

Photometric Test Report



EclipseFresnel JTU

Warm White LED Fresnel Luminaire

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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:

4631 lm

Total candela output:

5172 cd

Light quality:

CRI: 97,7

Color temperature:

3019 K

PRODUCT NAME:

EclipseFresnel JTU

MEASUREMENT CONDITIONS:

Beam angle:

45°

Target:

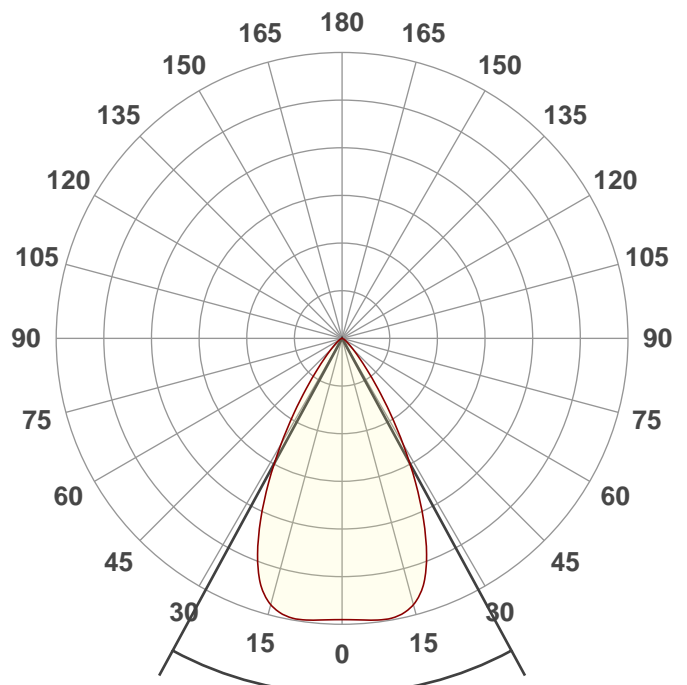
3200K

Operator:

Paolo Carvone

Date and time:

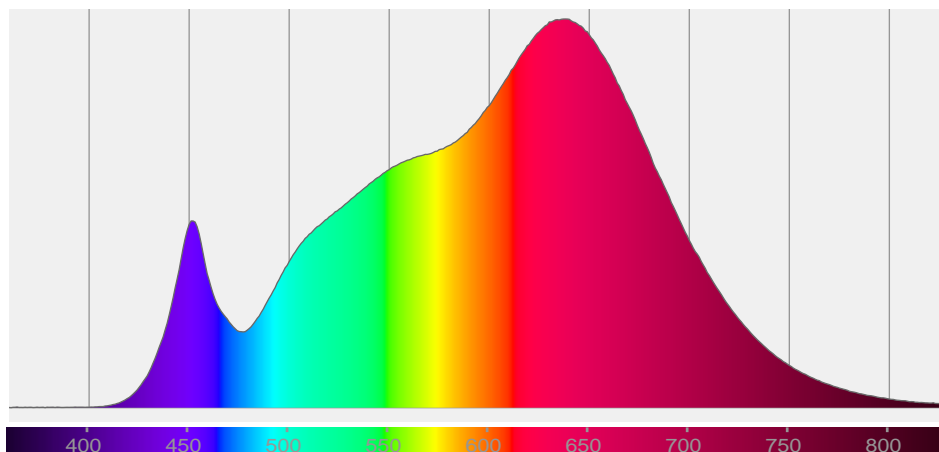
07/02/2020 11:11:29

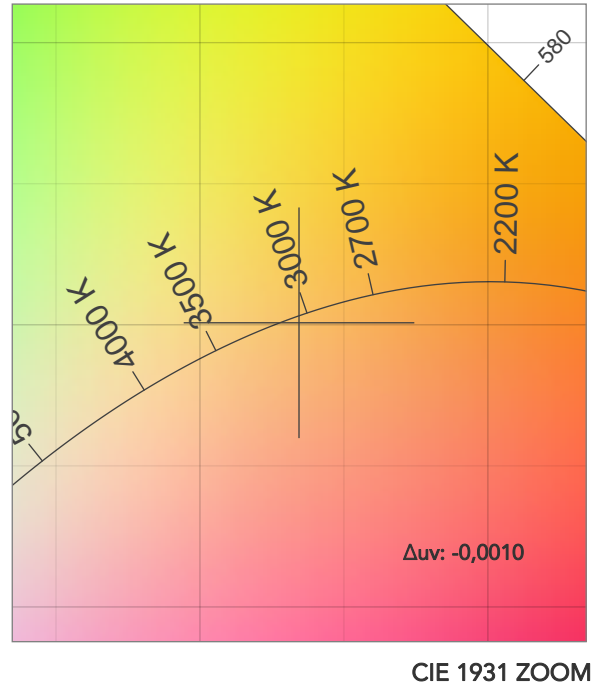
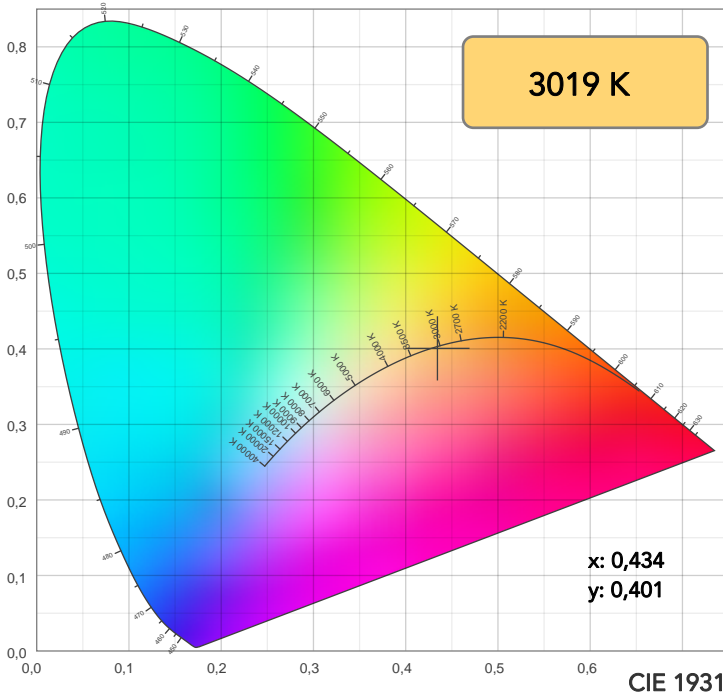


Beam angle

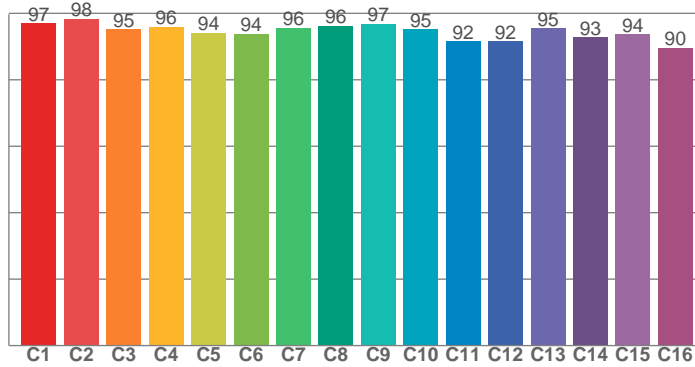
57°

Spectra

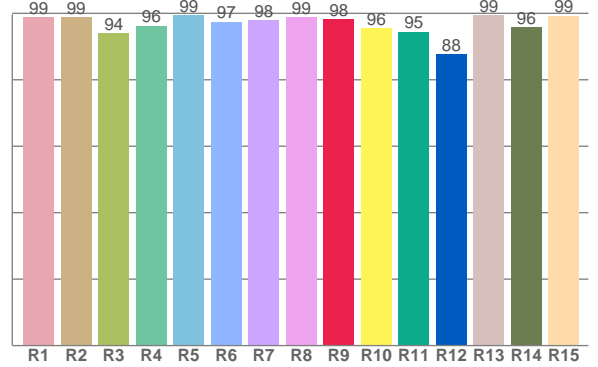




TM30: 94,8



CRI: 97,7 (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
98,9	98,7	94,1	96,2	99,4	97,4	97,8	98,8	98,1	95,5	94,5	87,7	99,4	95,7	99,3

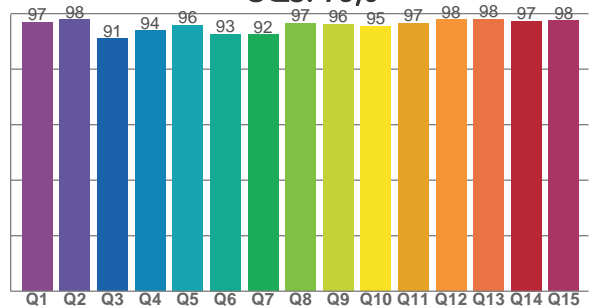
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
97,0	98,3	95,2	95,9	94,1	93,9	95,6	96,2	96,9	95,1	91,5	91,5	95,5	92,8	93,7	89,7

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
96,9	97,9	90,9	93,9	96,0	92,7	92,5	96,5	96,3	95,5	96,7	97,9	98,0	97,4	97,6

CQS: 95,0



COLOR PARAMETERS

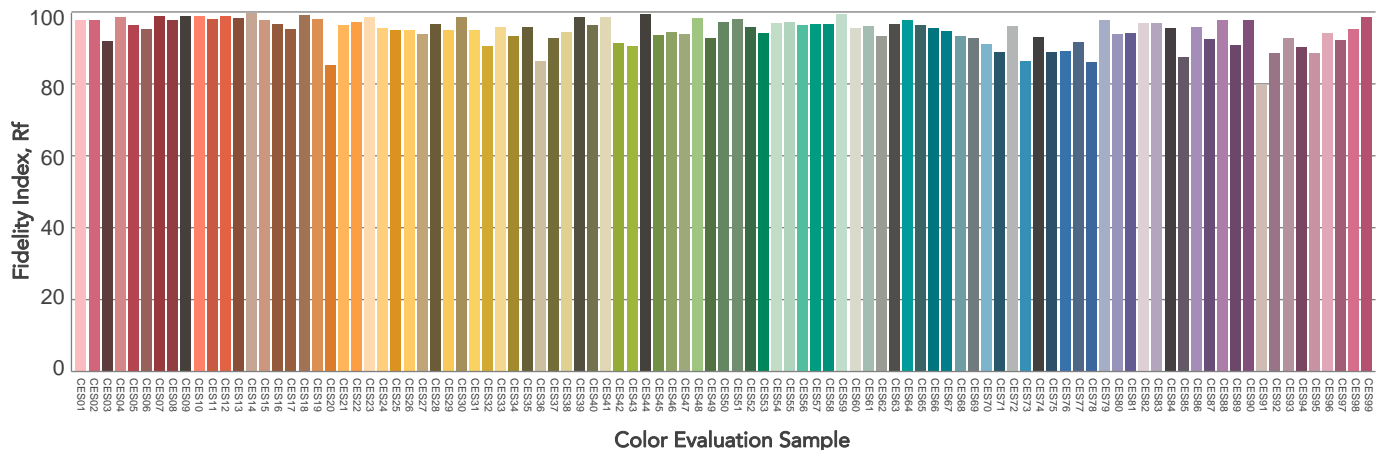
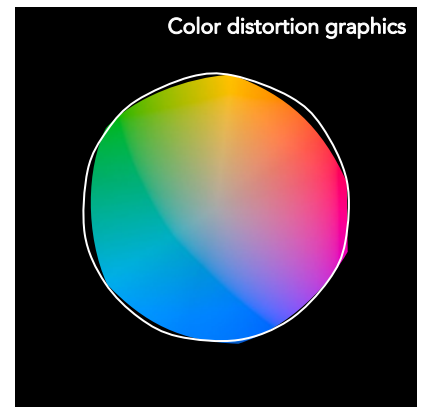
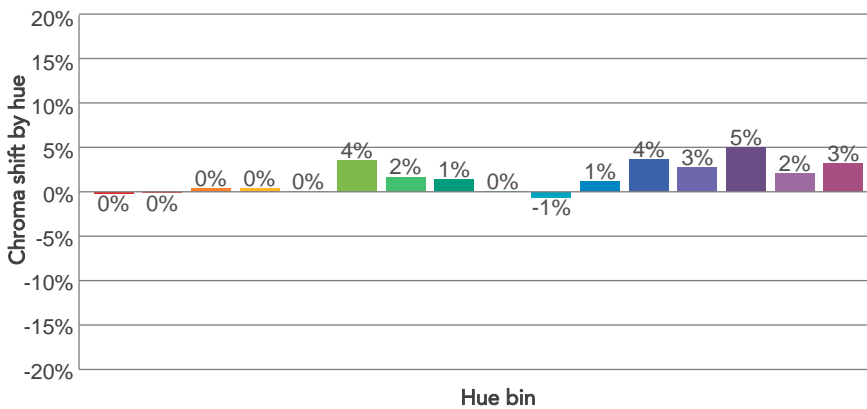
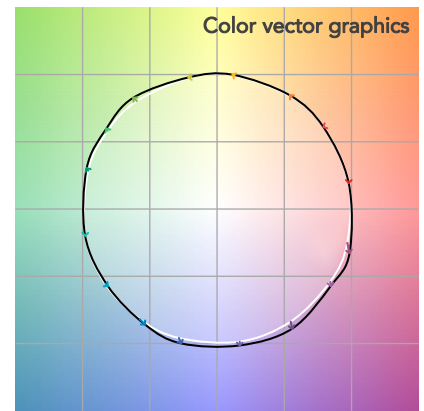
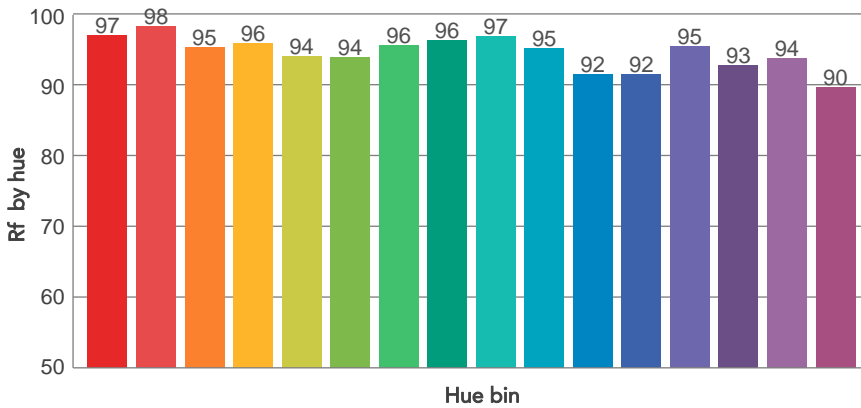
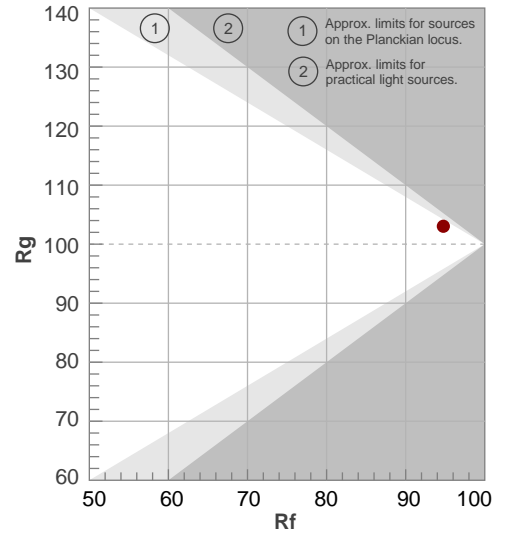
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
3019 K	97,7	98,1	94,8	103,0	95,0	98	0,434	0,401	-0,0010

TM30 DETAILS

Rf 94,8
Fidelity index Rf

Rg 103,0
Gammut index

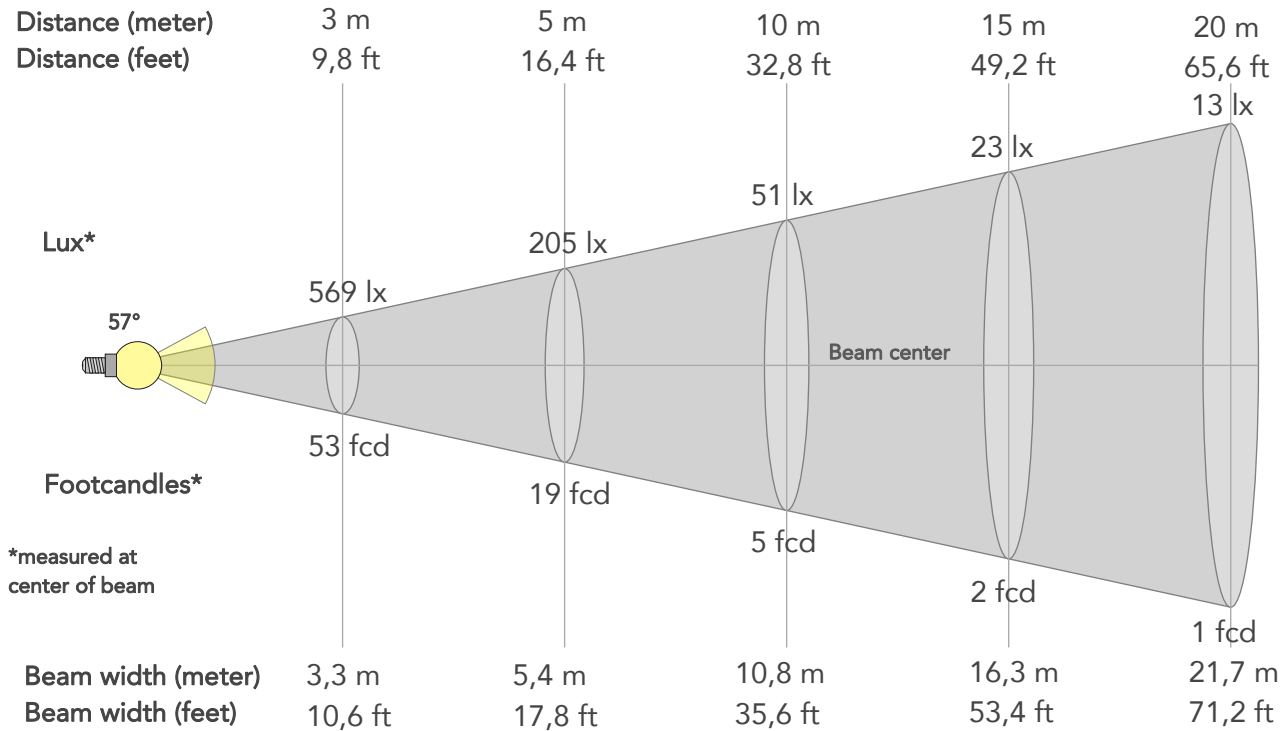
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	97	0%	-1%
2	98	0%	0%
3	95	0%	2%
4	96	0%	2%
5	94	0%	2%
6	94	4%	1%
7	96	2%	-1%
8	96	1%	-2%
9	97	0%	0%
10	95	-1%	2%
11	92	1%	5%
12	92	4%	2%
13	95	3%	-1%
14	93	5%	-2%
15	94	2%	-2%
16	90	3%	-7%



BEAM DETAILS



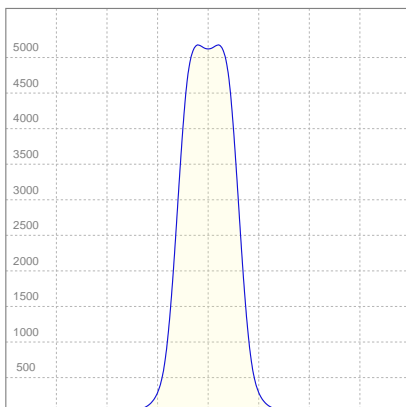
Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
57°	81,6°	103,7°	97,8%	94,1%



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	5123lx	1281lx	569lx	320lx	205lx	91lx	51lx	23lx	13lx	8lx	6lx	3lx	2lx
Footcand.	476fcd	119fcd	53fcd	30fcd	19fcd	8fcd	5fcd	2fcd	1fcd	1fcd	1fcd	0fcd	0fcd
Beam wid.	1,1m	2,2m	3,3m	4,3m	5,4m	8,1m	10,8m	16,3m	21,7m	27,1m	32,5m	43,4m	54,2m
Beam wid.	3,6ft	7,2ft	10,6ft	14,2ft	17,8ft	26,7ft	35,6ft	53,4ft	71,2ft	89ft	106,8ft	142,4ft	177,9ft

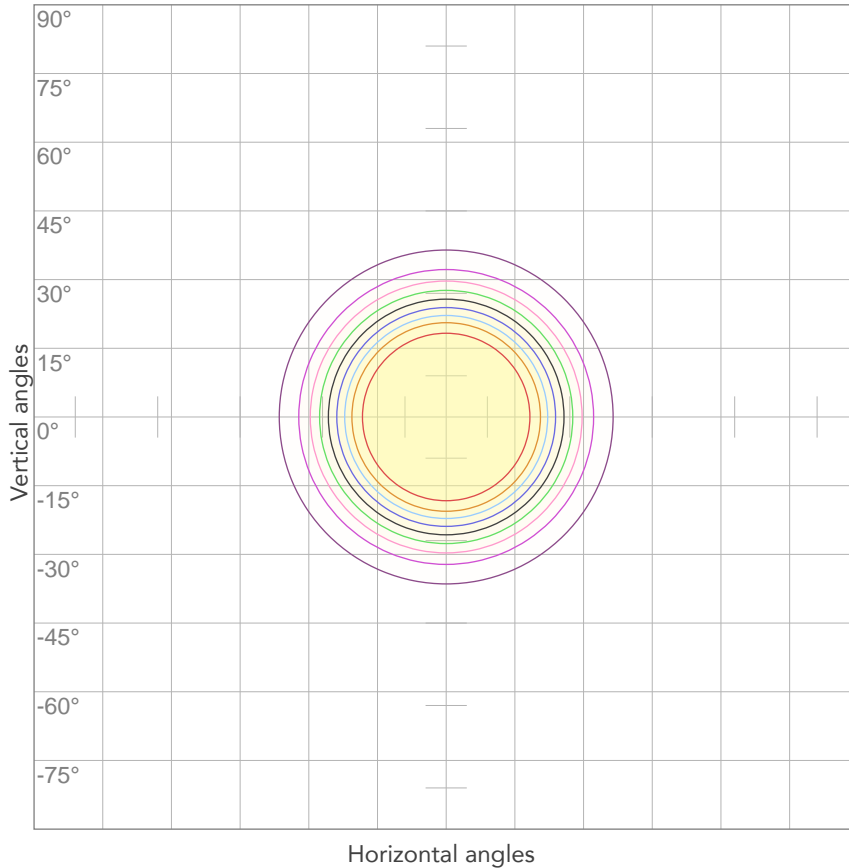
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,422A	90,0W	51lm/W

ISO CANDELA DIAGRAM



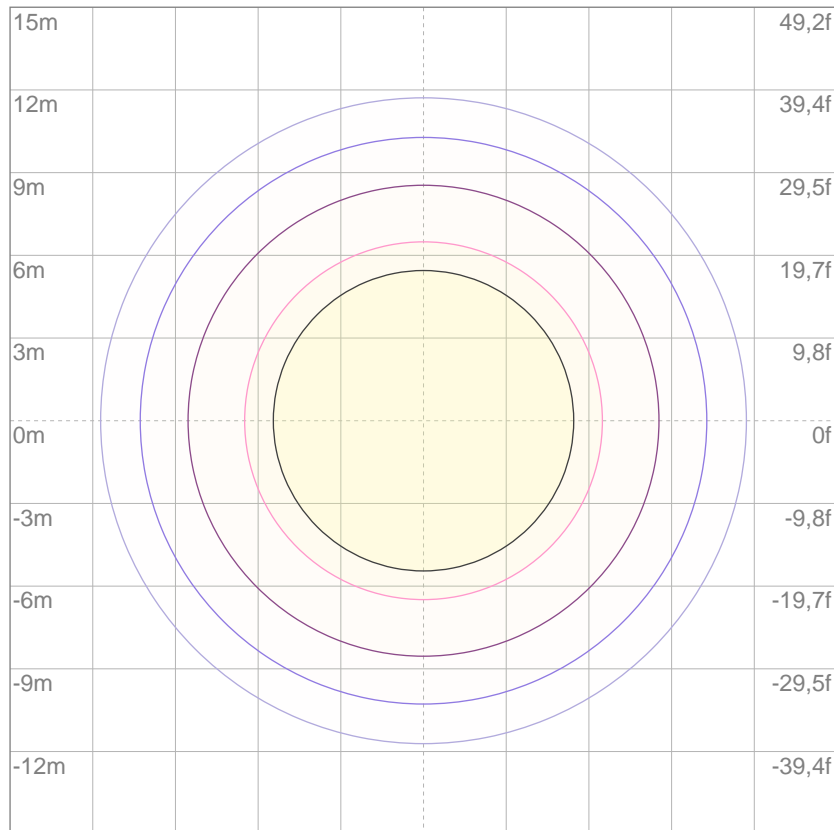
10%	512 cd
20%	1025 cd
30%	1537 cd
40%	2049 cd
50%	2561 cd
60%	3074 cd
70%	3586 cd
80%	4098 cd

Conditions:

Number of c-planes: 2

Candela at center: 5123 cd

ISO LUX DIAGRAM



3%	1,54 lx
5%	2,56 lx
10%	5,12 lx
30%	15,4 lx
50%	25,6 lx

Conditions:

Number of c-planes: 2

Lux at center: 51,2 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:

4357 lm

Total candela output:

14472 cd

Light quality:

CRI: 97,7

Color temperature:

3033 K

PRODUCT NAME:

EclipseFresnel JTU

MEASUREMENT CONDITIONS:

Beam angle:

30°

Target:

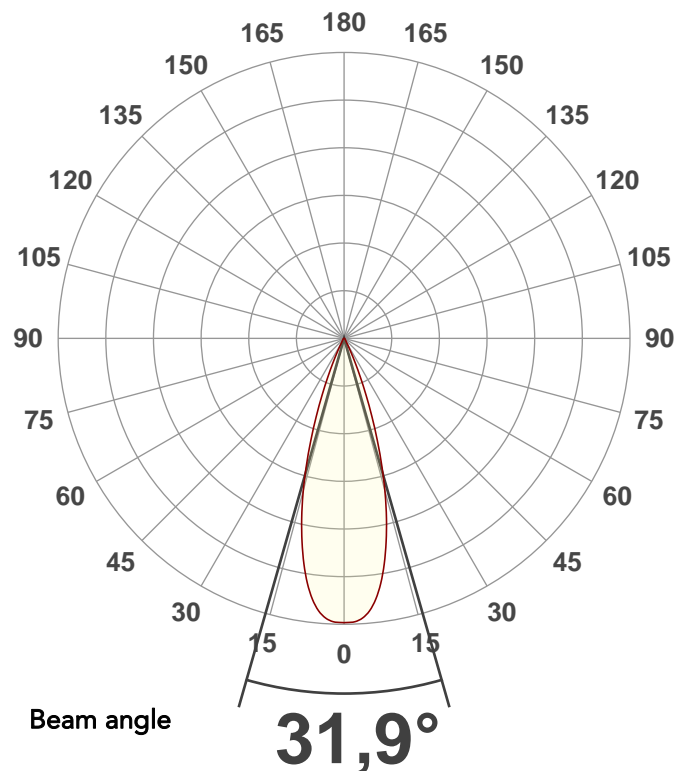
3200K

Operator:

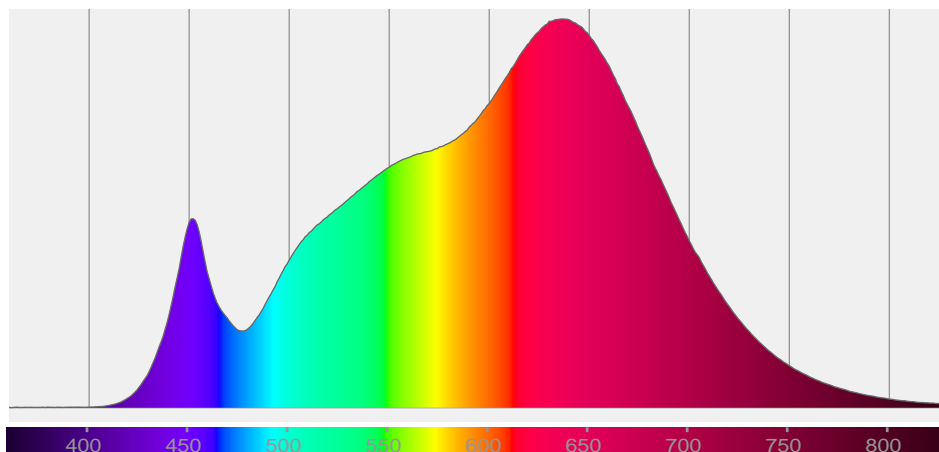
Paolo Carvone

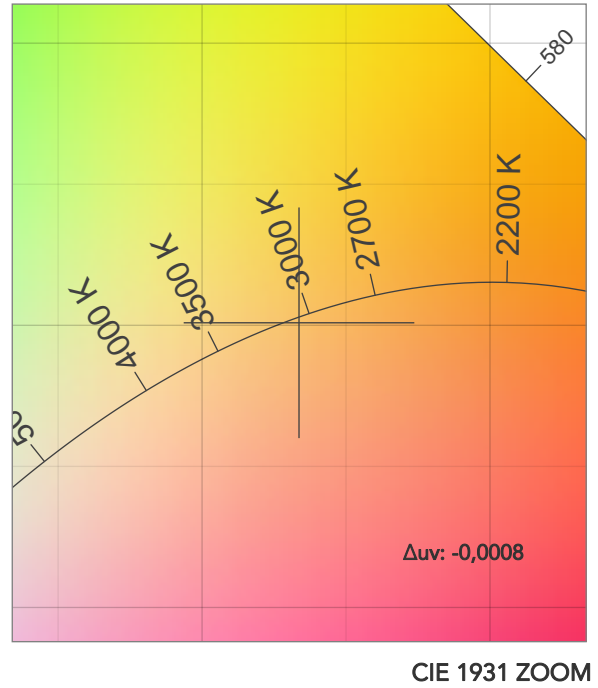
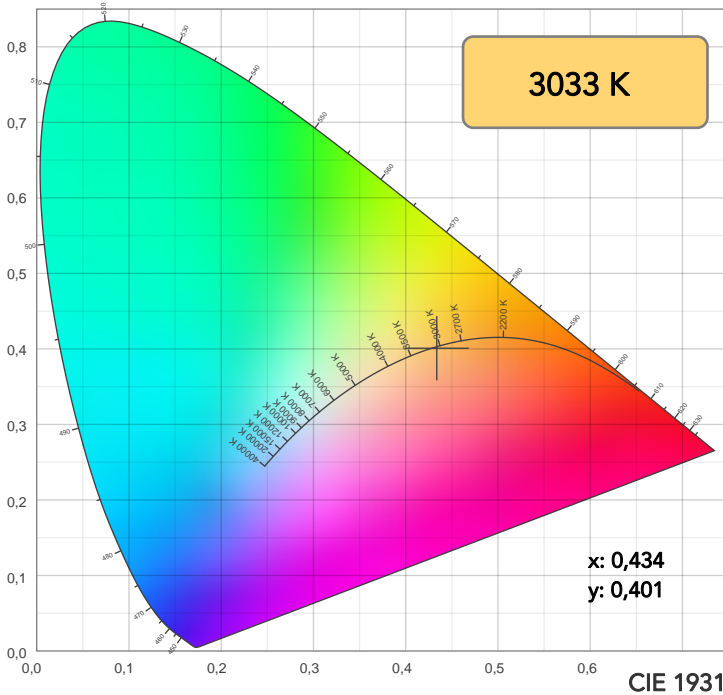
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07/02/2020 11:09:01

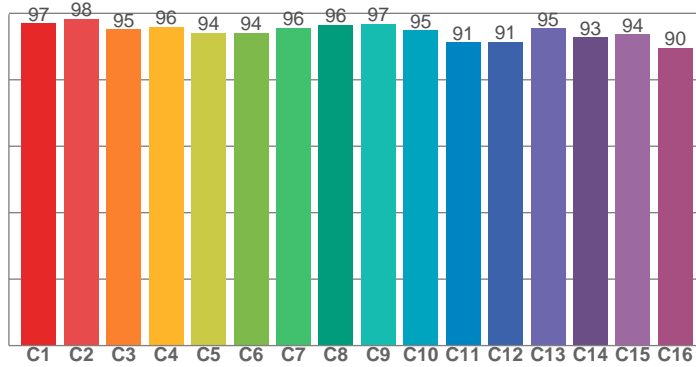


Spectra

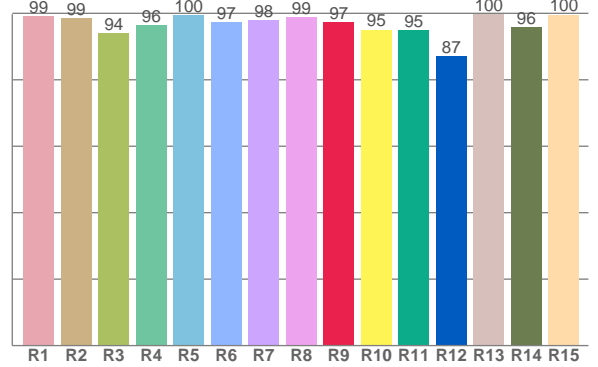




TM30: 94,7



CRI: 97,7 (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
99,2	98,6	94,0	96,4	99,5	97,3	97,9	98,8	97,2	95,1	94,8	87,2	99,7	95,7	99,6

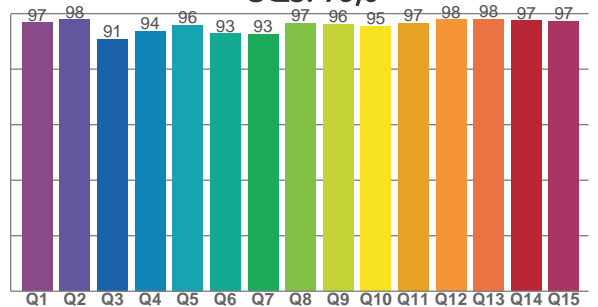
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
97,0	98,3	95,1	95,9	94,1	94,0	95,6	96,5	96,9	94,8	91,3	91,4	95,5	92,7	93,7	89,6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
96,8	97,9	90,8	93,7	96,0	92,9	92,6	96,5	96,3	95,4	96,6	97,9	98,1	97,5	97,4

CQS: 95,0



COLOR PARAMETERS

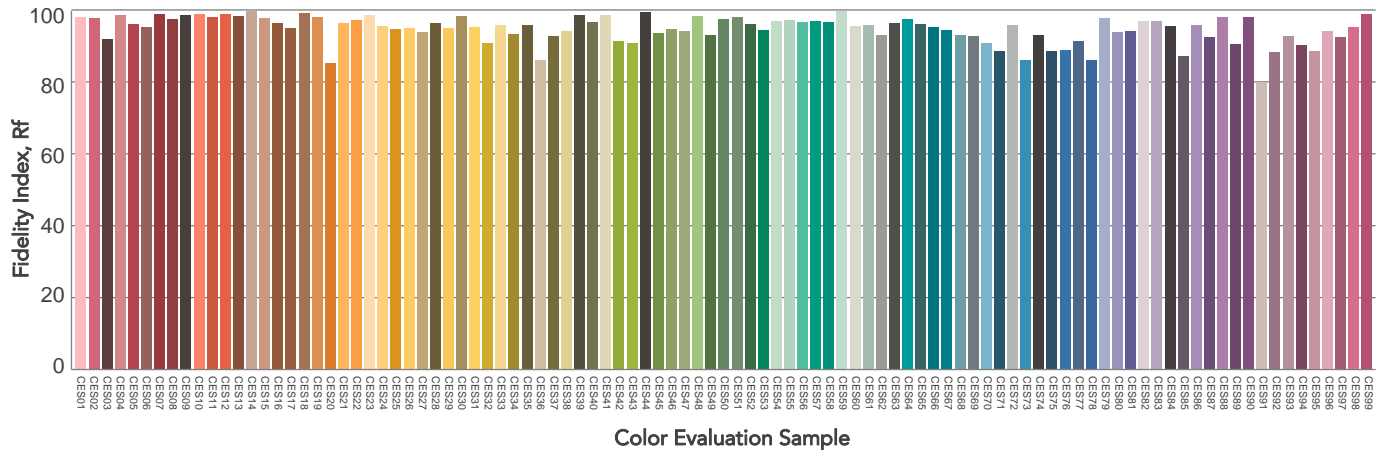
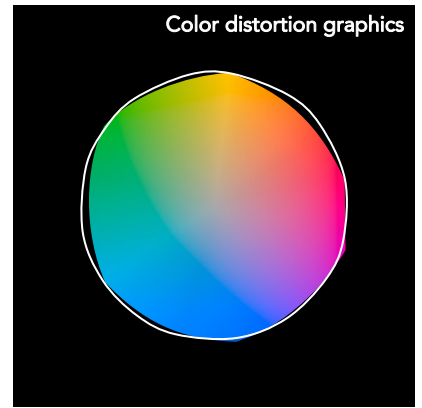
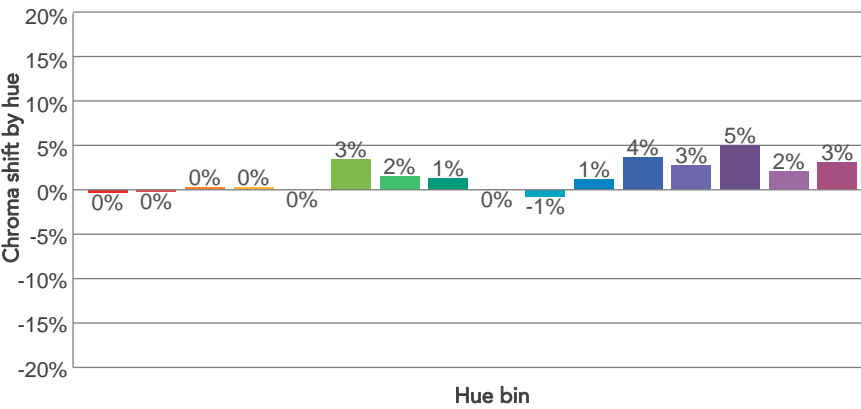
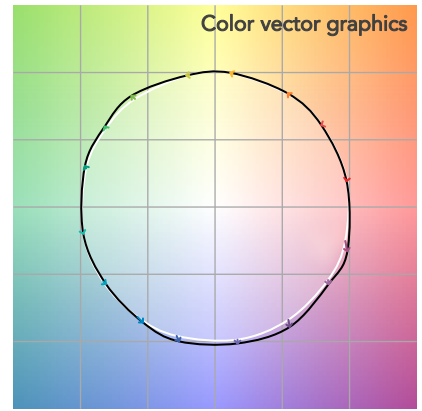
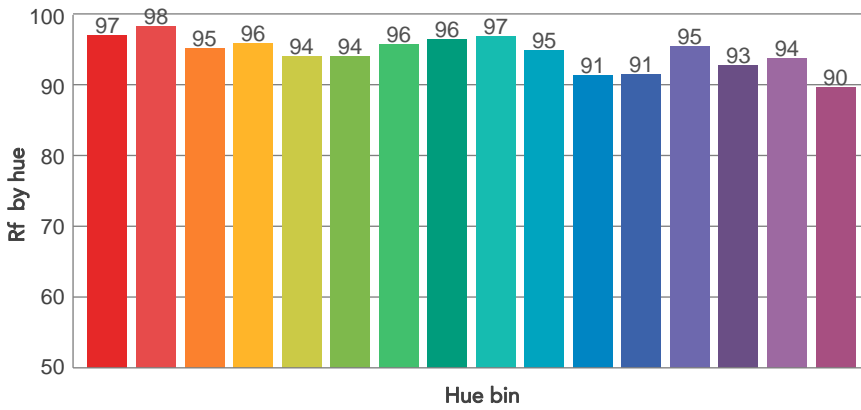
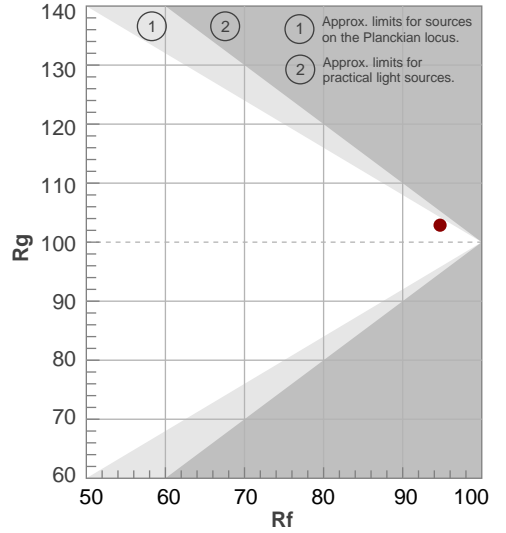
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
3033 K	97,7	97,2	94,7	102,9	95,0	98	0,434	0,401	-0,0008

TM30 DETAILS

Rf 94,7
Fidelity index Rf

Rg 102,9
Gammut index

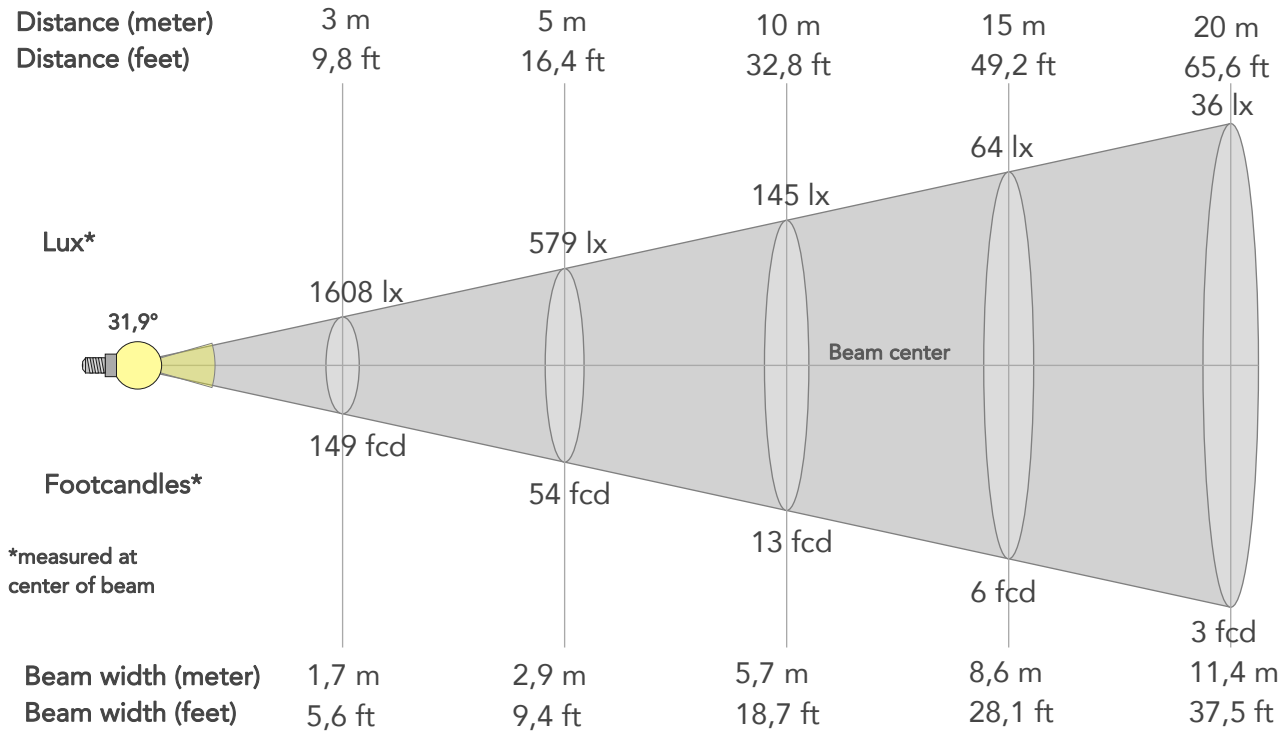
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	97	0%	-1%
2	98	0%	0%
3	95	0%	2%
4	96	0%	2%
5	94	0%	2%
6	94	3%	1%
7	96	2%	-1%
8	96	1%	-2%
9	97	0%	0%
10	95	-1%	2%
11	91	1%	6%
12	91	4%	3%
13	95	3%	-1%
14	93	5%	-2%
15	94	2%	-2%
16	90	3%	-7%



BEAM DETAILS



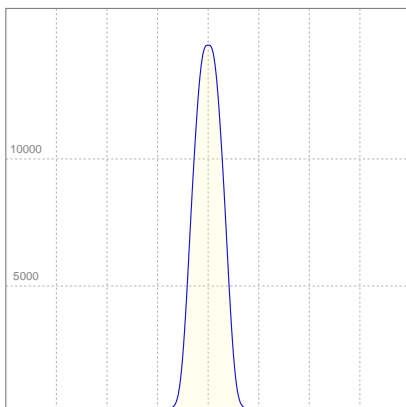
Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
31,9°	48,6°	58,5°	98,0%	96,2%



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	14472lx	3618lx	1608lx	905lx	579lx	257lx	145lx	64lx	36lx	23lx	16lx	9lx	6lx
Footcand.	1345fcd	336fcd	149fcd	84fcd	54fcd	24fcd	13fcd	6fcd	3fcd	2fcd	1fcd	1fcd	1fcd
Beam wid.	0,6m	1,1m	1,7m	2,3m	2,9m	4,3m	5,7m	8,6m	11,4m	14,3m	17,1m	22,9m	28,6m
Beam wid.	1,9ft	3,8ft	5,6ft	7,5ft	9,4ft	14,1ft	18,7ft	28,1ft	37,5ft	46,8ft	56,2ft	75ft	93,7ft

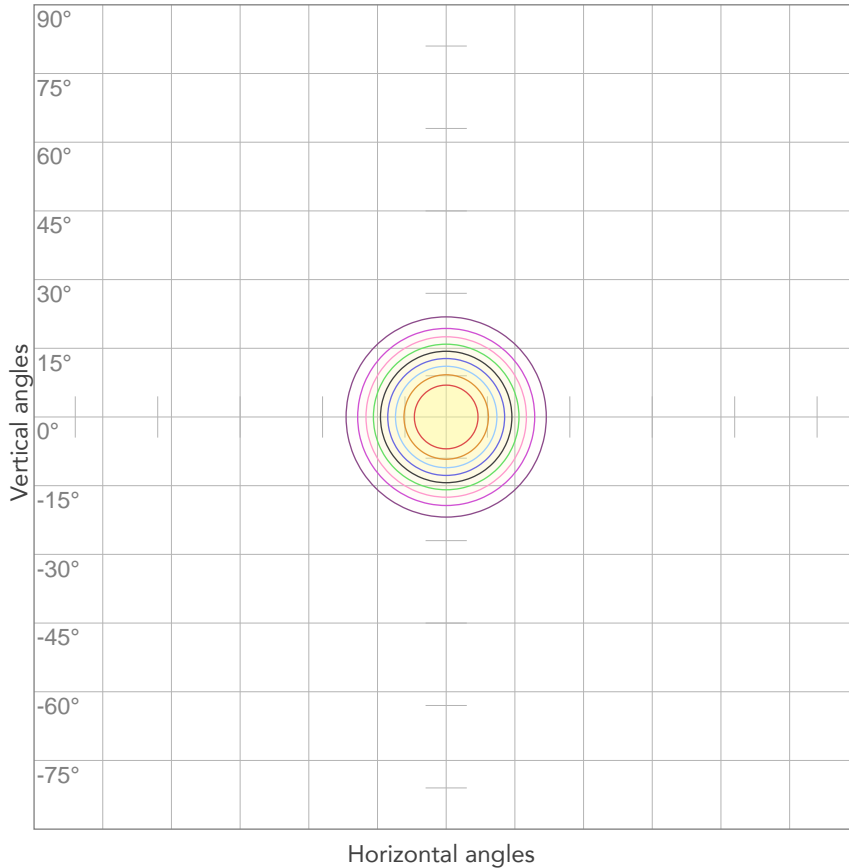
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
227V	0,421A	90,1W	48lm/W

ISO CANDELA DIAGRAM



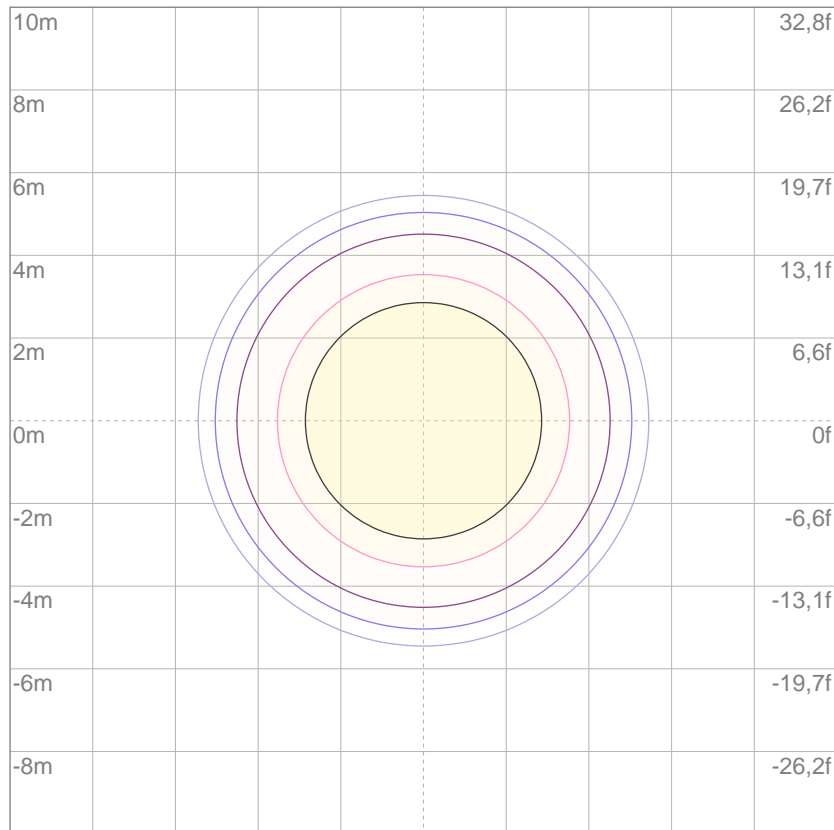
10%	1447 cd
20%	2894 cd
30%	4342 cd
40%	5789 cd
50%	7236 cd
60%	8683 cd
70%	10131 cd
80%	11578 cd

Conditions:

Number of c-planes: 2

Candela at center: 14472 cd

ISO LUX DIAGRAM



3%	4,34 lx
5%	7,24 lx
10%	14,5 lx
30%	43,4 lx
50%	72,4 lx

Conditions:

Number of c-planes: 2

Lux at center: 145 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:

2859 lm

Total candela output:

32315 cd

Light quality:

CRI: 97,7

Color temperature:

3065 K

PRODUCT NAME:

EclipseFresnel JTU

MEASUREMENT CONDITIONS:

Beam angle:

15°

Target:

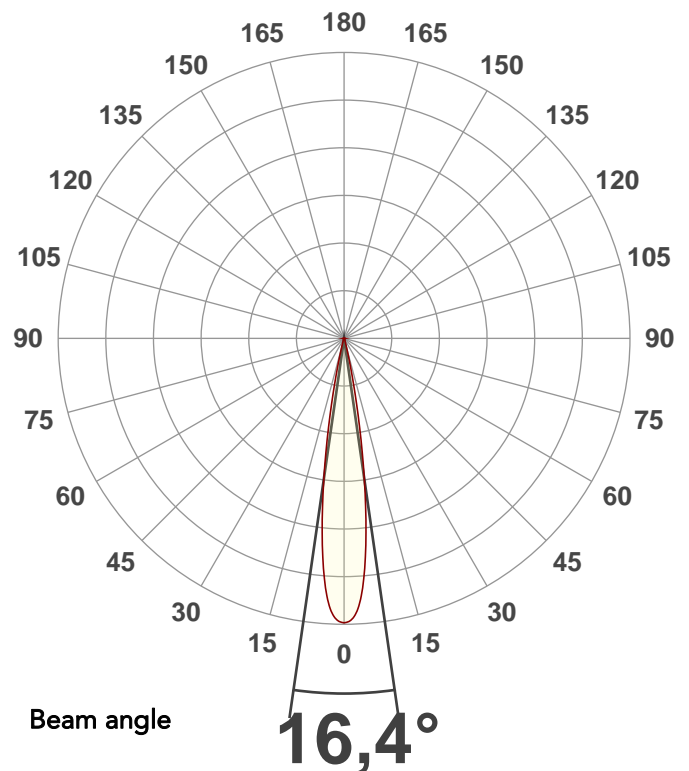
3200K

Operator:

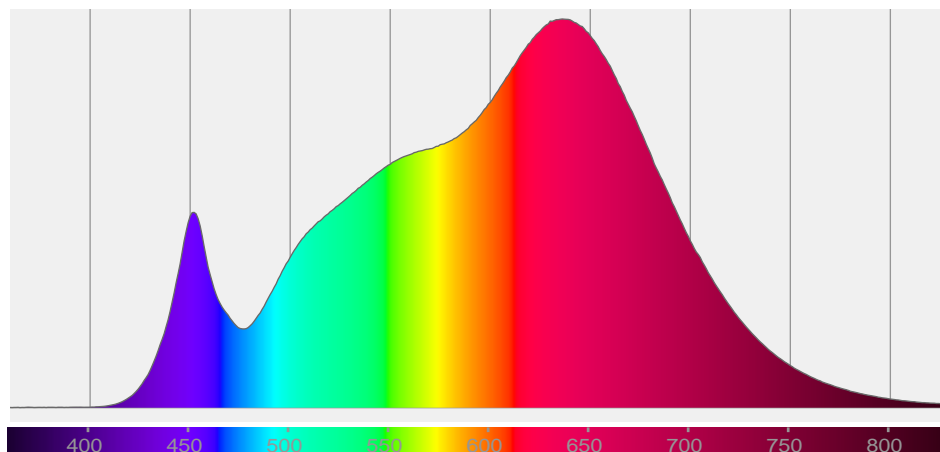
Paolo Carvone

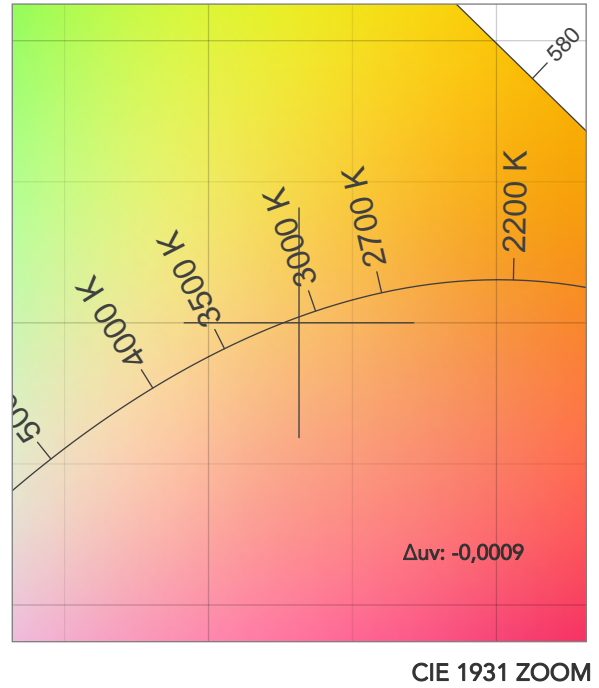
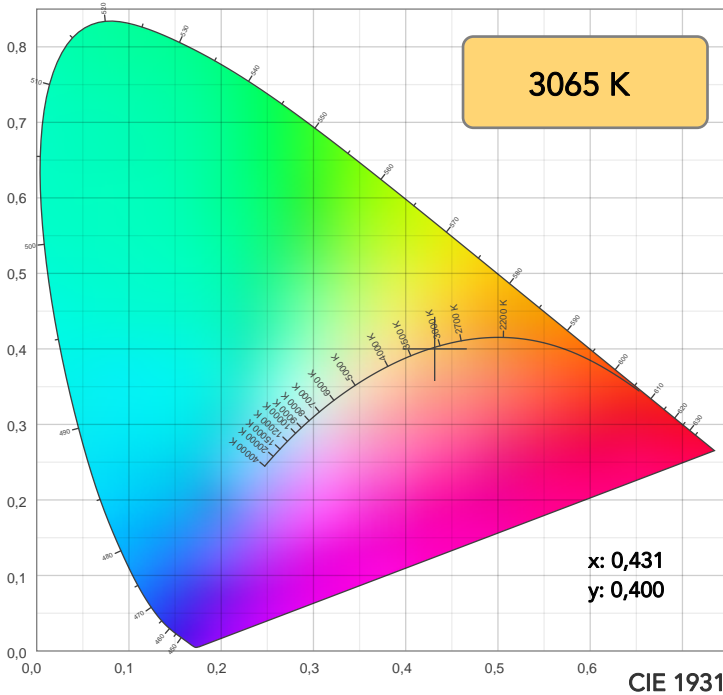
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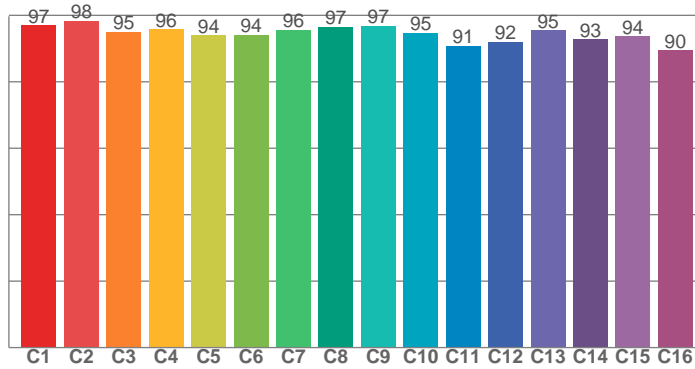


Spectra

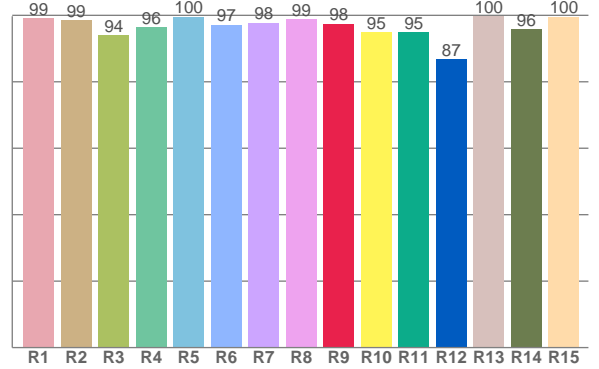




TM30: 94,7



CRI: 97,7 (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
99,2	98,5	94,0	96,4	99,5	97,2	97,8	98,8	97,5	95,0	94,9	86,8	99,7	95,7	99,5

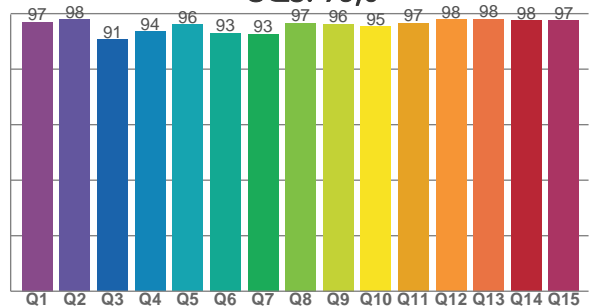
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
97,0	98,3	95,1	95,8	94,0	94,1	95,6	96,6	96,9	94,6	90,8	92,0	95,5	92,7	93,7	89,5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
96,9	97,9	90,7	93,5	96,0	93,0	92,6	96,6	96,3	95,4	96,6	97,9	98,1	97,5	97,5

CQS: 95,0



COLOR PARAMETERS

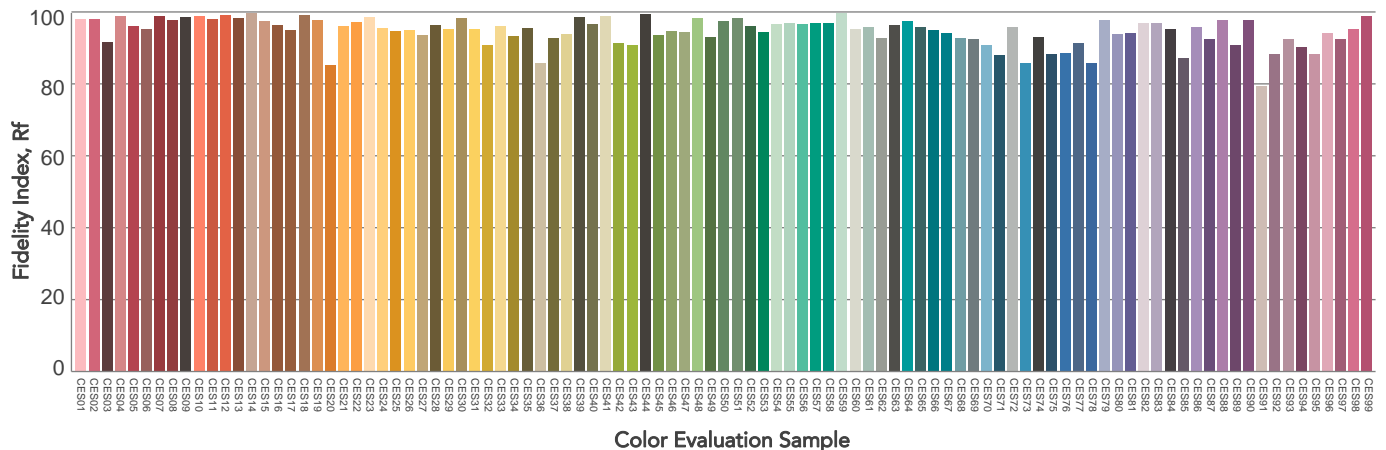
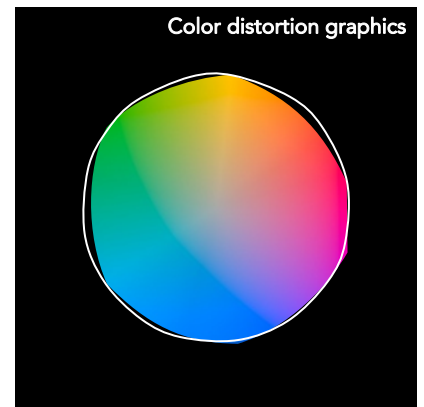
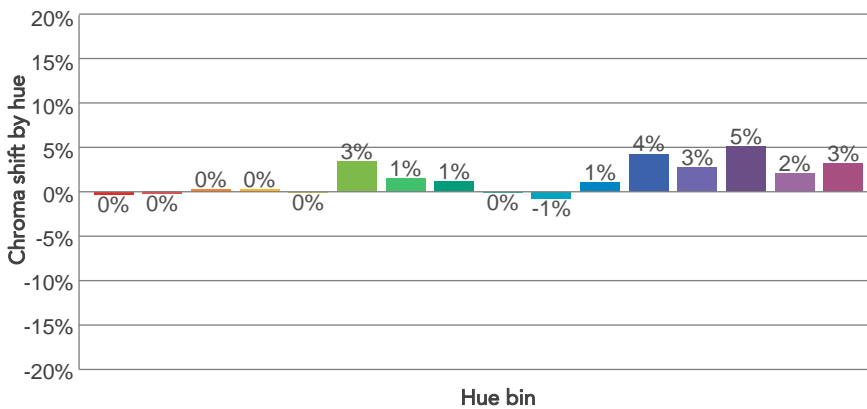
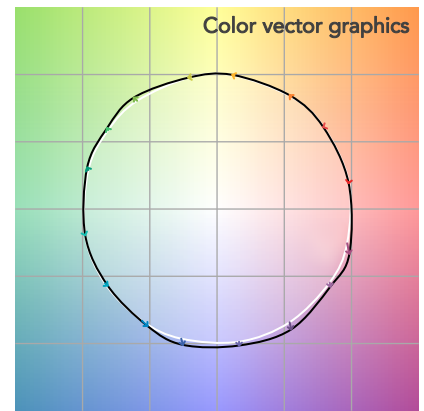
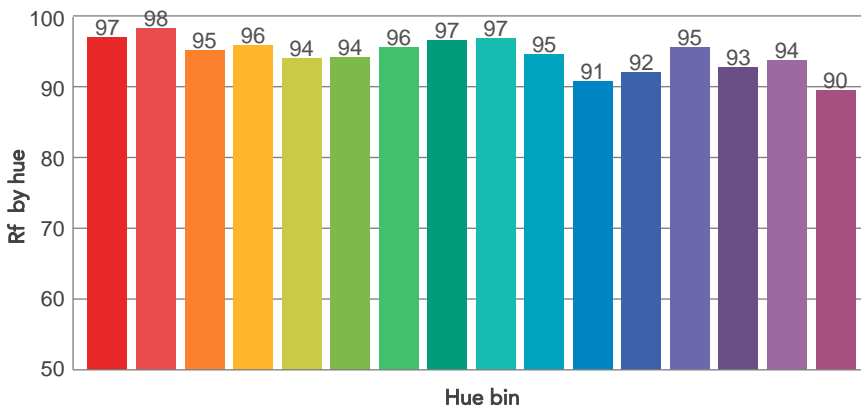
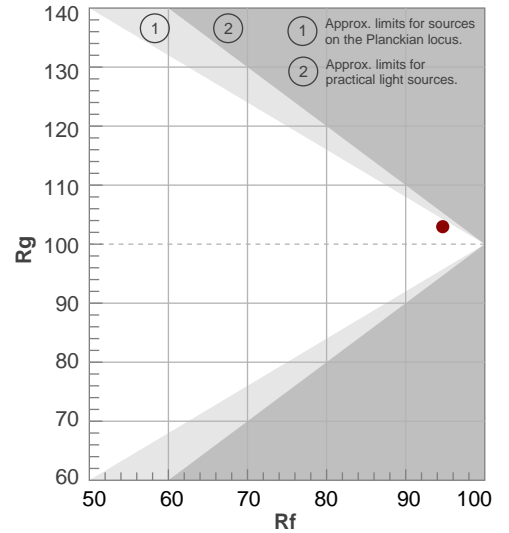
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
3065 K	97,7	97,5	94,7	103,0	95,0	98	0,431	0,400	-0,0009

TM30 DETAILS

Rf 94,7
Fidelity index Rf

Rg 103,0
Gammut index

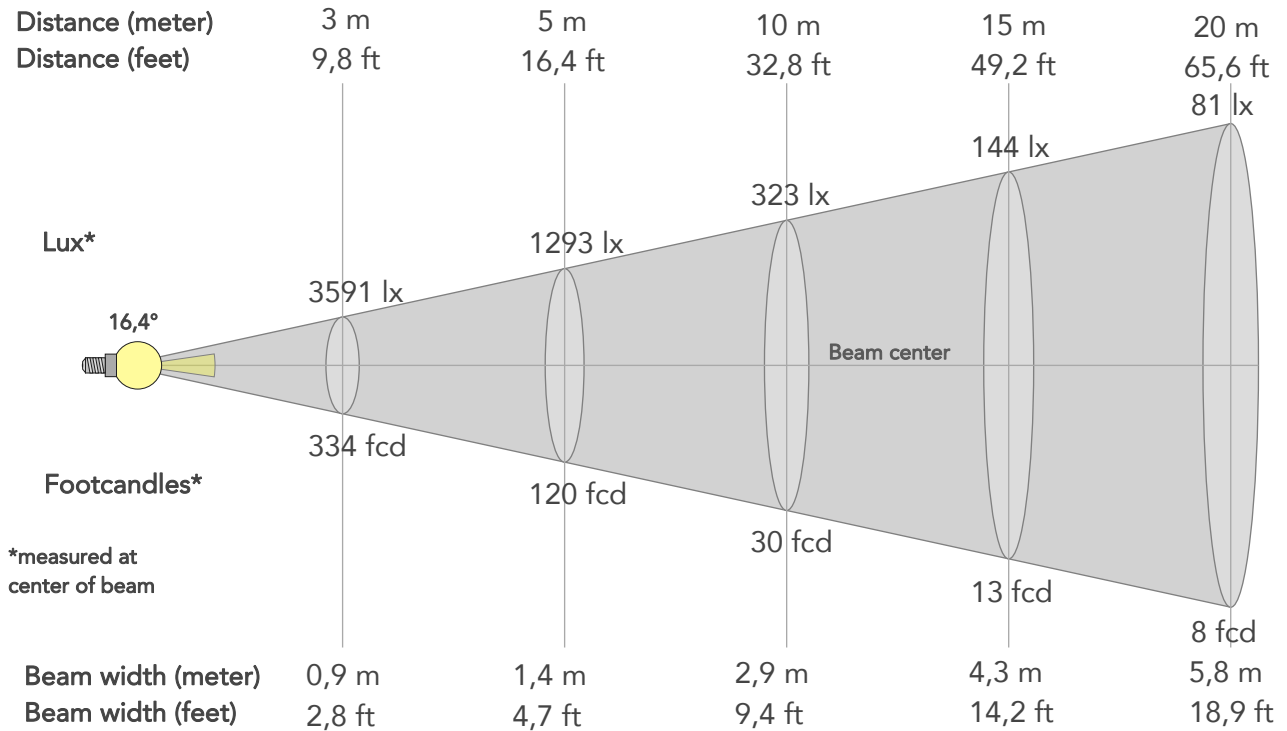
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	97	0%	-1%
2	98	0%	0%
3	95	0%	2%
4	96	0%	2%
5	94	0%	2%
6	94	3%	1%
7	96	1%	-1%
8	97	1%	-2%
9	97	0%	0%
10	95	-1%	2%
11	91	1%	6%
12	92	4%	2%
13	95	3%	-1%
14	93	5%	-2%
15	94	2%	-2%
16	90	3%	-7%



BEAM DETAILS



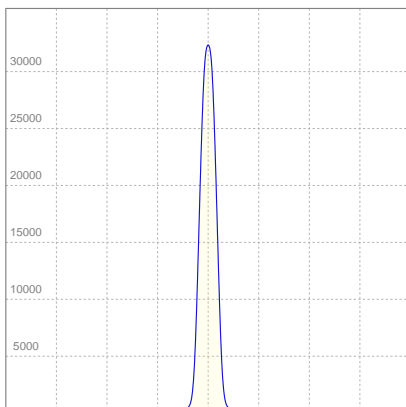
Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
16,4°	25,7°	32°	98,4%	96,1%



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	32315lx	8079lx	3591lx	2020lx	1293lx	574lx	323lx	144lx	81lx	52lx	36lx	20lx	13lx
Footcand.	3002fcd	751fcd	334fcd	188fcd	120fcd	53fcd	30fcd	13fcd	8fcd	5fcd	3fcd	2fcd	1fcd
Beam wid.	0,3m	0,6m	0,9m	1,2m	1,4m	2,2m	2,9m	4,3m	5,8m	7,2m	8,6m	11,5m	14,4m
Beam wid.	0,9ft	1,9ft	2,8ft	3,8ft	4,7ft	7,1ft	9,4ft	14,2ft	18,9ft	23,6ft	28,3ft	37,7ft	47,2ft

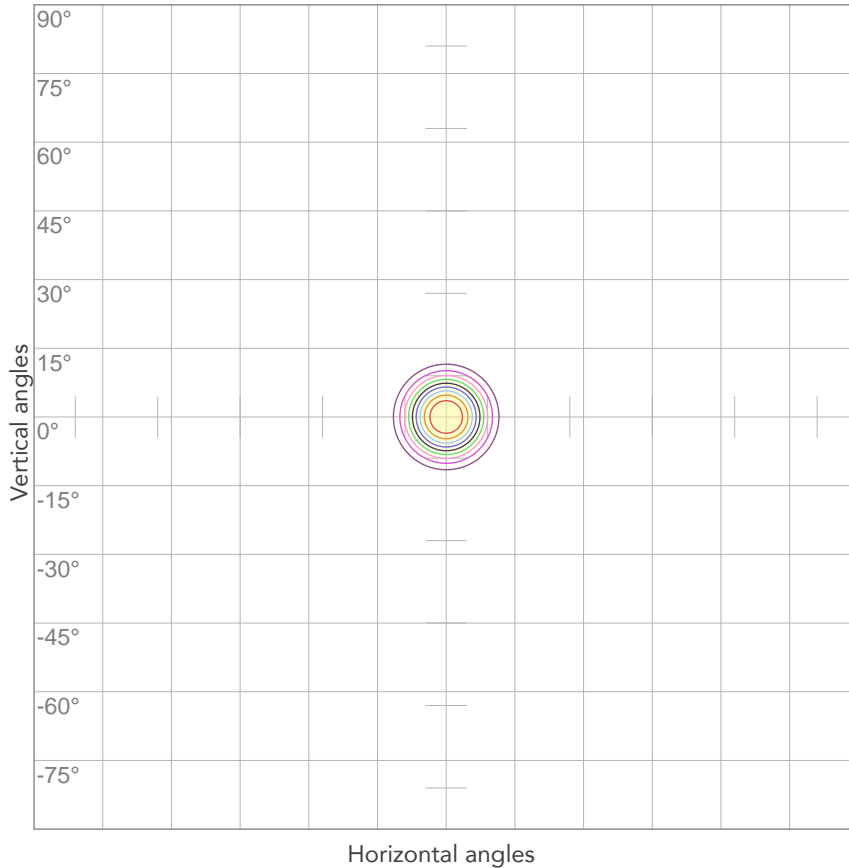
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,423A	90,2W	32lm/W

ISO CANDELA DIAGRAM



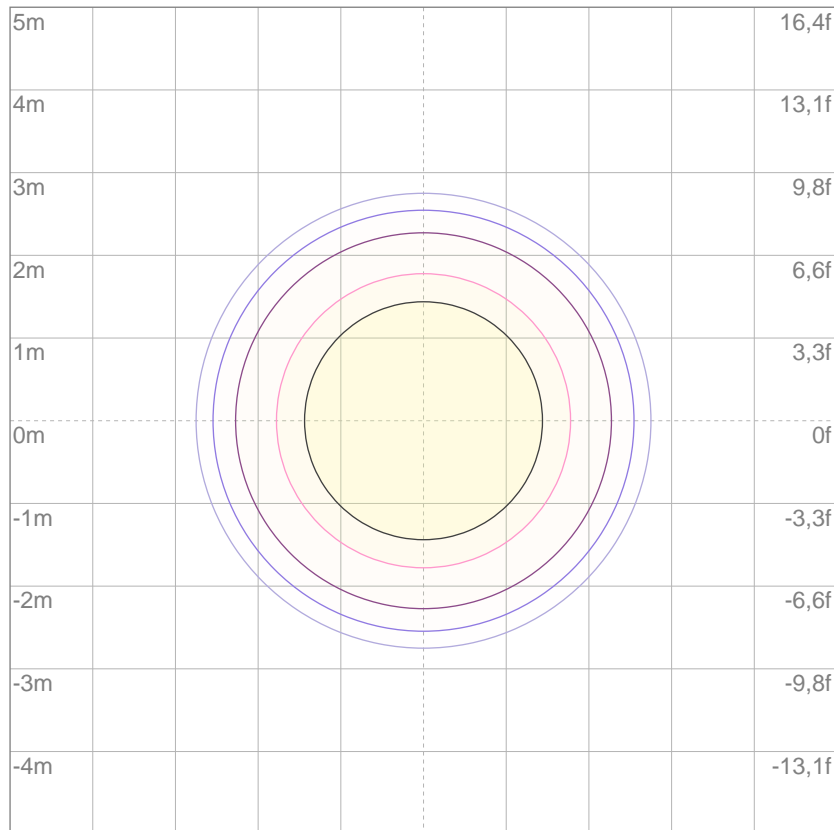
10%	3231 cd
20%	6463 cd
30%	9694 cd
40%	12926 cd
50%	16157 cd
60%	19389 cd
70%	22620 cd
80%	25852 cd

Conditions:

Number of c-planes: 2

Candela at center: 32315 cd

ISO LUX DIAGRAM



3%	9,69 lx
5%	16,2 lx
10%	32,3 lx
30%	96,9 lx
50%	162 lx

Conditions:

Number of c-planes: 2

Lux at center: 323 lx

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

Mounting height: 10 meters (33 feet)