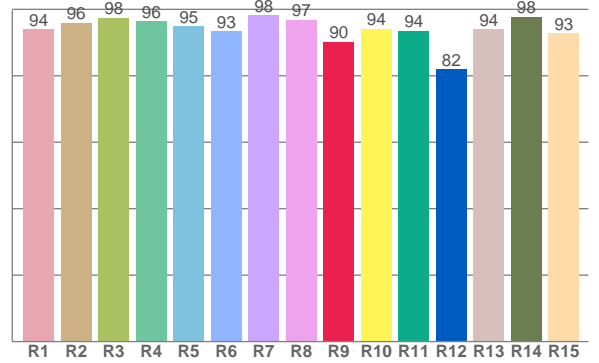




TM30: 93,0



CRI: 95,9 (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
94,1	95,9	97,5	96,4	95,0	93,5	98,2	96,9	90,2	94,1	93,5	82,1	94,1	97,7	92,8

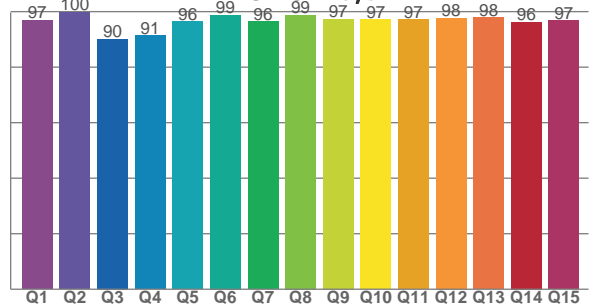
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
94,8	95,7	95,5	94,6	93,1	95,6	95,3	93,5	91,6	91,4	87,8	90,6	95,9	90,4	91,3	89,8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
96,9	99,7	90,1	91,4	96,4	98,8	96,4	98,8	97,3	97,1	97,1	97,7	97,9	96,3	96,8

CQS: 95,8



COLOR PARAMETERS

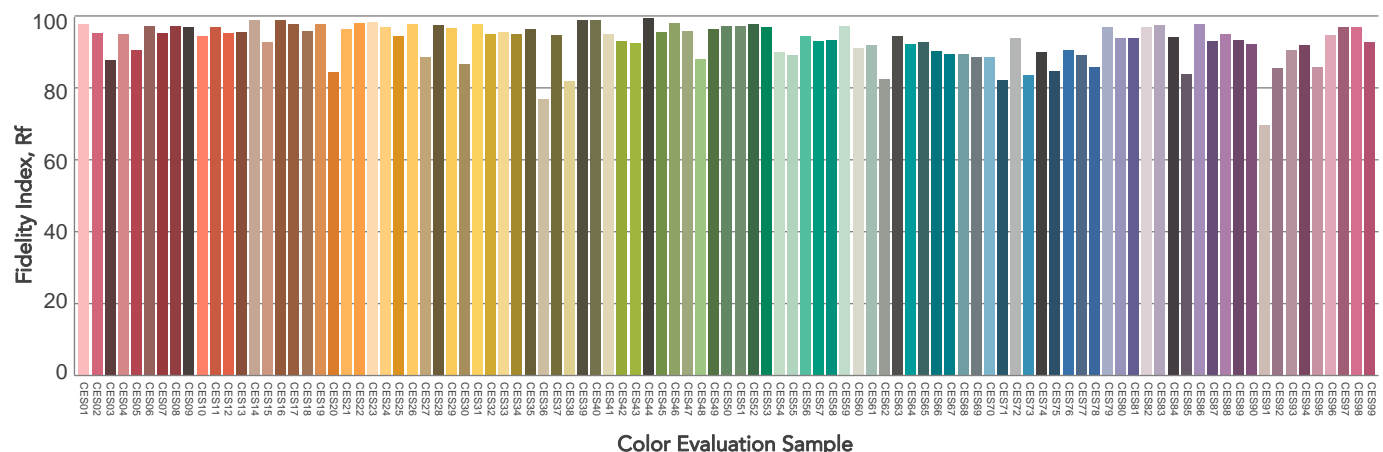
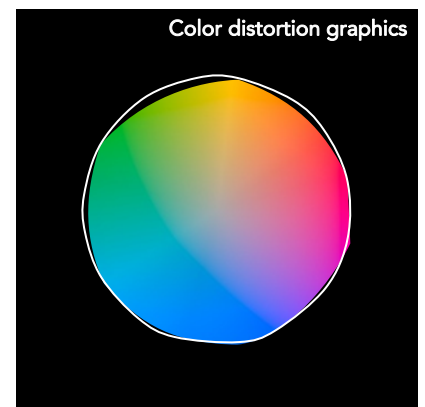
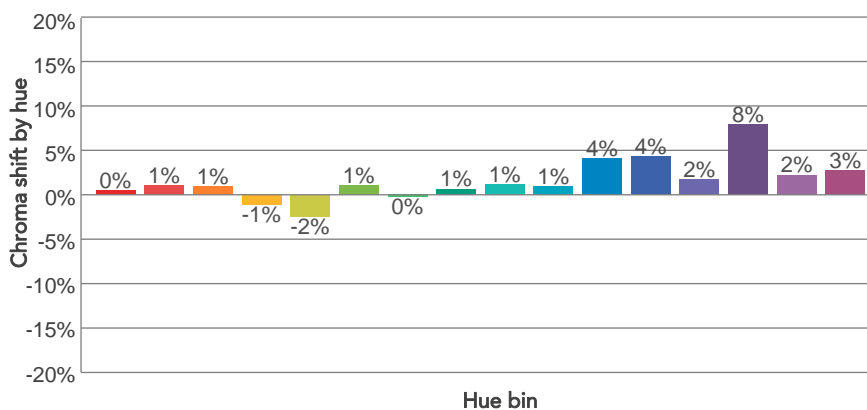
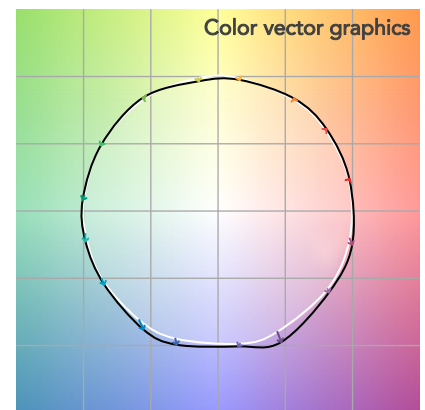
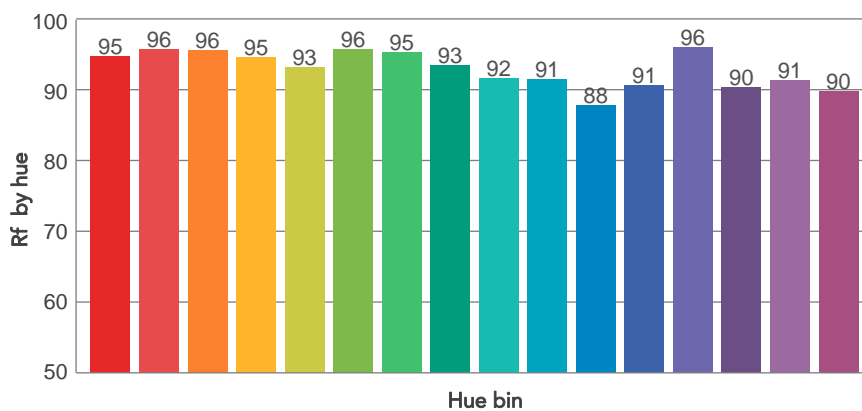
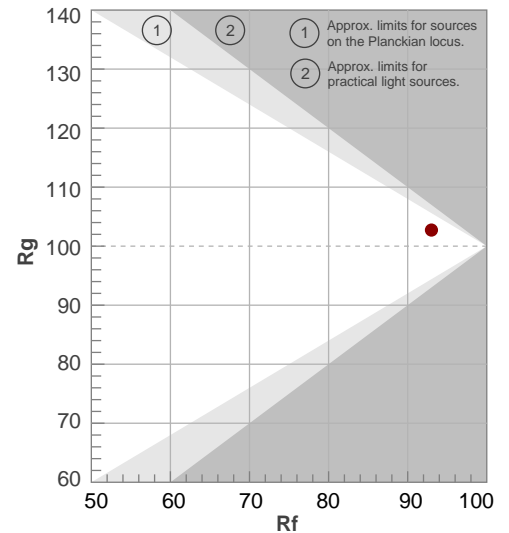
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
3950 K	95,9	90,2	93,0	102,7	95,8	98	0,383	0,378	-0,0072

TM30 DETAILS

Rf 93,0
Fidelity index Rf

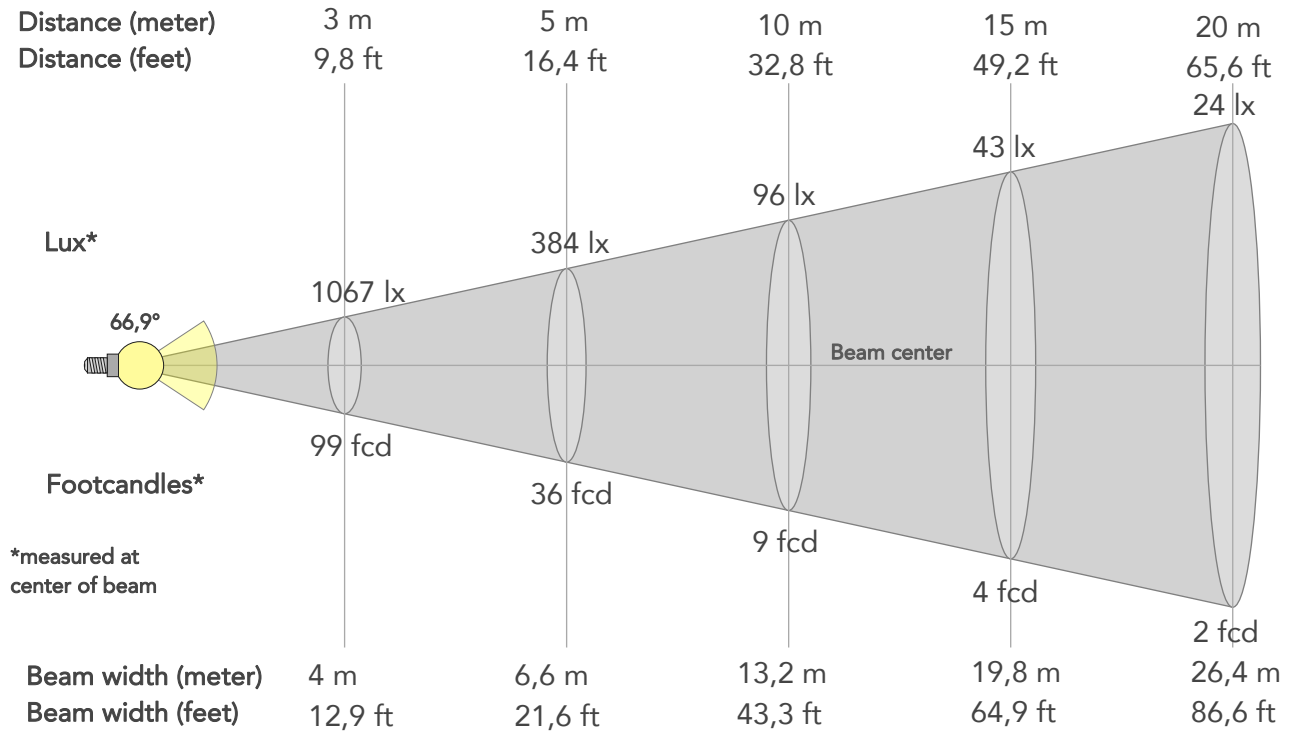
Rg 102,7
Gammut index

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



BEAM DETAILS

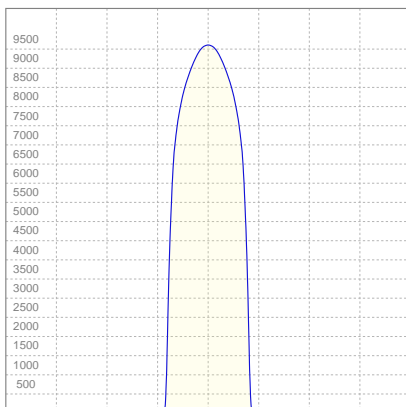
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
66,9°	74,5°	78,4°	100,0%	100,0%



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	9600lx	2400lx	1067lx	600lx	384lx	171lx	96lx	43lx	24lx	15lx	11lx	6lx	4lx
Footcand.	892fcd	223fcd	99fcd	56fcd	36fcd	16fcd	9fcd	4fcd	2fcd	1fcd	1fcd	1fcd	0fcd
Beam wid.	1,3m	2,6m	4m	5,3m	6,6m	9,9m	13,2m	19,8m	26,4m	33m	39,6m	52,8m	66m
Beam wid.	4,4ft	8,7ft	12,9ft	17,3ft	21,6ft	32,5ft	43,3ft	64,9ft	86,6ft	108,2ft	129,9ft	173,2ft	216,5ft

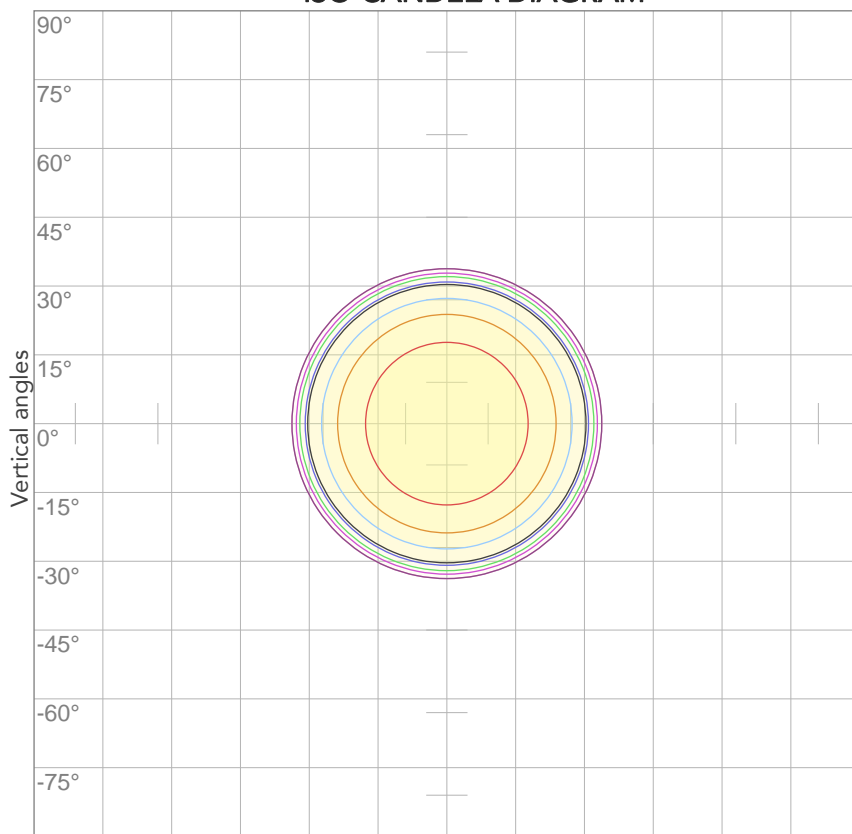
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
228V	1,17A	257,3W	35lm/W
Power Fc			
0,97			

ISO CANDELA DIAGRAM



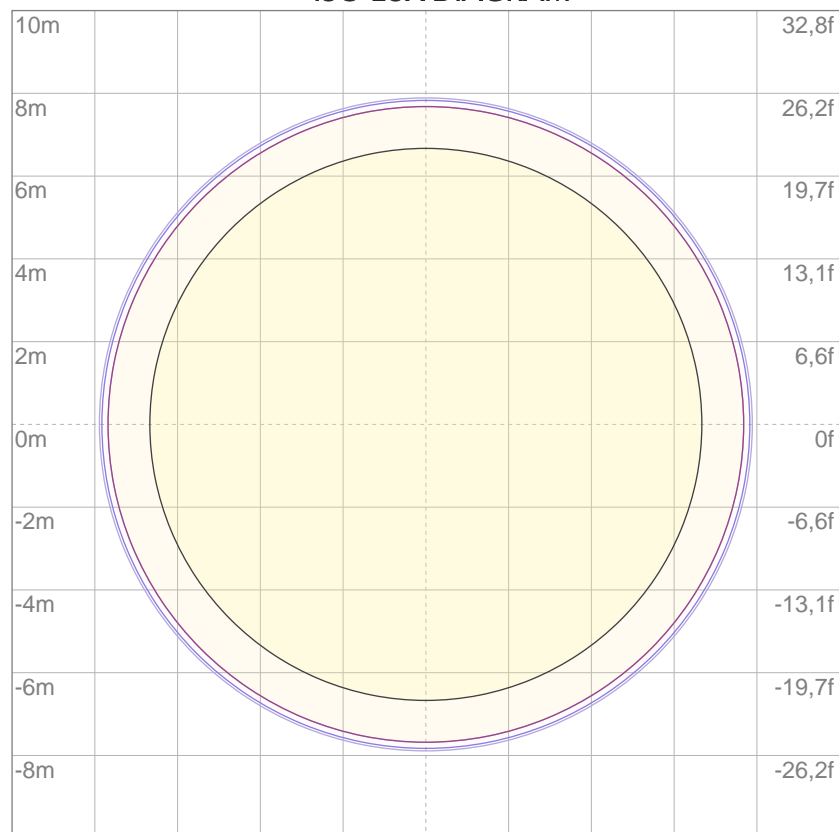
10%	960 cd
20%	1920 cd
30%	2880 cd
40%	3840 cd
50%	4800 cd
60%	5760 cd
70%	6720 cd
80%	7680 cd

Conditions:

Number of c-planes: 2

Candela at center: 9600 cd

ISO LUX DIAGRAM



3%	2,88 lx
5%	4,80 lx
10%	9,60 lx
30%	28,8 lx
50%	48,0 lx

Conditions:

Number of c-planes: 2

Lux at center: 96,0 lx

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



Total lumen output:

5084 lm

Peak candela output:

5399 cd

Light quality:

CRI: 97,2

Color temperature:

5610 K

PRODUCT NAME:

ECLFWWW

MEASURAMENT CONDITIONS:

Beam angle:

PRL70

Target:

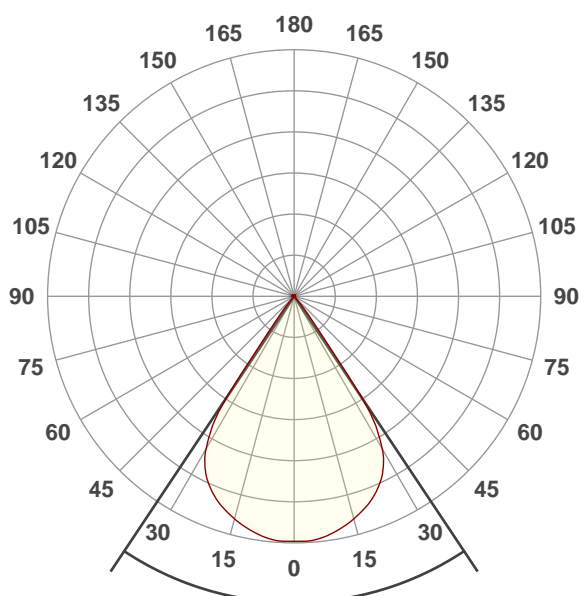
Cold White

Operator:

Paolo Carvone

Date and time:

11/06/2021 14:20:09

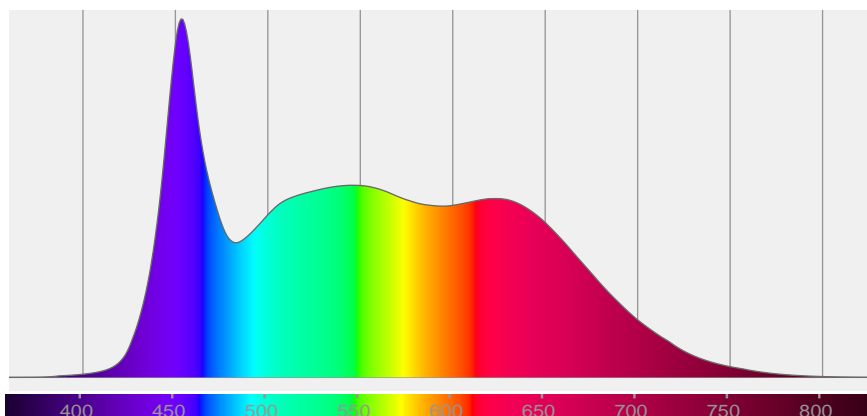


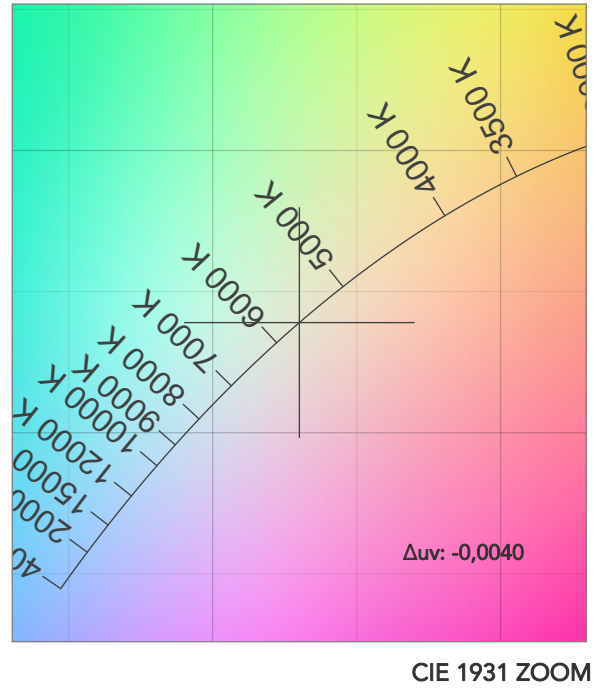
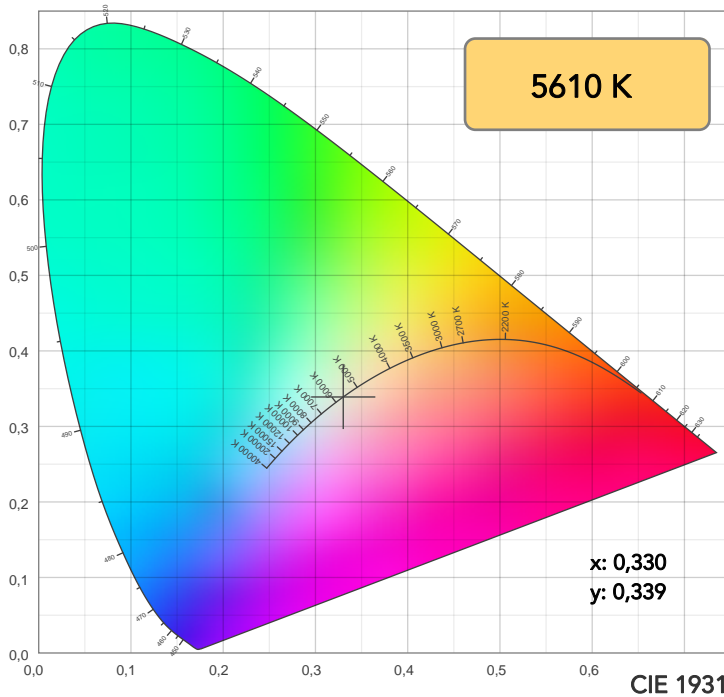
Beam angle 50%: 67,4°

Field angle 10%: 74,6°

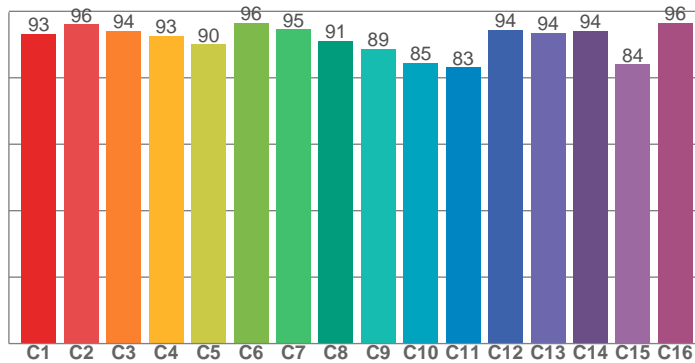
Cut off angle 2.5%: 78,7°

Spectra

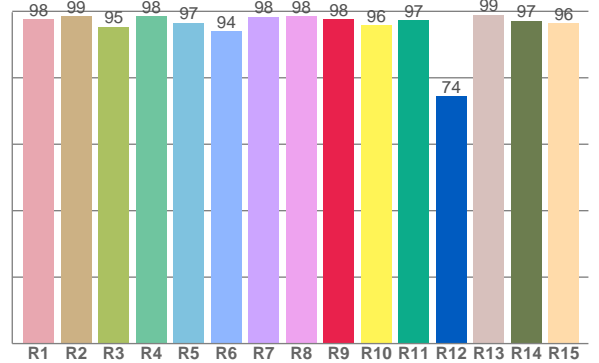




TM30: 91,4



CRI: 97,2 (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
97,6	98,6	95,4	98,5	96,6	93,9	98,4	98,5	97,6	95,7	97,3	74,4	98,9	97,1	96,4

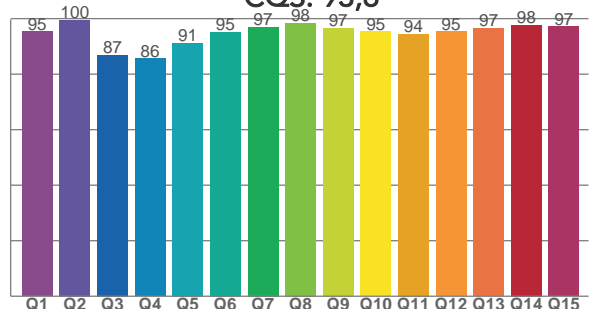
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
93,1	96,0	94,1	92,6	90,1	96,5	94,6	91,0	88,7	84,5	83,1	94,5	93,6	94,1	84,0	96,5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
95,4	99,5	86,9	85,6	91,2	95,2	96,9	98,4	96,6	95,4	94,5	95,3	96,5	97,7	97,2

CQS: 93,6



COLOR PARAMETERS

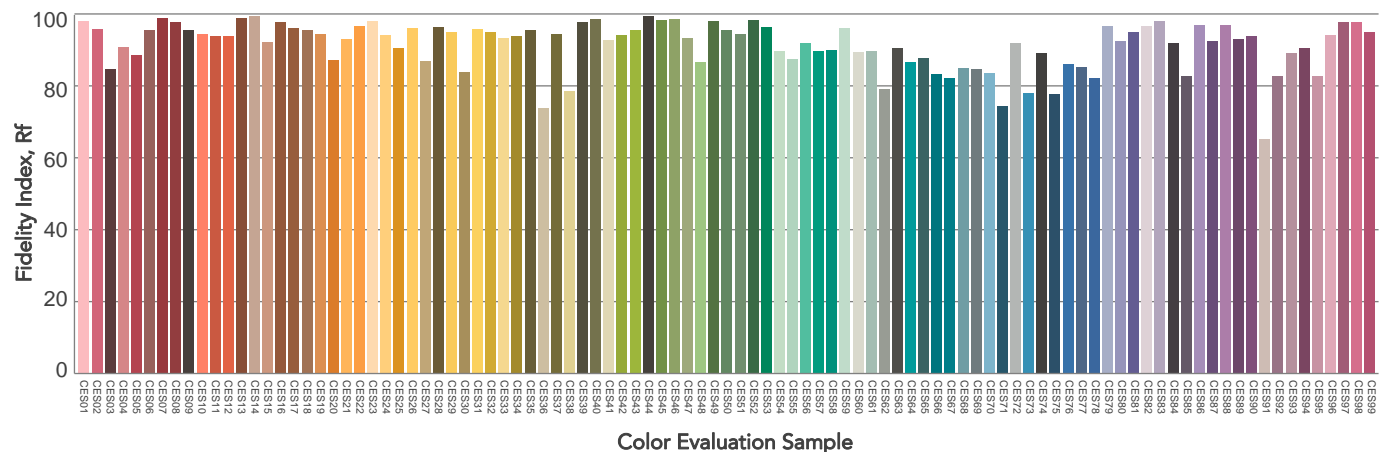
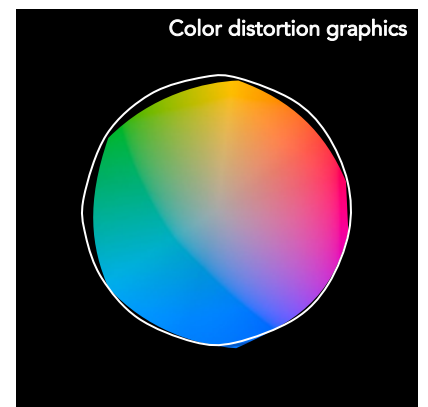
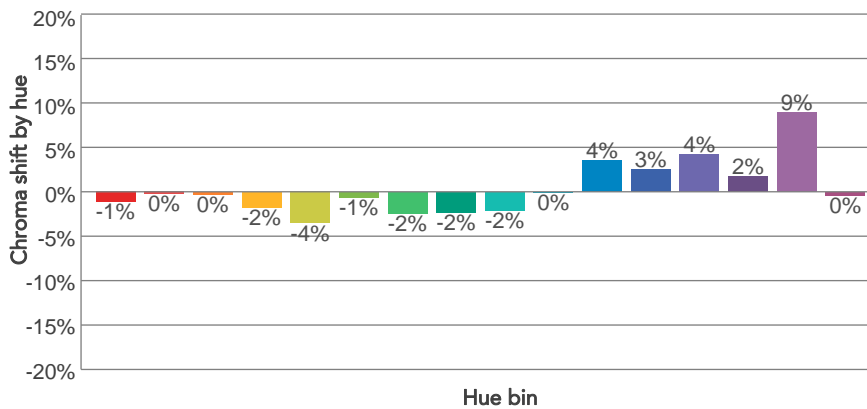
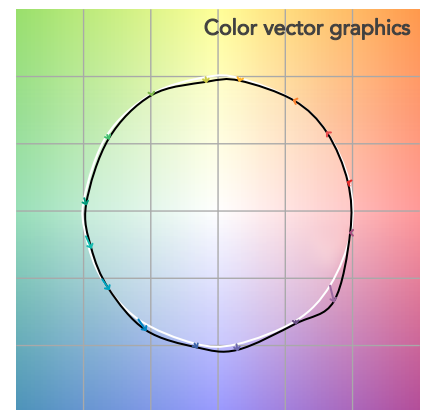
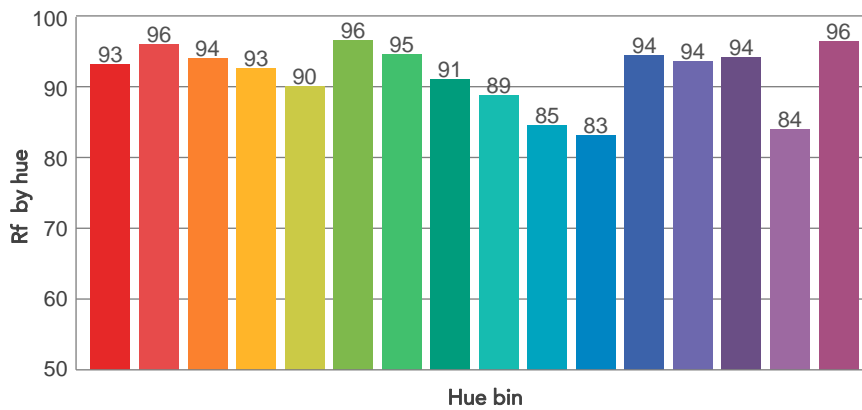
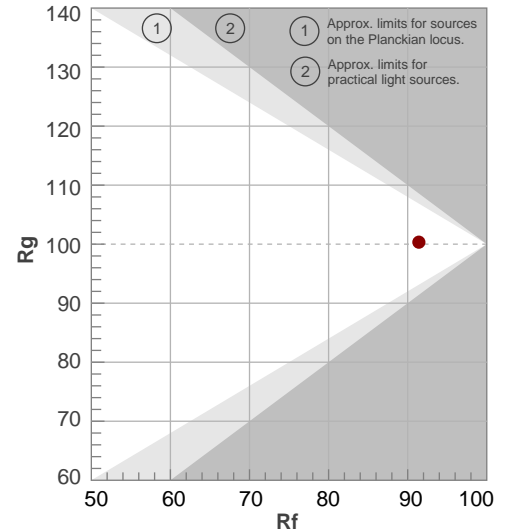
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5610 K	97,2	97,6	91,4	100,3	93,6	98	0,330	0,339	-0,0040

TM30 DETAILS

Rf 91,4
Fidelity index Rf

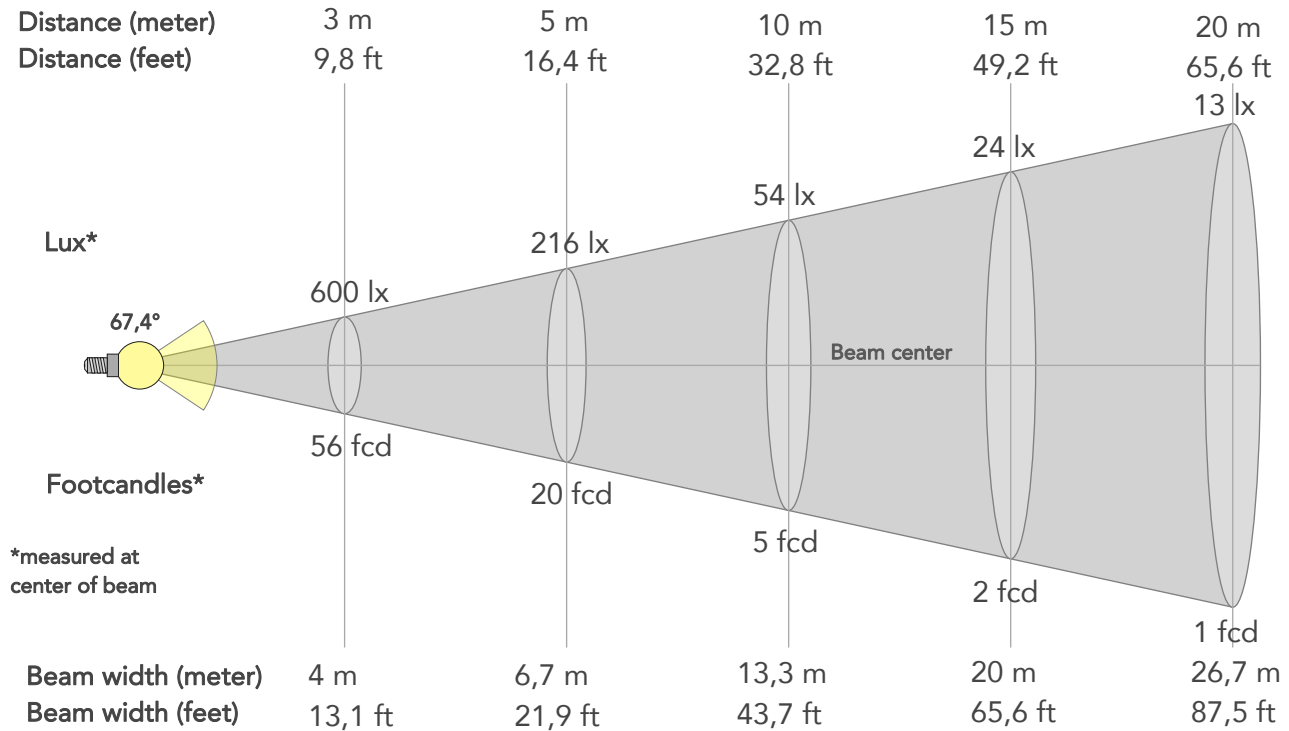
Rg 100,3
Gammut index

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	93	-1%	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%	9%
11	83	4%	9%
12	94	3%	2%
13	94	4%	0%
14	94	2%	-1%
15	84	9%	-8%
16	96	0%	0%



BEAM DETAILS

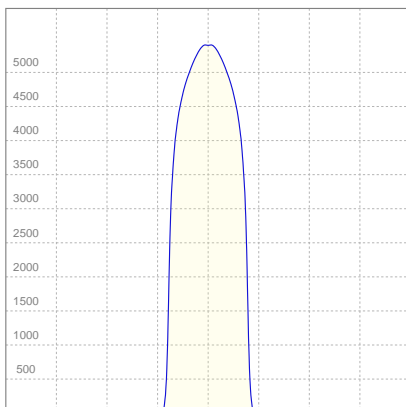
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
67,4°	74,6°	78,7°	100,0%	100,0%



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	5398lx	1349lx	600lx	337lx	216lx	96lx	54lx	24lx	13lx	9lx	6lx	3lx	2lx
Footcand.	501fcd	125fcd	56fcd	31fcd	20fcd	9fcd	5fcd	2fcd	1fcd	1fcd	1fcd	0fcd	0fcd
Beam wid.	1,3m	2,7m	4m	5,3m	6,7m	10m	13,3m	20m	26,7m	33,3m	40m	53,3m	66,7m
Beam wid.	4,4ft	8,8ft	13,1ft	17,5ft	21,9ft	32,8ft	43,7ft	65,6ft	87,5ft	109,4ft	131,2ft	175ft	218,7ft

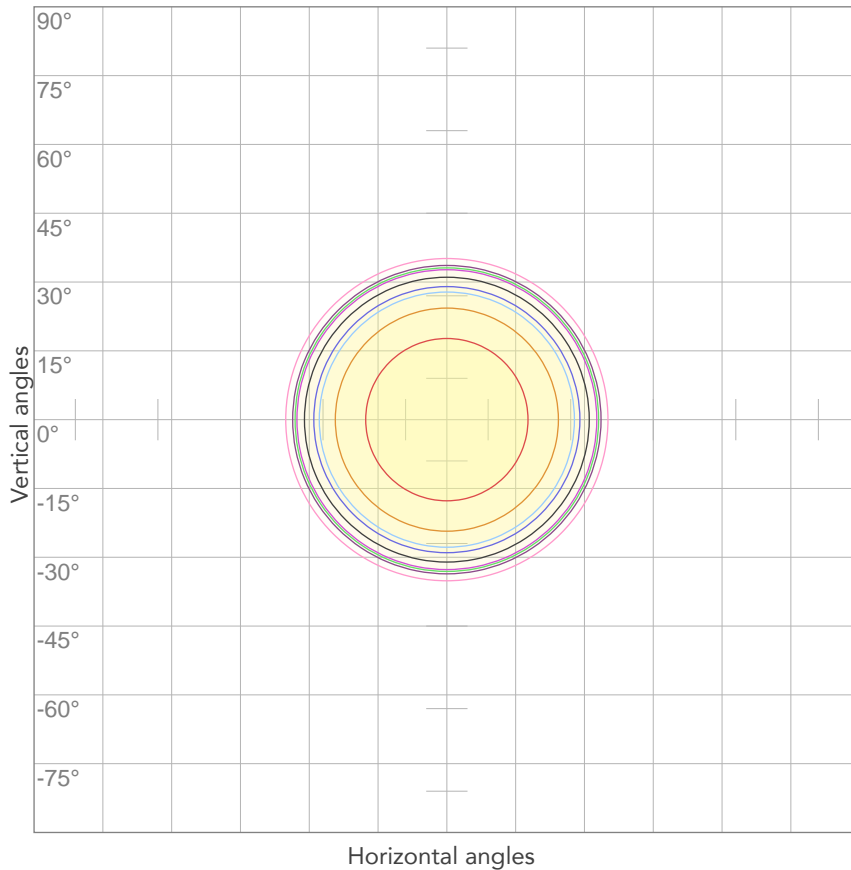
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
229V	0,615A	130,3W	39lm/W
Power Fc			
0,97			

ISO CANDELA DIAGRAM



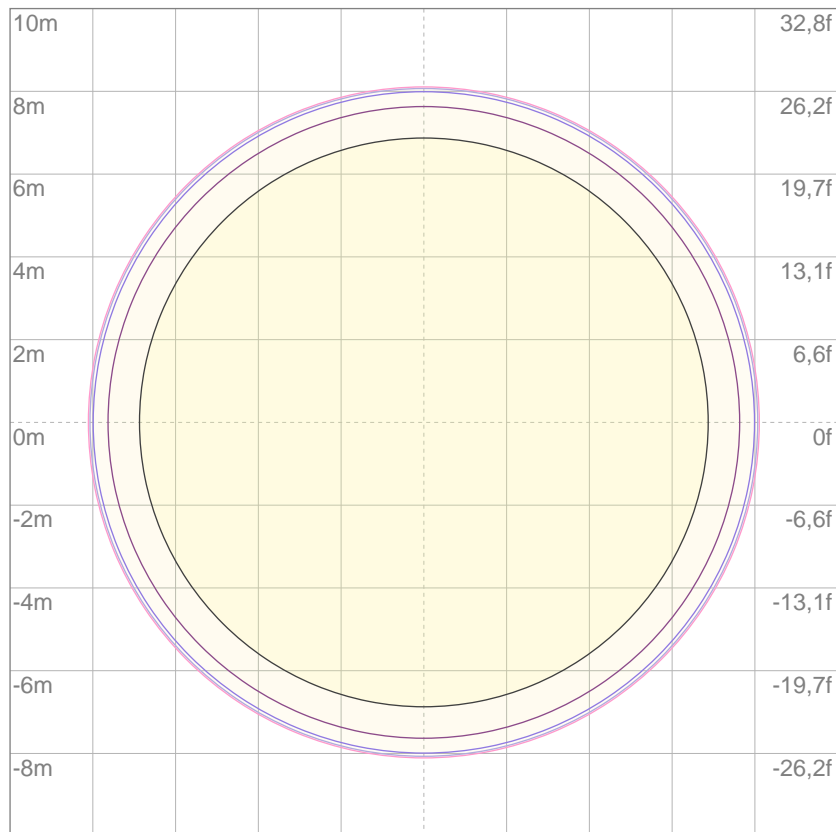
10%	540 cd
20%	1080 cd
30%	1619 cd
40%	2159 cd
50%	2699 cd
60%	3239 cd
70%	3778 cd
80%	4318 cd

Conditions:

Number of c-planes: 2

Candela at center: 5398 cd

ISO LUX DIAGRAM



3%	1,62 lx
5%	2,70 lx
10%	5,40 lx
30%	16,2 lx
50%	27,0 lx

Conditions:

Number of c-planes: 2

Lux at center: 54,0 lx

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



Total lumen output:

4147 lm

Peak candela output:

4452 cd

Light quality:

CRI: 97,2

Color temperature:

2709 K

PRODUCT NAME:

ECLFWWW

MEASURAMENT CONDITIONS:

Beam angle:

PRL70

Target:

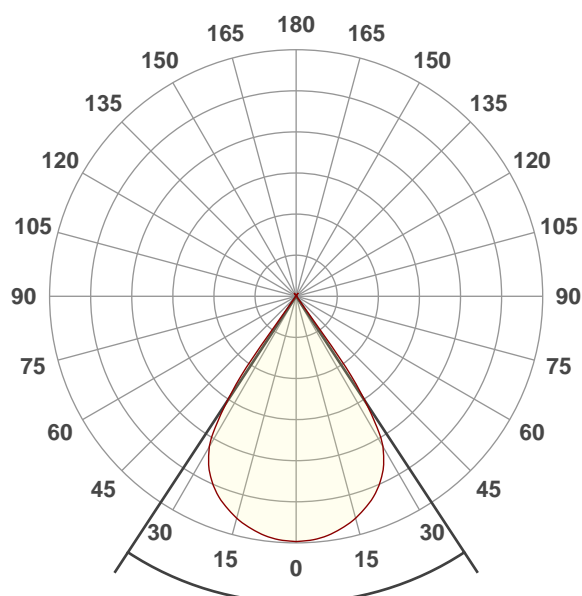
Warm White

Operator:

Paolo Carvone

Date and time:

11/06/2021 14:18:49

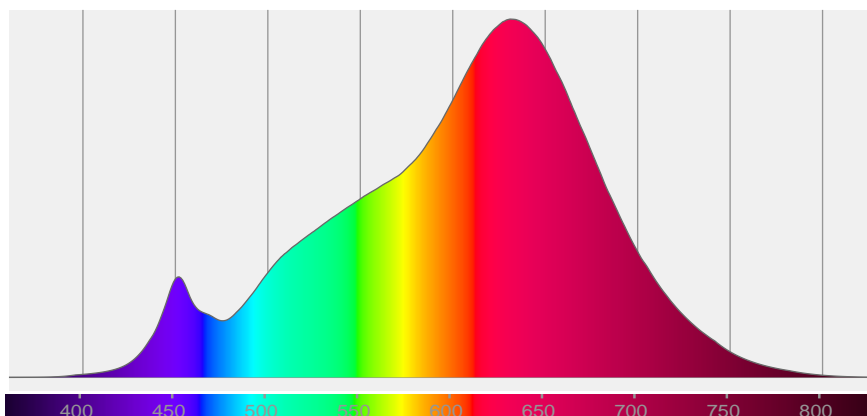


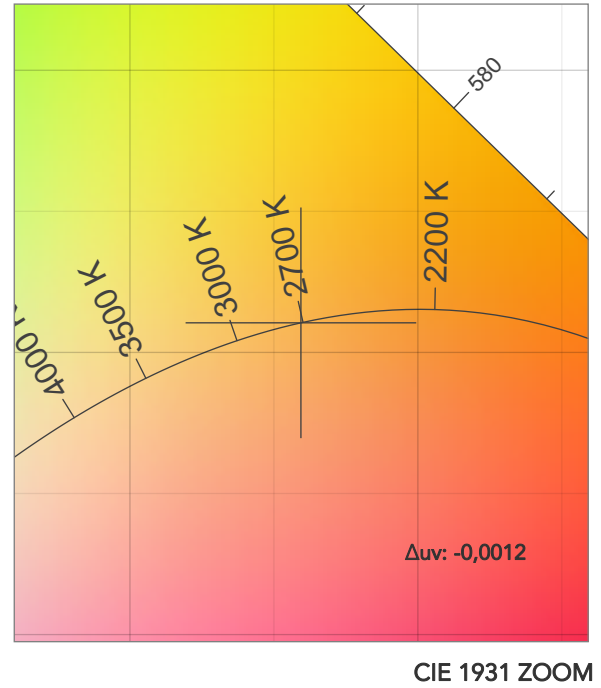
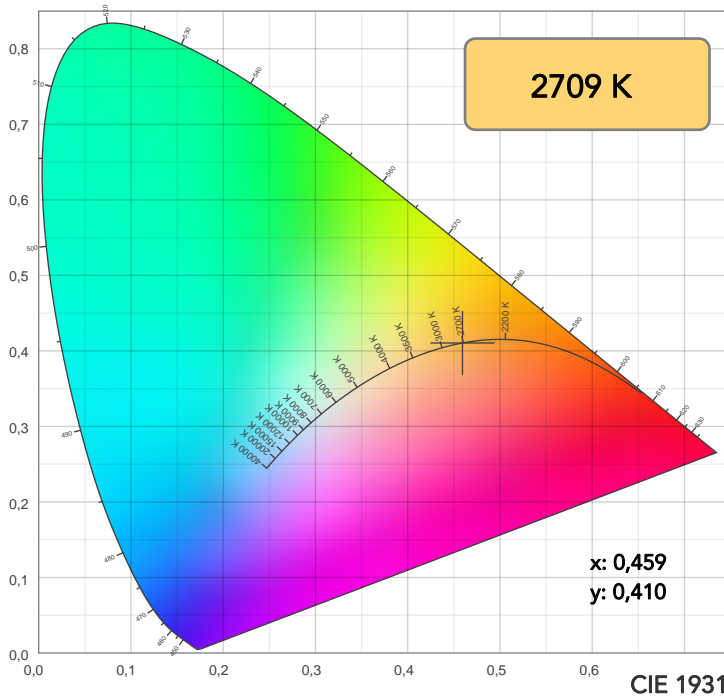
Beam angle 50%: 66,6°

Field angle 10%: 74,7°

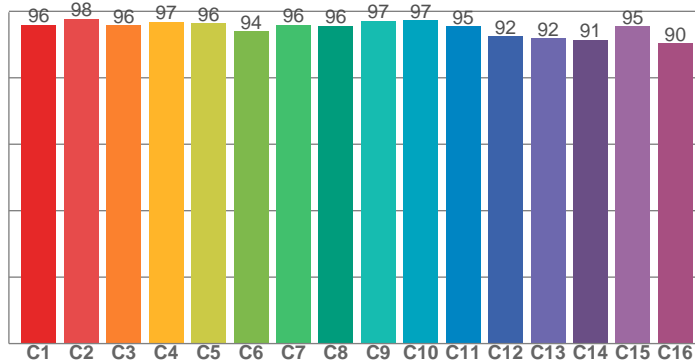
Cut off angle 2.5%: 76,1°

Spectra

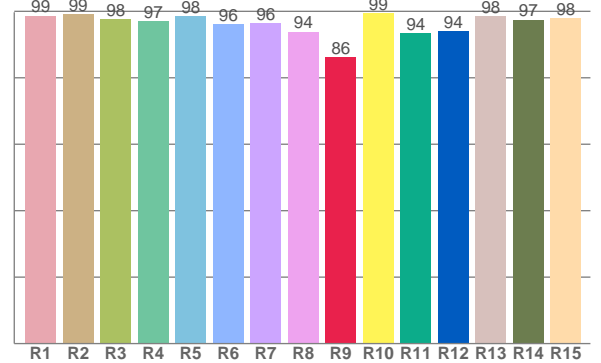




TM30: 95,3



CRI: 97,2 (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
98,7	99,1	97,7	97,0	98,5	96,1	96,3	93,9	86,1	99,4	93,5	94,1	98,4	97,5	97,9

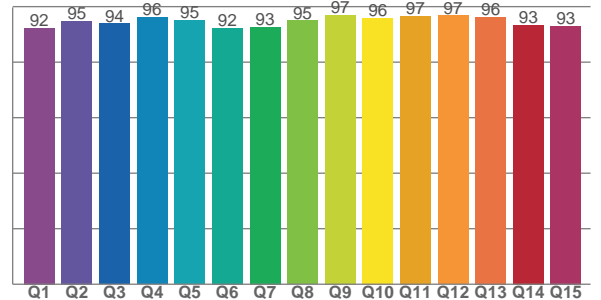
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
96,0	97,7	95,8	96,8	96,4	94,0	96,0	95,6	97,1	97,3	95,5	92,4	91,9	91,4	95,4	90,4

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
92,3	94,9	93,9	96,1	95,1	92,3	92,6	95,0	96,9	95,8	96,7	96,8	96,3	93,4	93,0

CQS: 94,2



COLOR PARAMETERS

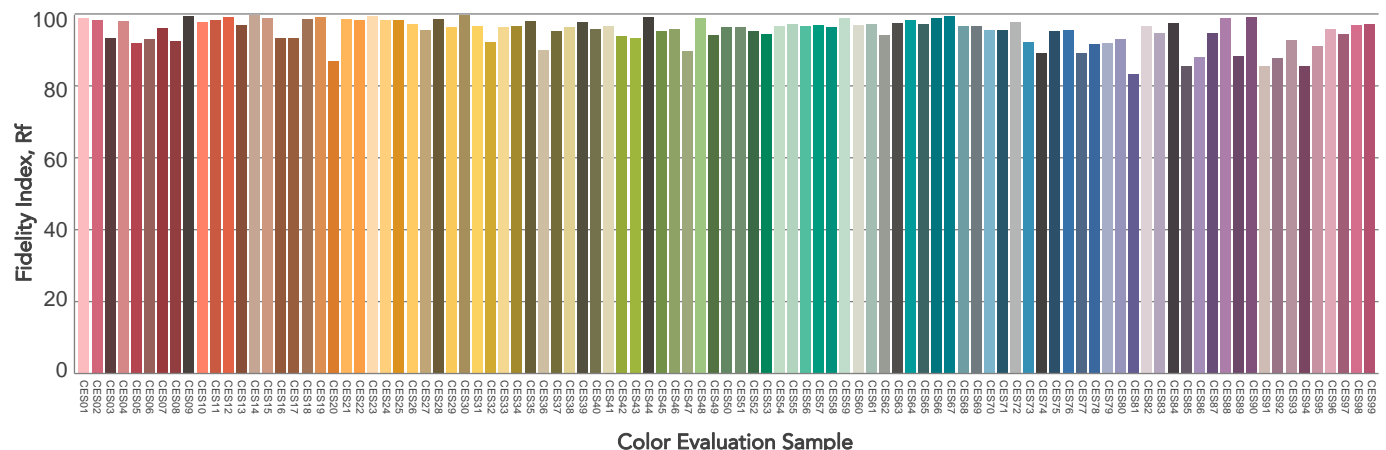
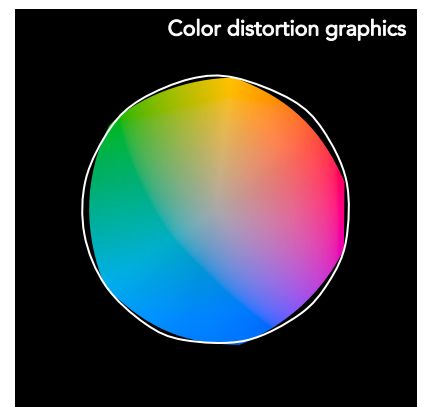
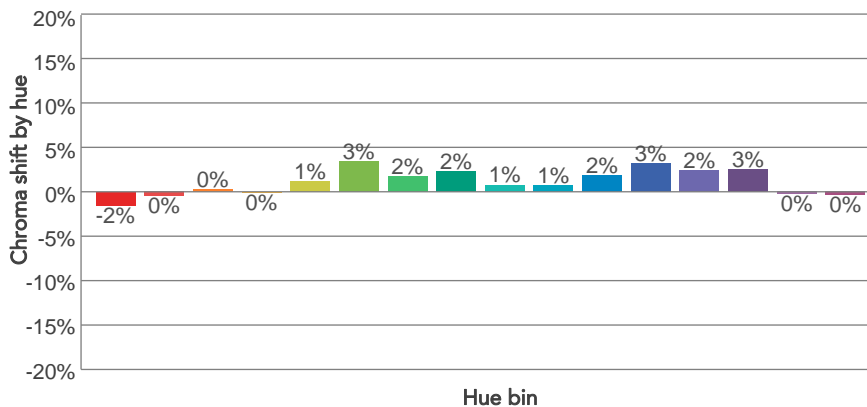
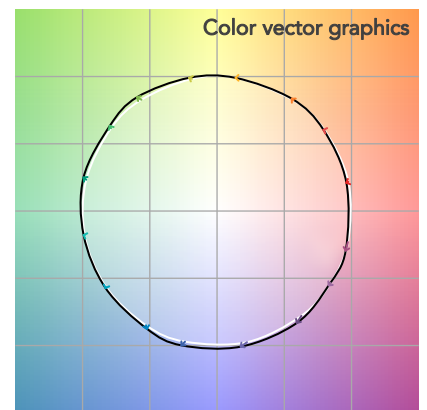
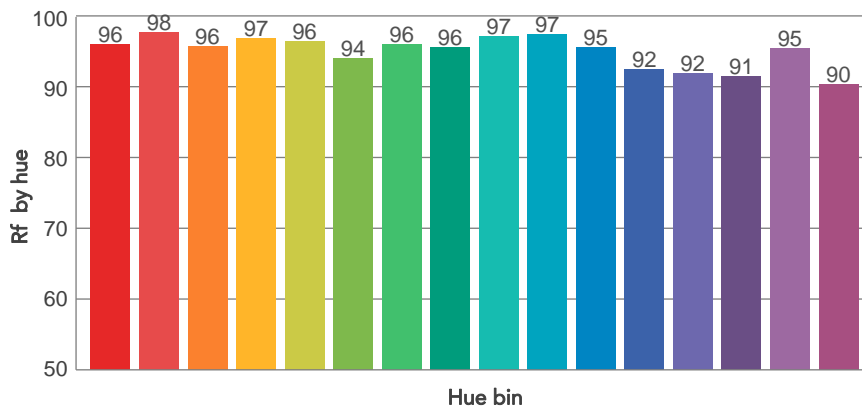
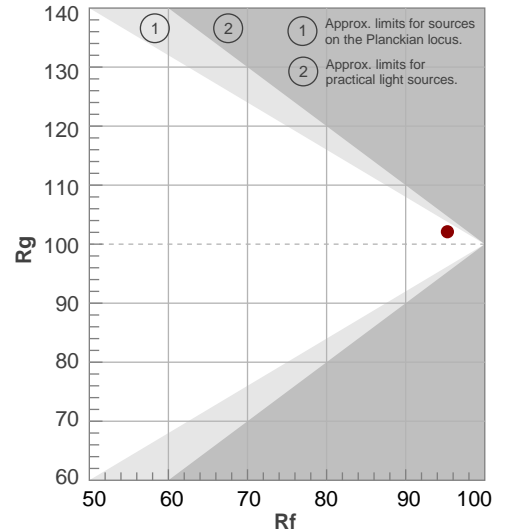
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
2709 K	97,2	86,1	95,3	102,1	94,2	97	0,459	0,410	-0,0012

TM30 DETAILS

Rf 95,3
Fidelity index Rf

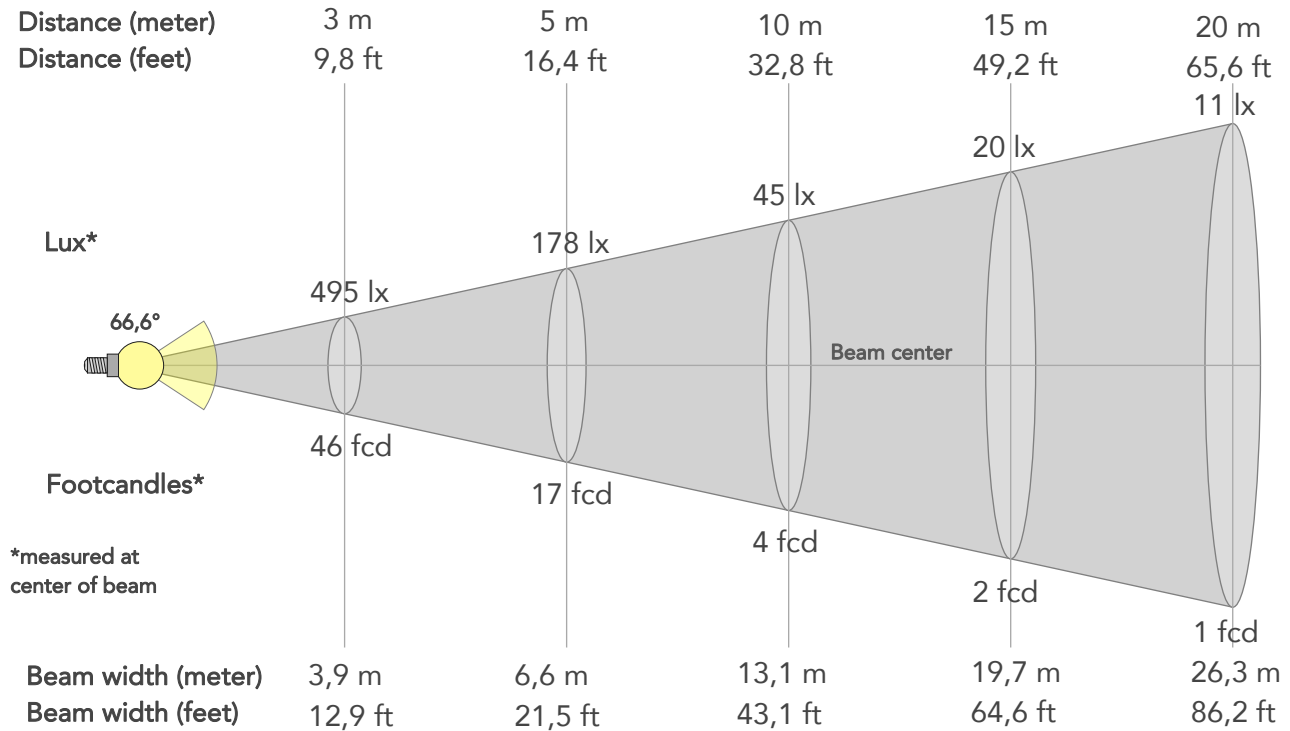
Rg 102,1
Gammut index

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



BEAM DETAILS

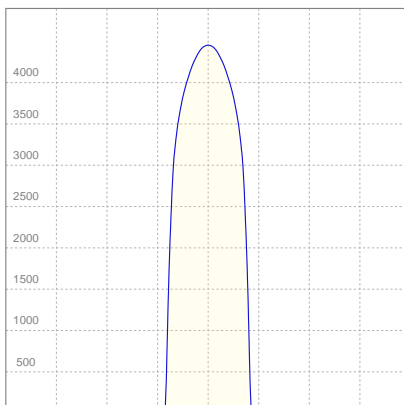
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
66,6°	74,7°	76,1°	100,0%	100,0%



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	4452lx	1113lx	495lx	278lx	178lx	79lx	45lx	20lx	11lx	7lx	5lx	3lx	2lx
Footcand.	414fcd	103fcd	46fcd	26fcd	17fcd	7fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	3,9m	5,3m	6,6m	9,9m	13,1m	19,7m	26,3m	32,8m	39,4m	52,6m	65,7m
Beam wid.	4,3ft	8,7ft	12,9ft	17,2ft	21,5ft	32,3ft	43,1ft	64,6ft	86,2ft	107,7ft	129,3ft	172,4ft	215,5ft

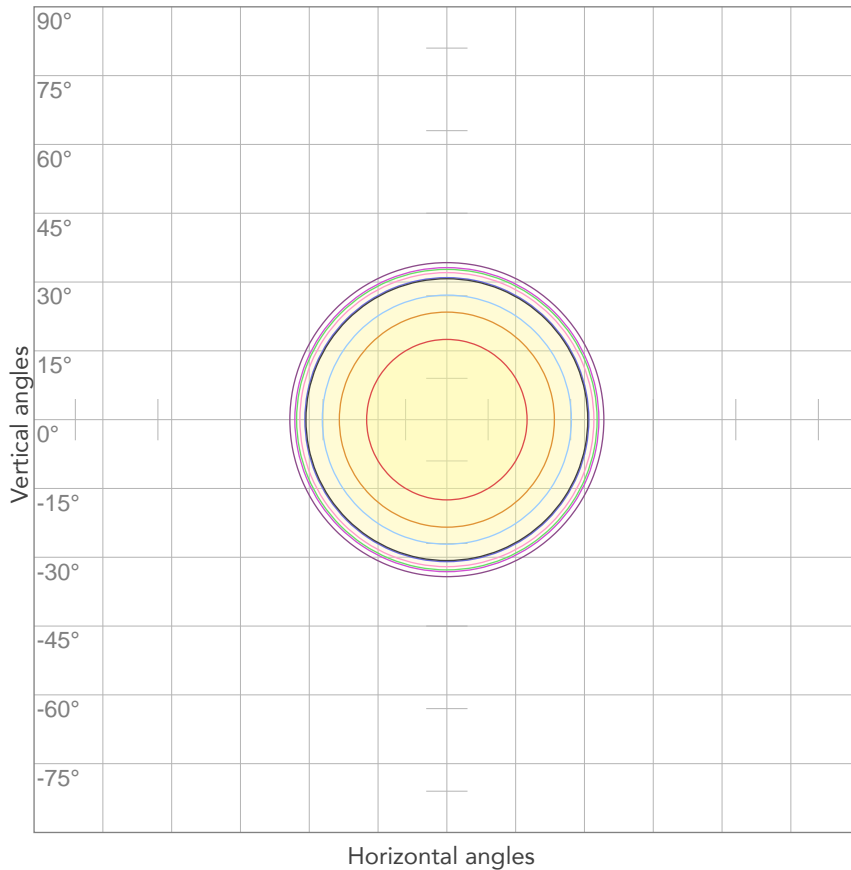
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
229V	0,624A	132,1W	31lm/W
Power Fc			
0,97			

ISO CANDELA DIAGRAM



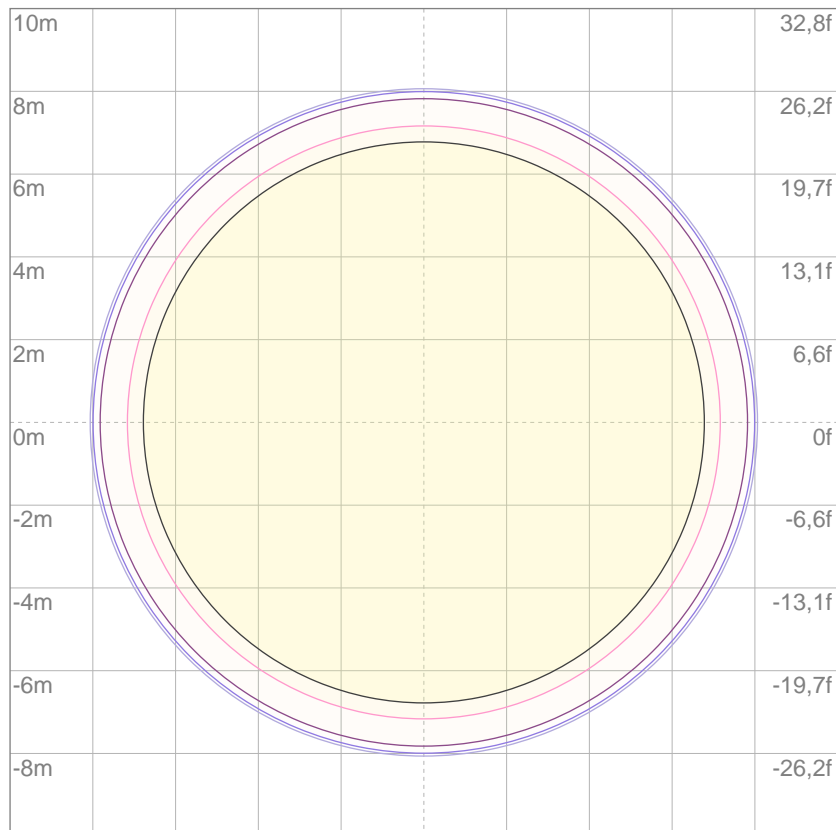
10%	445 cd
20%	890 cd
30%	1336 cd
40%	1781 cd
50%	2226 cd
60%	2671 cd
70%	3116 cd
80%	3562 cd

Conditions:

Number of c-planes: 2

Candela at center: 4452 cd

ISO LUX DIAGRAM



3%	1,34 lx
5%	2,23 lx
10%	4,45 lx
30%	13,4 lx
50%	22,3 lx

Conditions:

Number of c-planes: 2

Lux at center: 44,5 lx

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