

Photometric Test Report



ECLCTPLUS IP PRL19

Waterproofed high quality six colours LED ellipsoidal, Tunable White and colour mixing

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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:

5380 lm

Peak candela output:

63251 cd

PRODUCT NAME:

ECLCTPLUS IP

MEASURAMENT CONDITIONS:

Beam angle:

PRL19

Target:

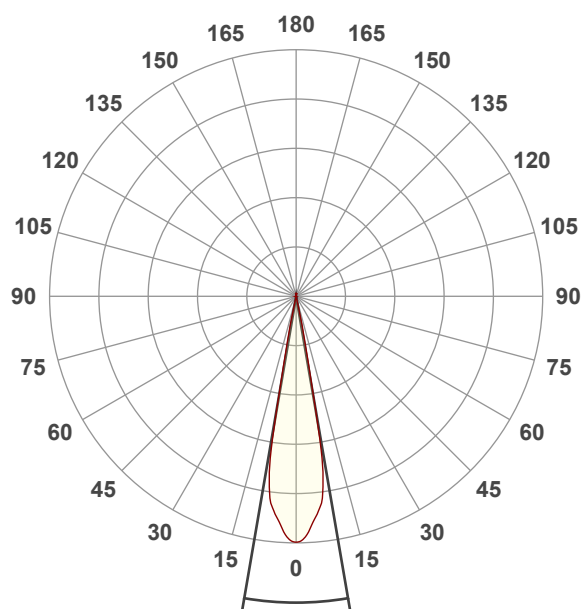
Full On HQ

Operator:

Paolo Carvone

Date and time:

14/07/2020 14:06:56

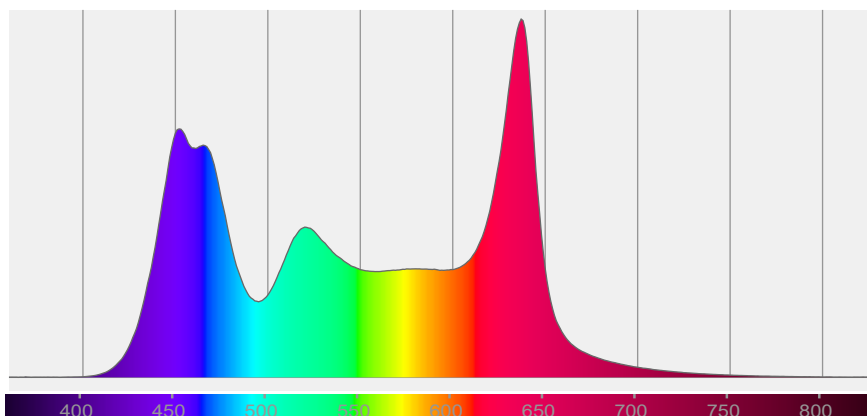


Beam angle 50%: 19,5°

Field angle 10%: 23,4°

Cut off angle 2.5%: 24,8°

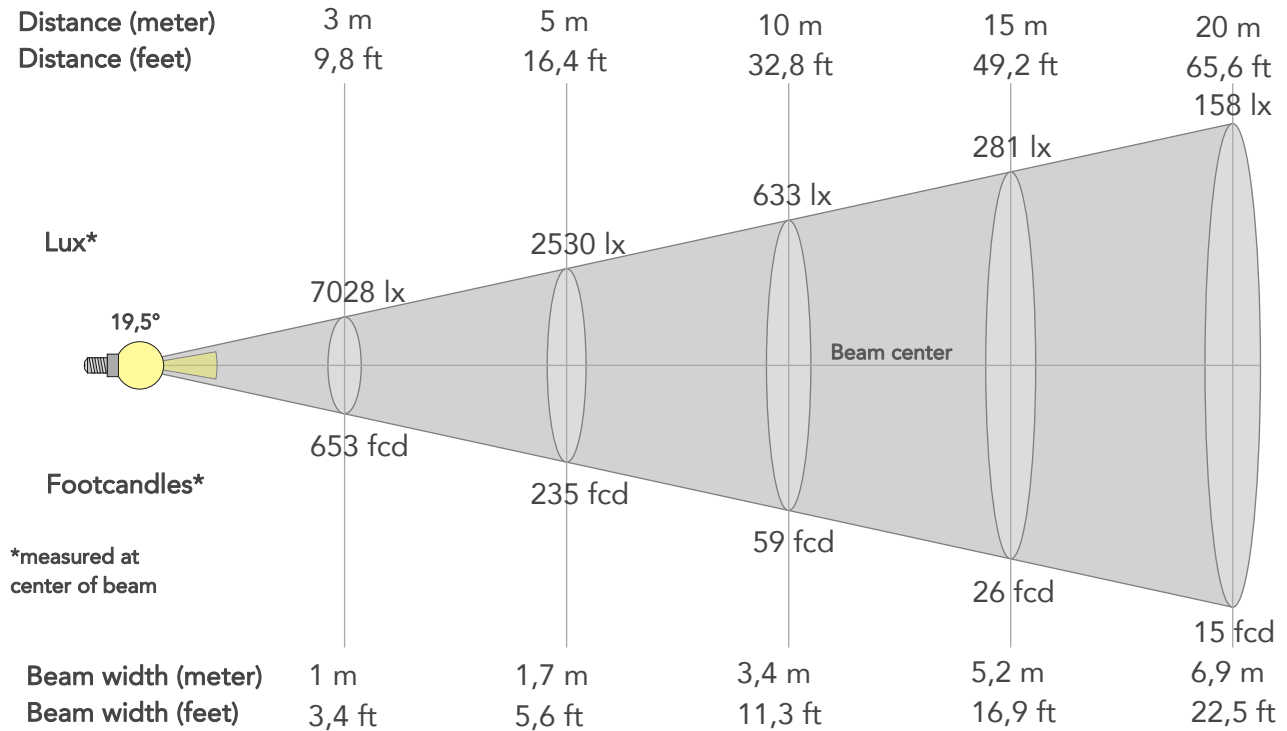
Spectra



BEAM DETAILS



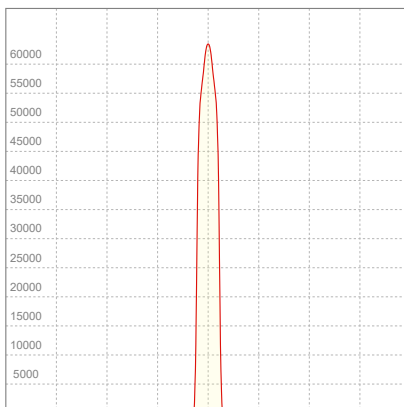
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
19,5°	23,4°	24,8°	100,0%	100,0%



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	63251lx	15813lx	7028lx	3953lx	2530lx	1124lx	633lx	281lx	158lx	101lx	70lx	40lx	25lx
Footcand.	5876fcd	1469fcd	653fcd	367fcd	235fcd	104fcd	59fcd	26fcd	15fcd	9fcd	7fcd	4fcd	2fcd
Beam wid.	0,3m	0,7m	1m	1,4m	1,7m	2,6m	3,4m	5,2m	6,9m	8,6m	10,3m	13,7m	17,2m
Beam wid.	1,1ft	2,3ft	3,4ft	4,5ft	5,6ft	8,5ft	11,3ft	16,9ft	22,5ft	28,2ft	33,8ft	45,1ft	56,4ft

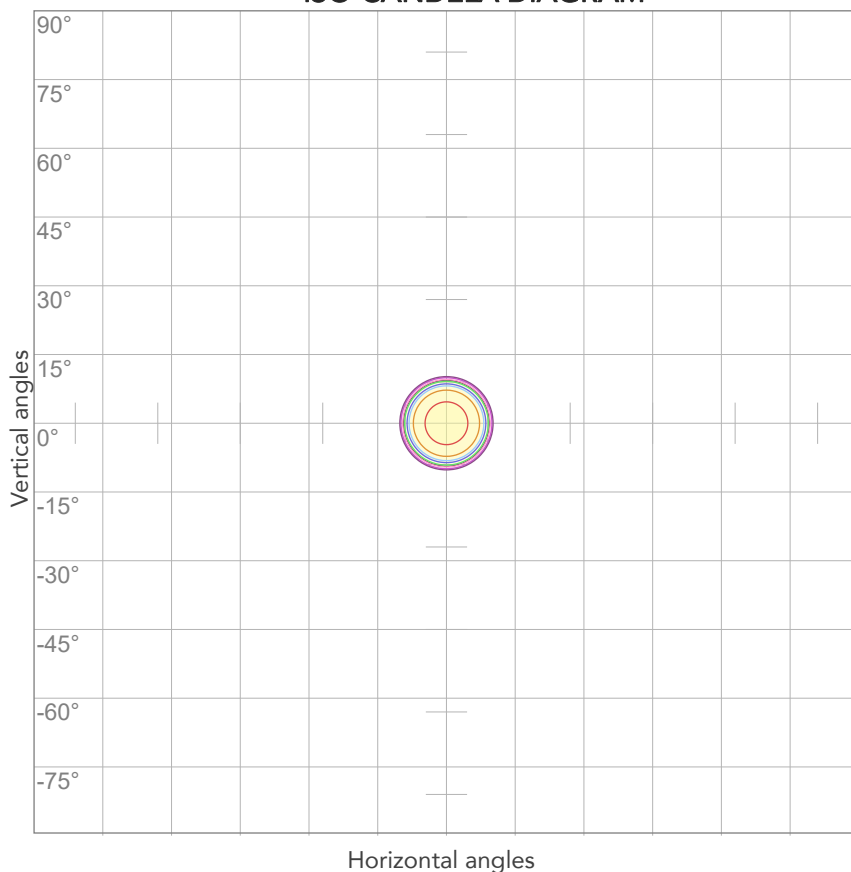
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	1,25A	269W	20lm/W
Power FC			
0,96			

ISO CANDELA DIAGRAM



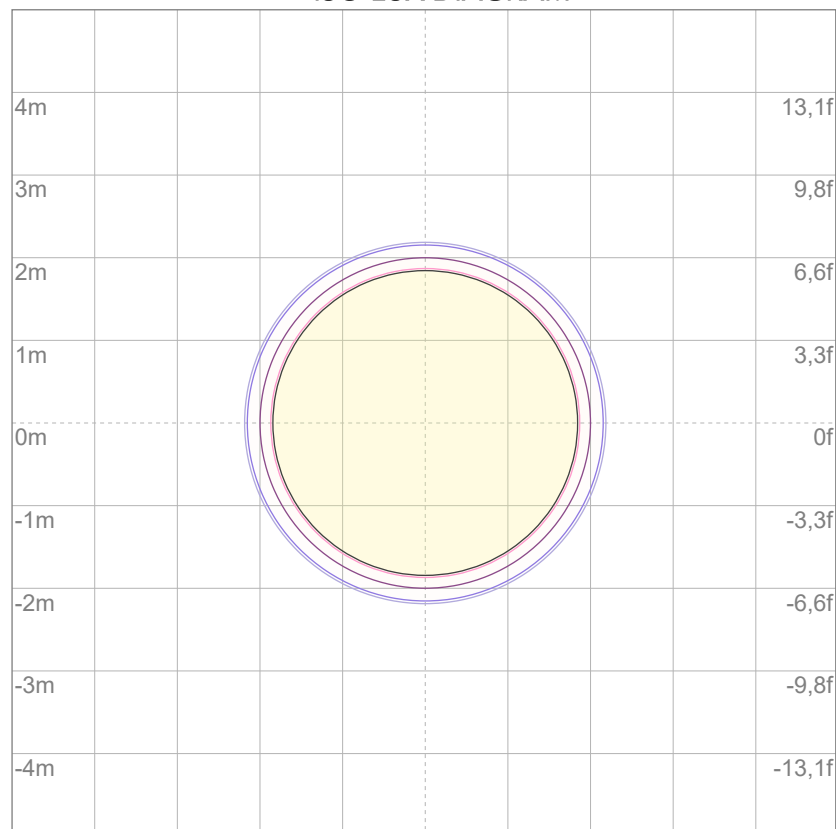
10%	6325 cd
20%	12650 cd
30%	18975 cd
40%	25300 cd
50%	31625 cd
60%	37951 cd
70%	44276 cd
80%	50601 cd

Conditions:

Number of c-planes: 2

Candela at center: 63251 cd

ISO LUX DIAGRAM



3%	19,0 lx
5%	31,6 lx
10%	63,3 lx
30%	190 lx
50%	316 lx

Conditions:

Number of c-planes: 2

Lux at center: 633 lx

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



Total lumen output:

795 lm

Peak candela output:

8777 cd

PRODUCT NAME:

ECLCTPLUS IP

MEASURAMENT CONDITIONS:

Beam angle:

PRL19

Target:

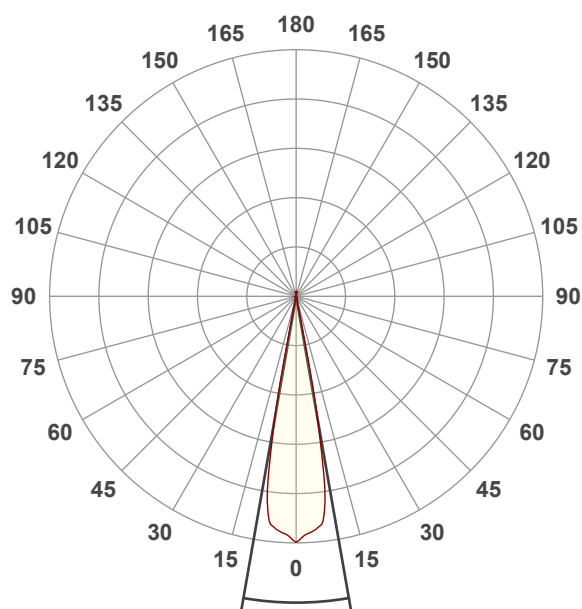
Red HQ

Operator:

Paolo Carvone

Date and time:

14/07/2020 14:09:56

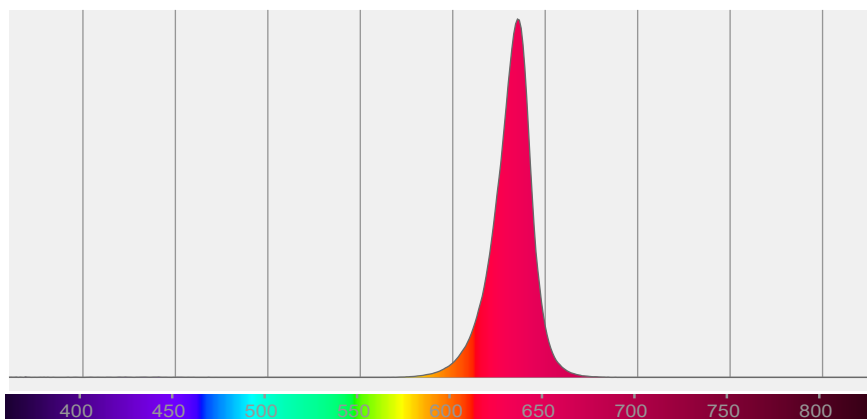


Beam angle 50%: 19,8°

Field angle 10%: 23,3°

Cut off angle 2.5%: 23,9°

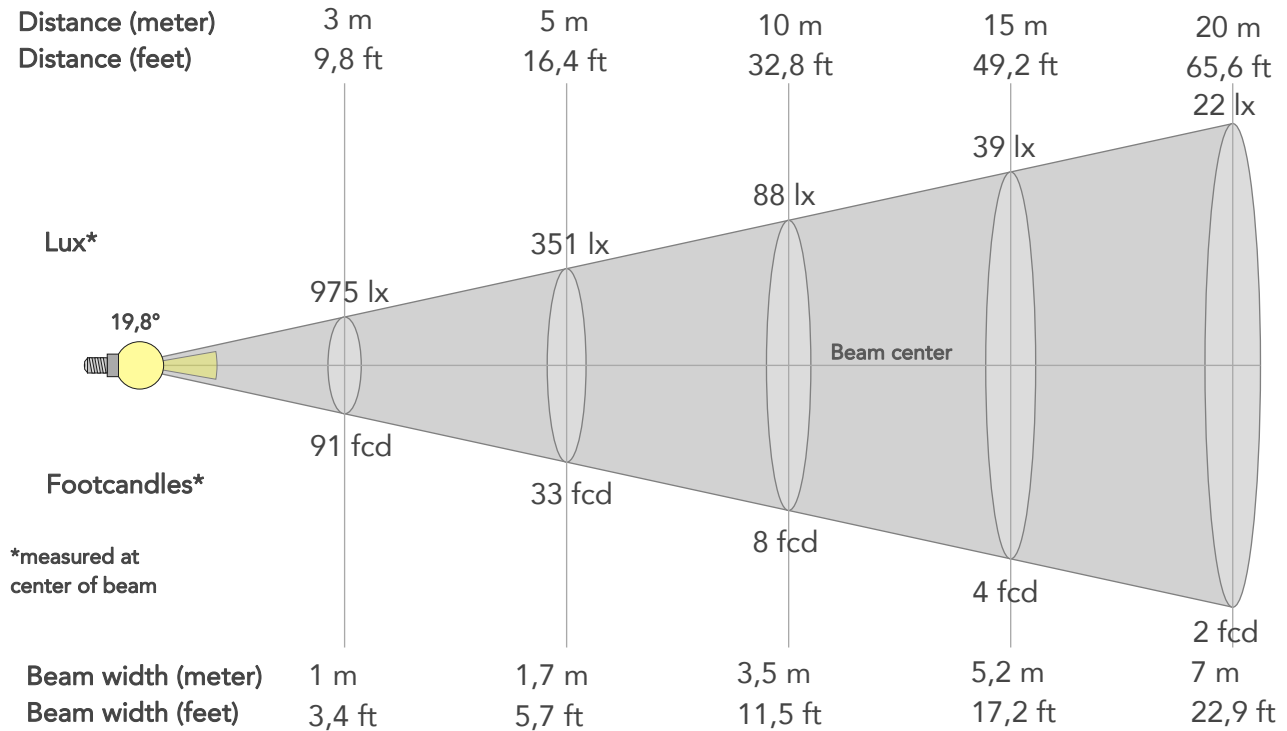
Spectra



BEAM DETAILS



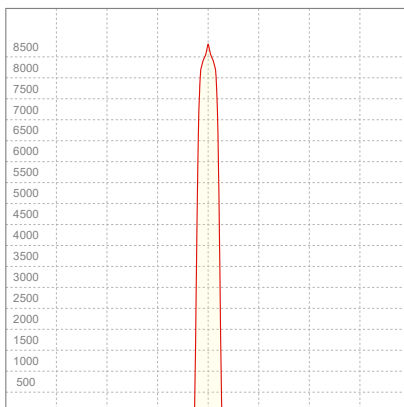
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
19,8°	23,3°	23,9°	99,9%	99,9%



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	8777lx	2194lx	975lx	549lx	351lx	156lx	88lx	39lx	22lx	14lx	10lx	5lx	4lx
Footcand.	815fcd	204fcd	91fcd	51fcd	33fcd	14fcd	8fcd	4fcd	2fcd	1fcd	1fcd	1fcd	0fcd
Beam wid.	0,3m	0,7m	1m	1,4m	1,7m	2,6m	3,5m	5,2m	7m	8,7m	10,5m	14m	17,5m
Beam wid.	1,2ft	2,3ft	3,4ft	4,6ft	5,7ft	8,6ft	11,5ft	17,2ft	22,9ft	28,7ft	34,4ft	45,8ft	57,3ft

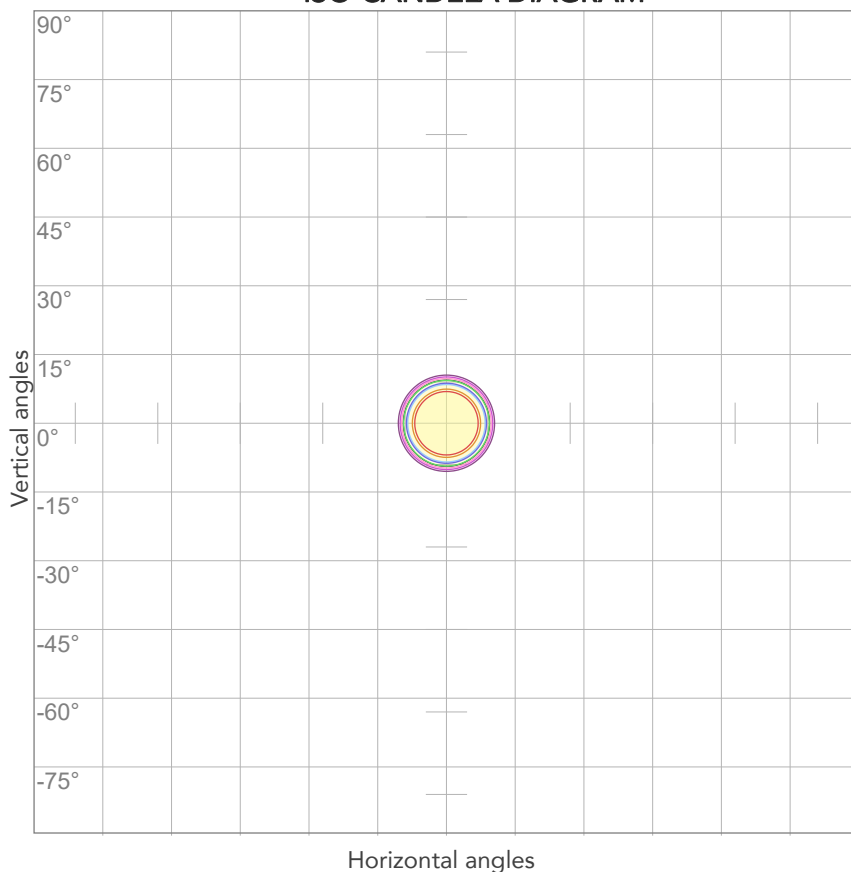
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,313A	51,3W	16lm/W
Power FC			
0,72			

ISO CANDELA DIAGRAM



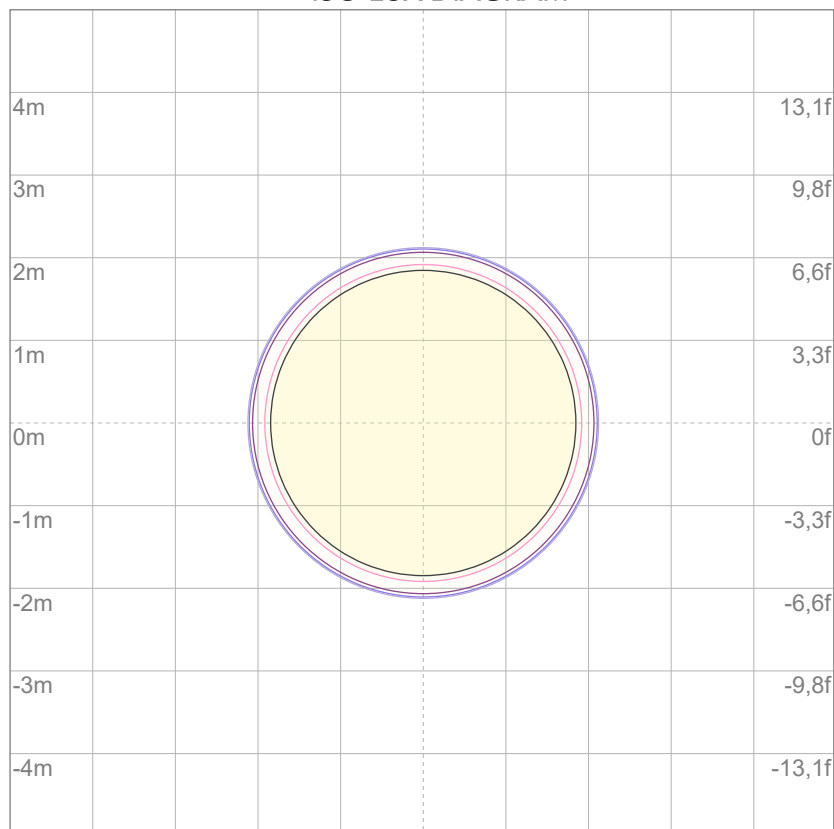
10%	878 cd
20%	1755 cd
30%	2633 cd
40%	3511 cd
50%	4389 cd
60%	5266 cd
70%	6144 cd
80%	7022 cd

Conditions:

Number of c-planes: 2

Candela at center: 8777 cd

ISO LUX DIAGRAM



3%	2,63 lx
5%	4,39 lx
10%	8,78 lx
30%	26,3 lx
50%	43,9 lx

Conditions:

Number of c-planes: 2

Lux at center: 87,8 lx

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



Total lumen output:

895 lm

Peak candela output:

9897 cd

PRODUCT NAME:

ECLCTPLUS IP

MEASURAMENT CONDITIONS:

Beam angle:

PRL19

Target:

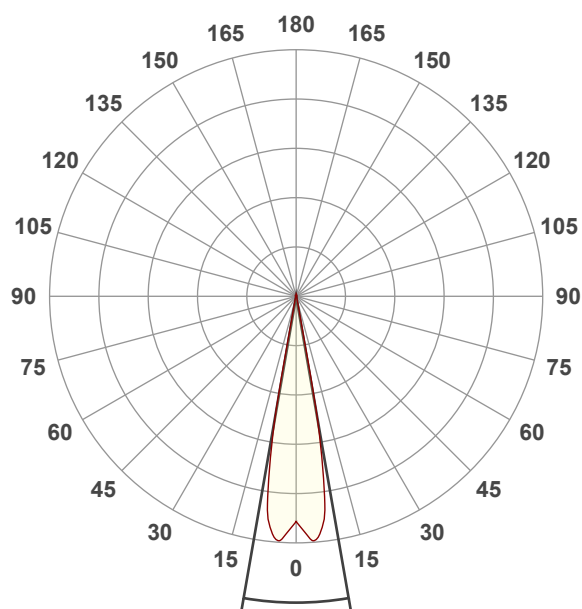
Green HQ

Operator:

Paolo Carvone

Date and time:

14/07/2020 14:11:34

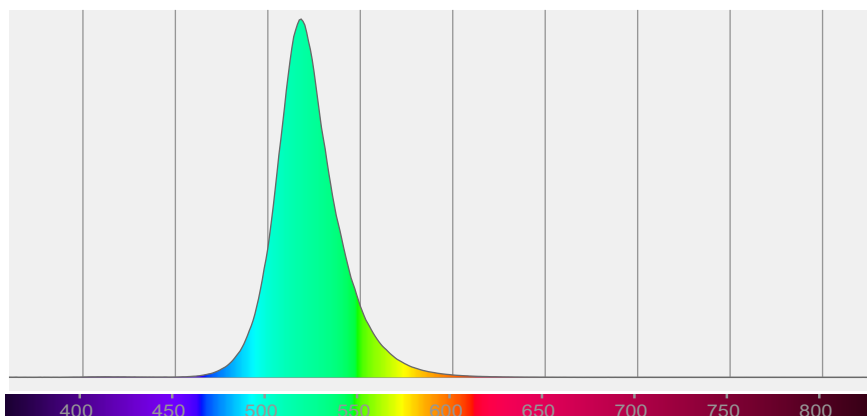


Beam angle 50%: 19,7°

Field angle 10%: 23,1°

Cut off angle 2.5%: 25,6°

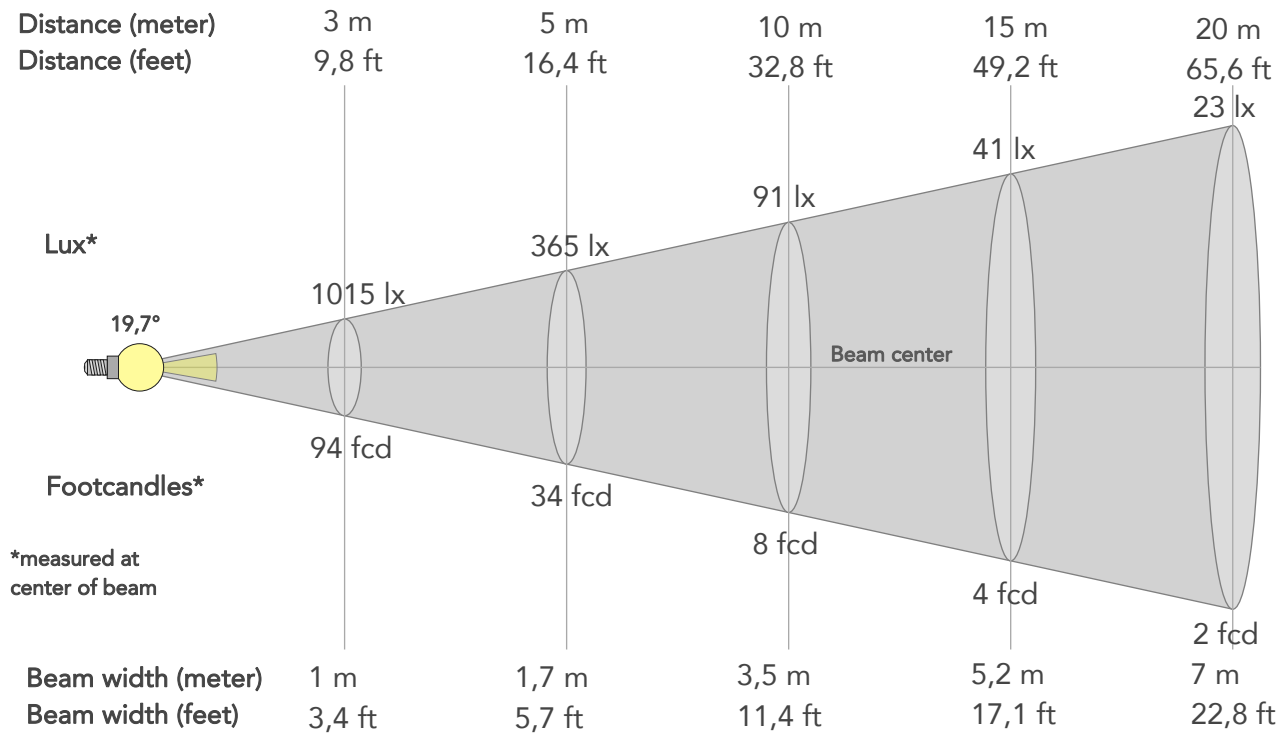
Spectra



BEAM DETAILS



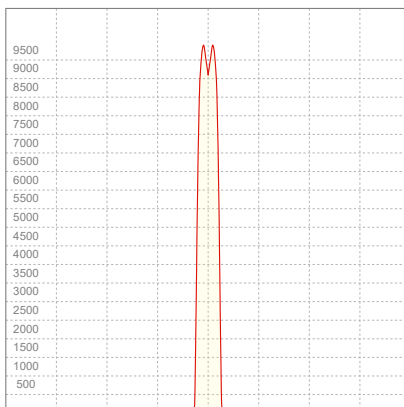
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
19,7°	23,1°	25,6°	99,9%	99,9%



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	9136lx	2284lx	1015lx	571lx	365lx	162lx	91lx	41lx	23lx	15lx	10lx	6lx	4lx
Footcand.	849fcd	212fcd	94fcd	53fcd	34fcd	15fcd	8fcd	4fcd	2fcd	1fcd	1fcd	1fcd	0fcd
Beam wid.	0,3m	0,7m	1m	1,4m	1,7m	2,6m	3,5m	5,2m	7m	8,7m	10,4m	13,9m	17,4m
Beam wid.	1,1ft	2,3ft	3,4ft	4,6ft	5,7ft	8,6ft	11,4ft	17,1ft	22,8ft	28,5ft	34,2ft	45,7ft	57,1ft

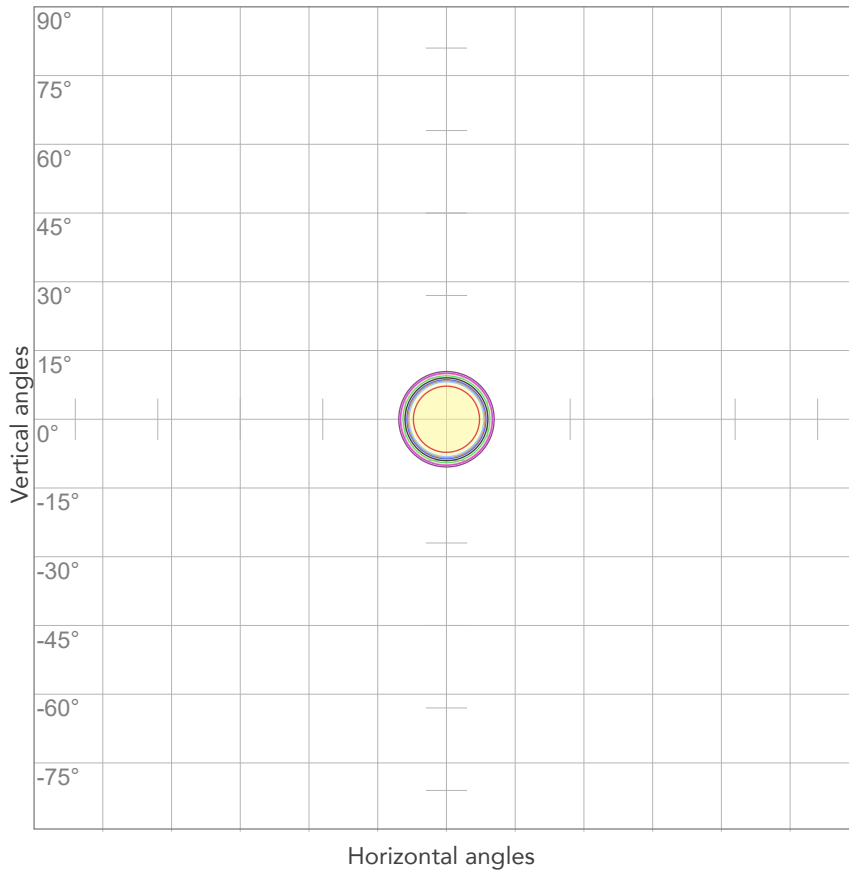
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
227V	0,297A	47,3W	19lm/W
Power FC			
0,7			

ISO CANDELA DIAGRAM



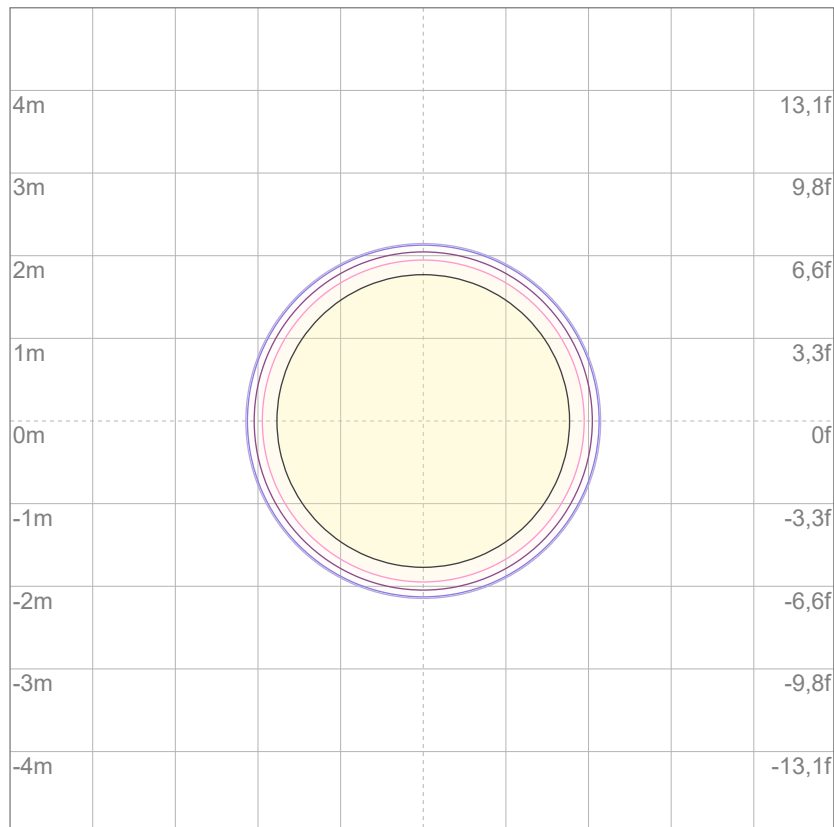
10%	914 cd
20%	1827 cd
30%	2741 cd
40%	3654 cd
50%	4568 cd
60%	5481 cd
70%	6395 cd
80%	7308 cd

Conditions:

Number of c-planes: 2

Candela at center: 9136 cd

ISO LUX DIAGRAM



3%	2,74 lx
5%	4,57 lx
10%	9,14 lx
30%	27,4 lx
50%	45,7 lx

Conditions:

Number of c-planes: 2

Lux at center: 91,4 lx

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



Total lumen output:

106 lm

Peak candela output:

1113 cd

PRODUCT NAME:

ECLCTPLUS IP

MEASURAMENT CONDITIONS:

Beam angle:

PRL19

Target:

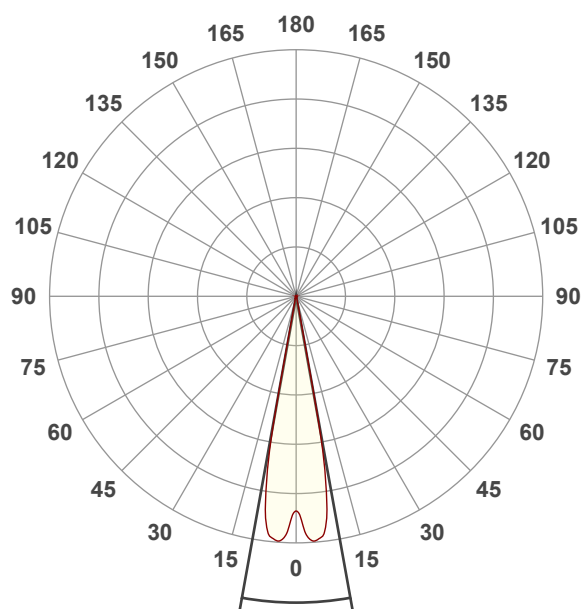
Blue HQ

Operator:

Paolo Carvone

Date and time:

14/07/2020 14:13:28

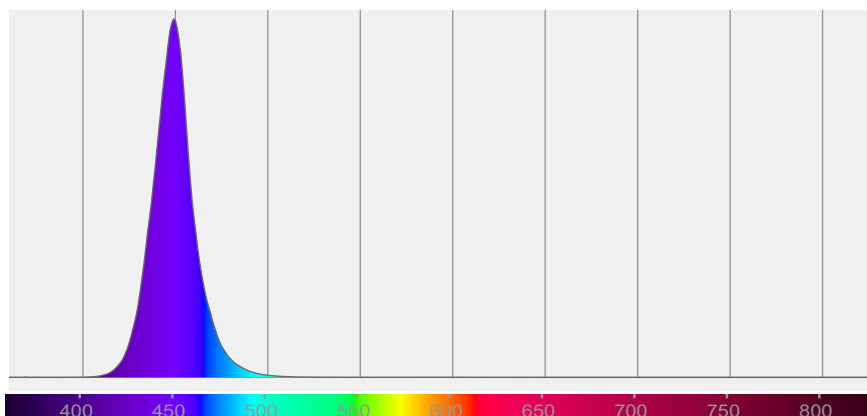


Beam angle 50%: 20,4°

Field angle 10%: 22,7°

Cut off angle 2.5%: 24,7°

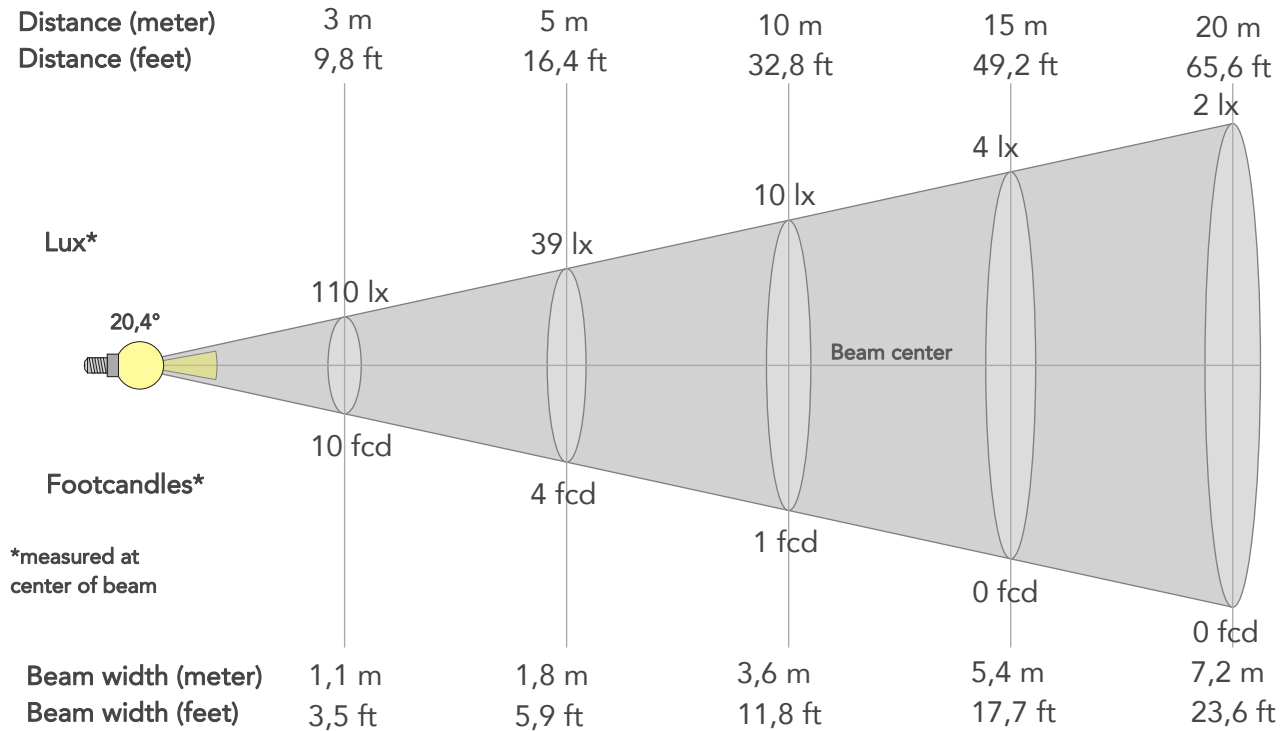
Spectra



BEAM DETAILS



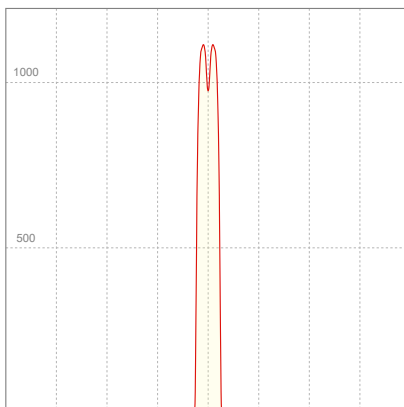
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
20,4°	22,7°	24,7°	99,9%	99,9%



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	986lx	247lx	110lx	62lx	39lx	18lx	10lx	4lx	2lx	2lx	1lx	1lx	0lx
Footcand.	92fcd	23fcd	10fcd	6fcd	4fcd	2fcd	1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	0,4m	0,7m	1,1m	1,4m	1,8m	2,7m	3,6m	5,4m	7,2m	9m	10,8m	14,4m	18m
Beam wid.	1,2ft	2,4ft	3,5ft	4,7ft	5,9ft	8,8ft	11,8ft	17,7ft	23,6ft	29,5ft	35,4ft	47,2ft	59ft

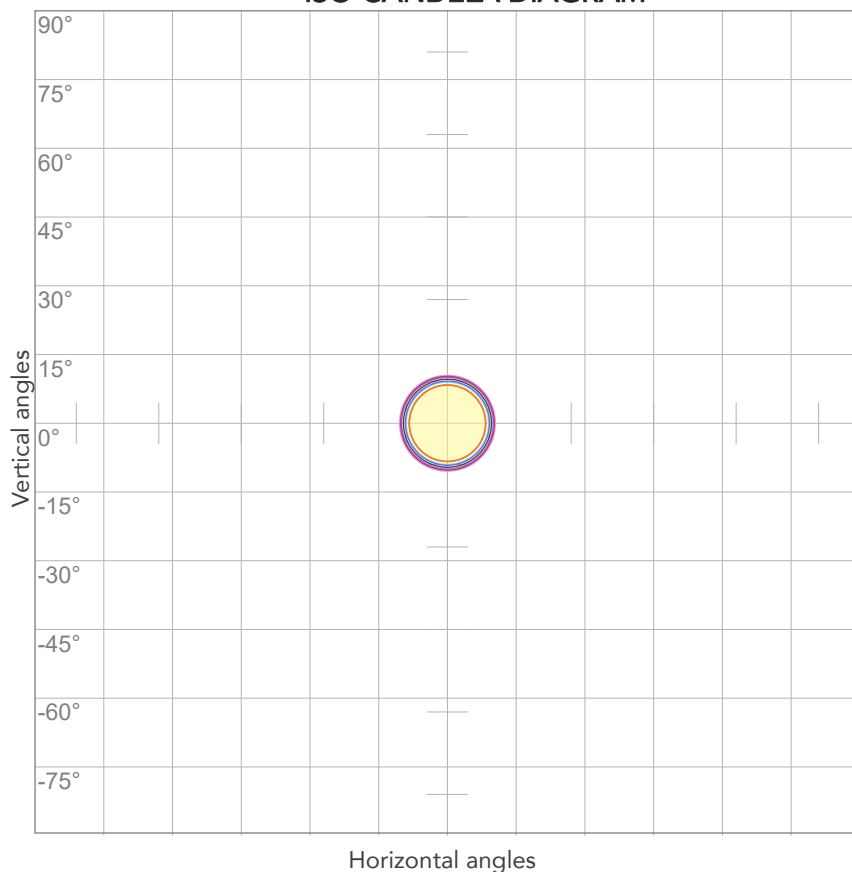
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,234A	32,3W	3lm/W
Power FC			
0,61			

ISO CANDELA DIAGRAM



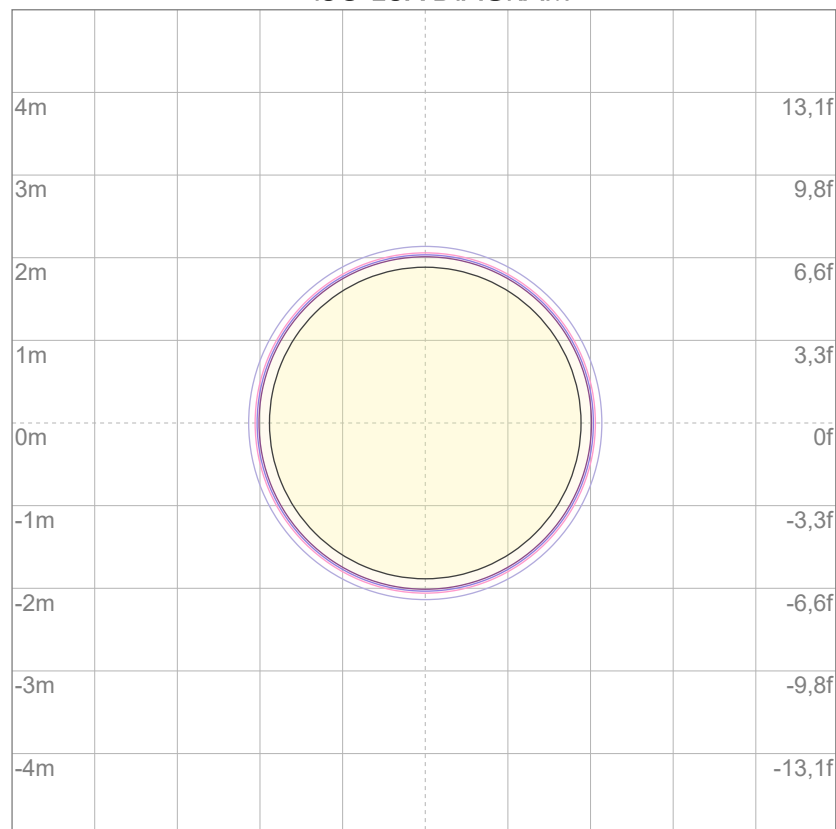
10%	99 cd
20%	197 cd
30%	296 cd
40%	395 cd
50%	493 cd
60%	592 cd
70%	690 cd
80%	789 cd

Conditions:

Number of c-planes: 2

Candela at center: 986 cd

ISO LUX DIAGRAM



3%	0,296 lx
5%	0,493 lx
10%	0,986 lx
30%	2,96 lx
50%	4,93 lx

Conditions:

Number of c-planes: 2

Lux at center: 9,86 lx

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



Total lumen output:

4265 lm

Peak candela output:

51806 cd

Light quality:

CRI: 92,1

Color temperature:

2823 K

PRODUCT NAME:

ECLCTPLUS IP

MEASURAMENT CONDITIONS:

Beam angle:

PRL19

Target:

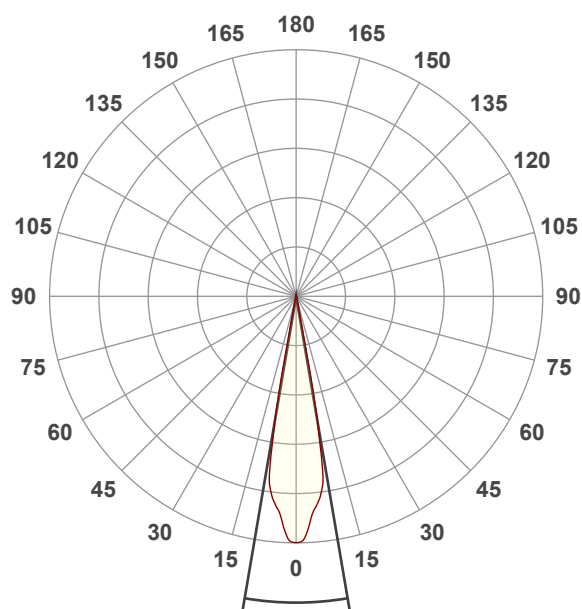
2800K HQ

Operator:

Paolo Carvone

Date and time:

14/07/2020 14:15:36

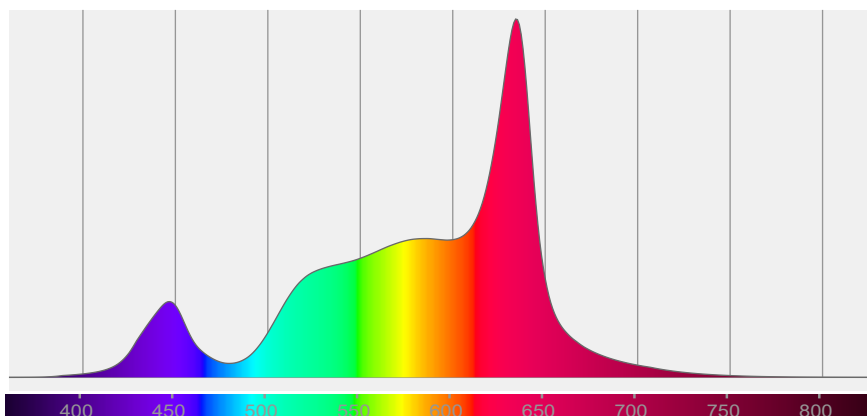


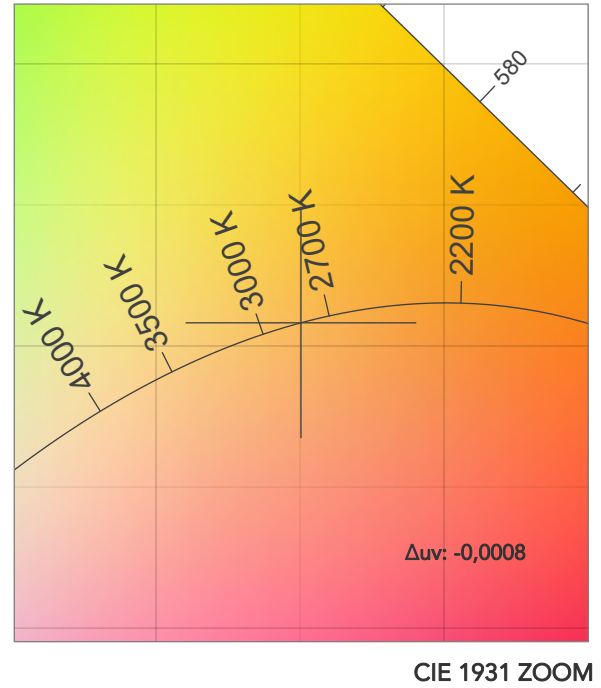
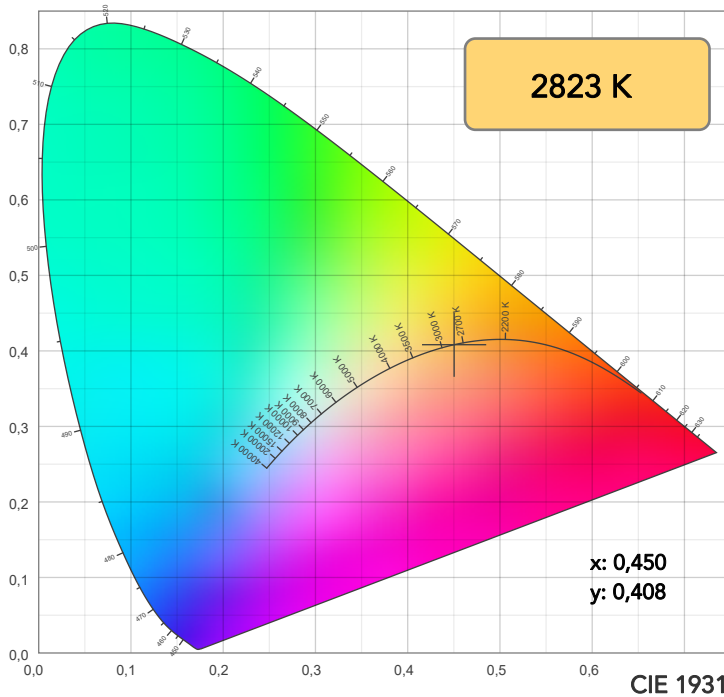
Beam angle 50%: 19,4°

Field angle 10%: 22,7°

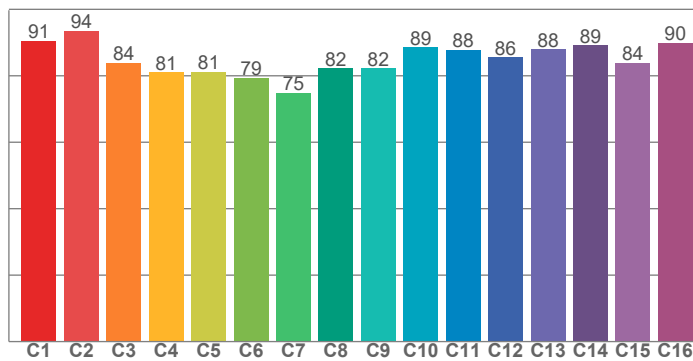
Cut off angle 2.5%: 24,4°

Spectra

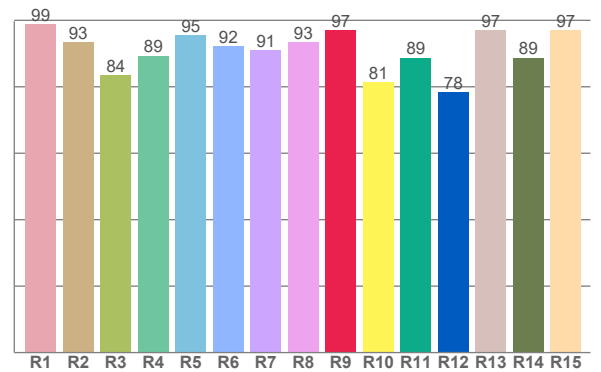




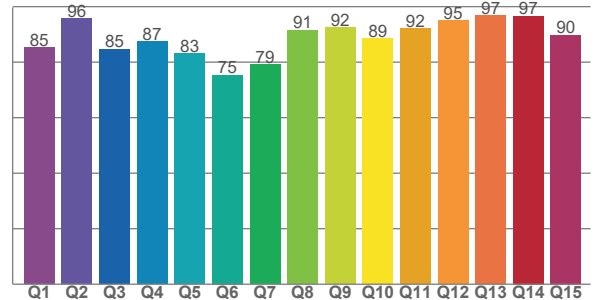
TM30: 85,7



CRI: 92,1 (R1-R8)



CQS: 86,9



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
98,8	93,3	83,5	89,3	95,5	92,2	90,9	93,4	97,0	81,3	88,7	78,3	97,0	88,7	96,9

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
90,5	93,6	83,9	81,0	81,3	79,4	74,9	82,2	82,3	88,6	87,8	85,6	87,9	89,1	83,9	89,8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
85,3	95,6	84,6	87,4	83,1	75,4	79,2	91,5	92,5	88,5	92,1	95,0	96,7	96,6	89,8

COLOR PARAMETERS

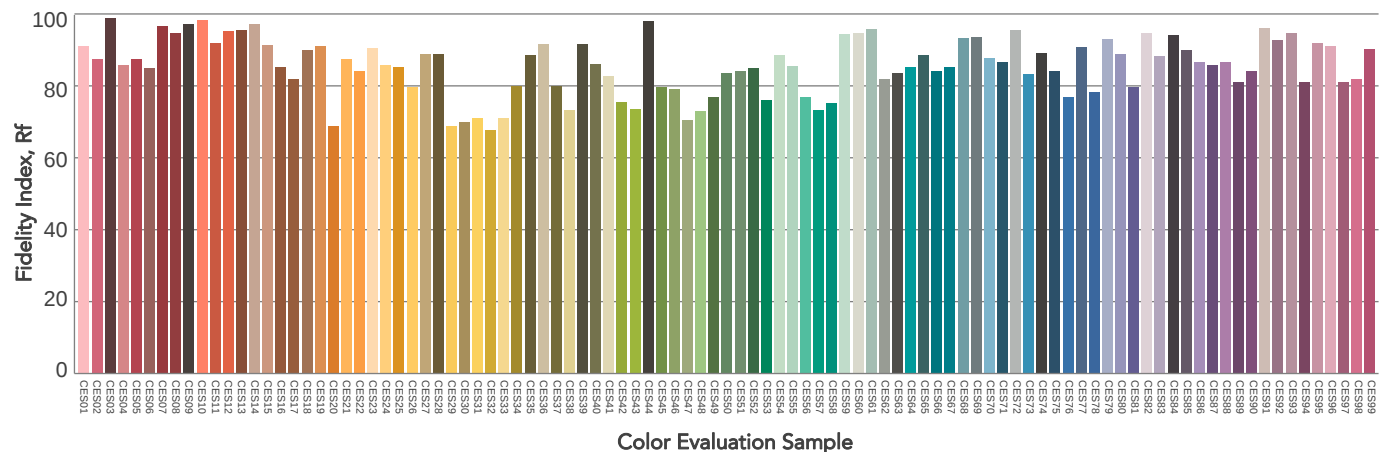
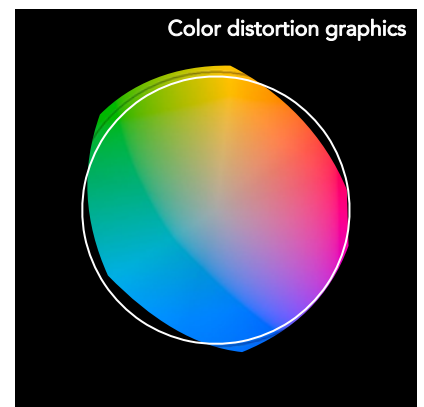
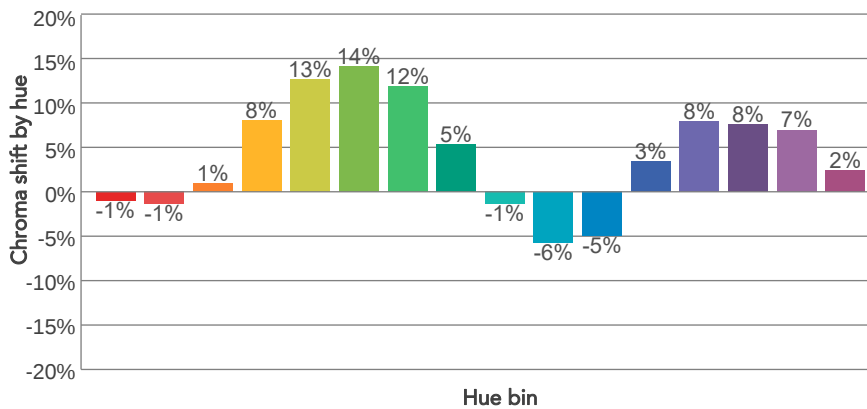
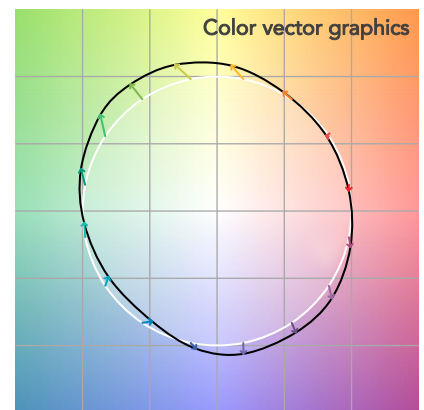
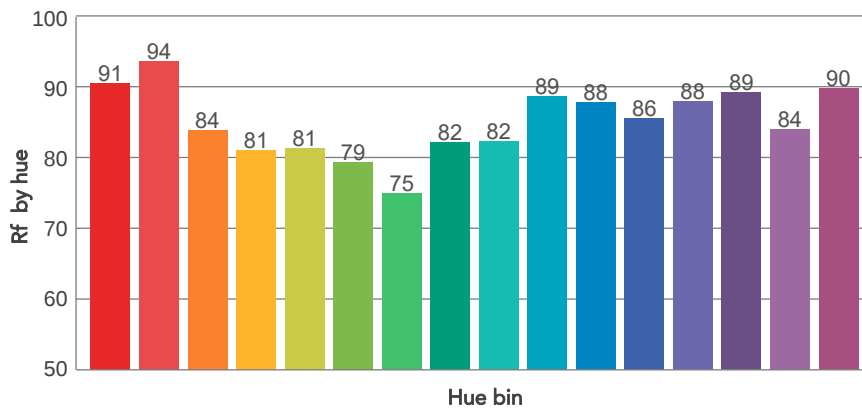
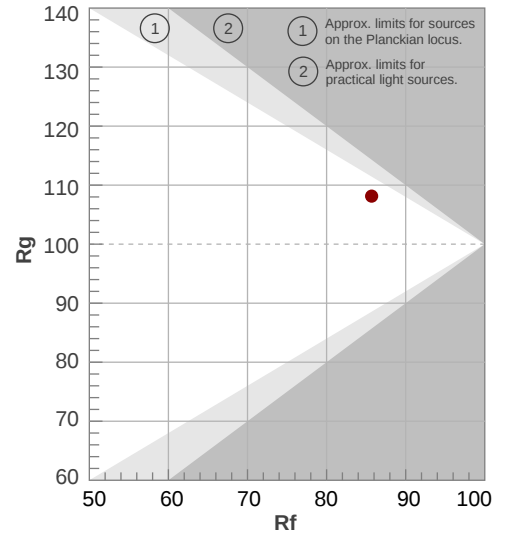
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
2823 K	92,1	97,0	85,7	108,1	86,9	69	0,450	0,408	-0,0008

TM30 DETAILS

Rf 85,7
Fidelity index Rf

Rg 108,1
Gammut index

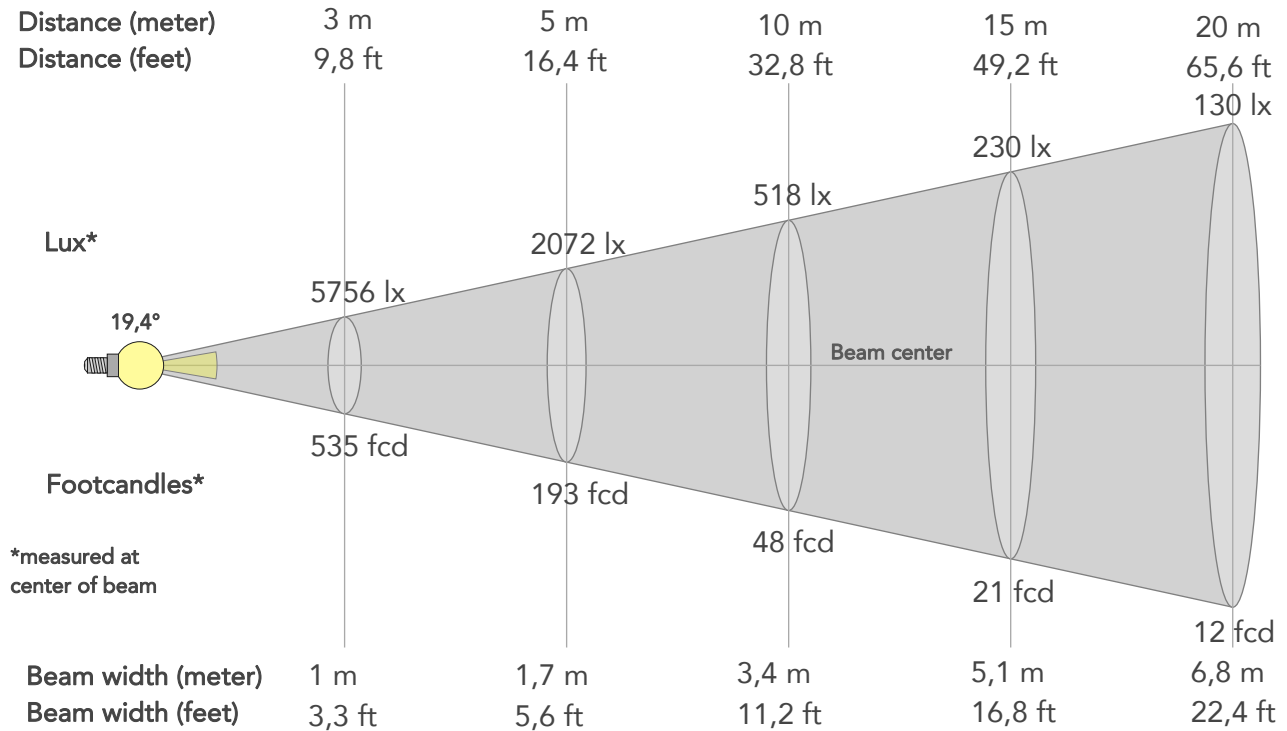
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	91	-1%	-4%
2	94	-1%	2%
3	84	1%	8%
4	81	8%	11%
5	81	13%	9%
6	79	14%	1%
7	75	12%	-11%
8	82	5%	-11%
9	82	-1%	-11%
10	89	-6%	-4%
11	88	-5%	5%
12	86	3%	5%
13	88	8%	-1%
14	89	8%	-1%
15	84	7%	-7%
16	90	2%	-7%



BEAM DETAILS



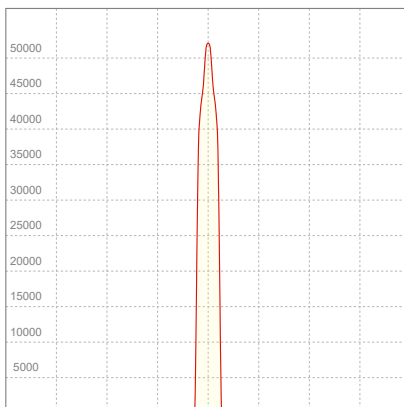
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
19,4°	22,7°	24,4°	100,0%	100,0%



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	51806lx	12951lx	5756lx	3238lx	2072lx	921lx	518lx	230lx	130lx	83lx	58lx	32lx	21lx
Footcand.	4813fcd	1203fcd	535fcd	301fcd	193fcd	86fcd	48fcd	21fcd	12fcd	8fcd	5fcd	3fcd	2fcd
Beam wid.	0,3m	0,7m	1m	1,4m	1,7m	2,6m	3,4m	5,1m	6,8m	8,5m	10,2m	13,6m	17m
Beam wid.	1,1ft	2,3ft	3,3ft	4,5ft	5,6ft	8,4ft	11,2ft	16,8ft	22,4ft	28ft	33,6ft	44,7ft	55,9ft

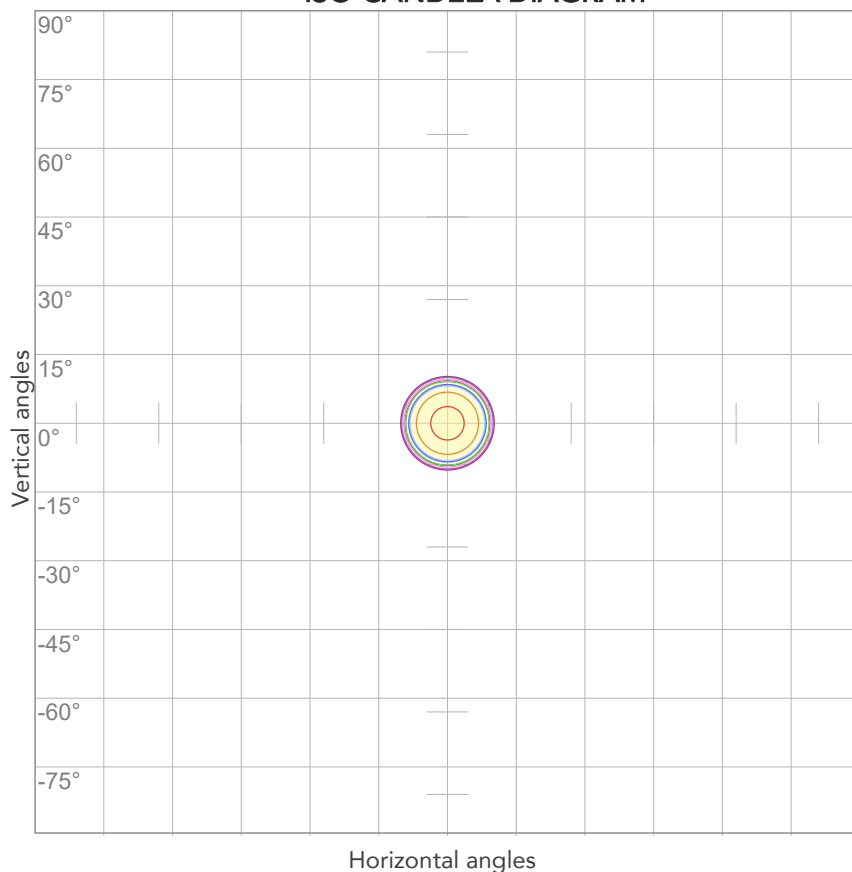
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,804A	167,6W	25lm/W

ISO CANDELA DIAGRAM



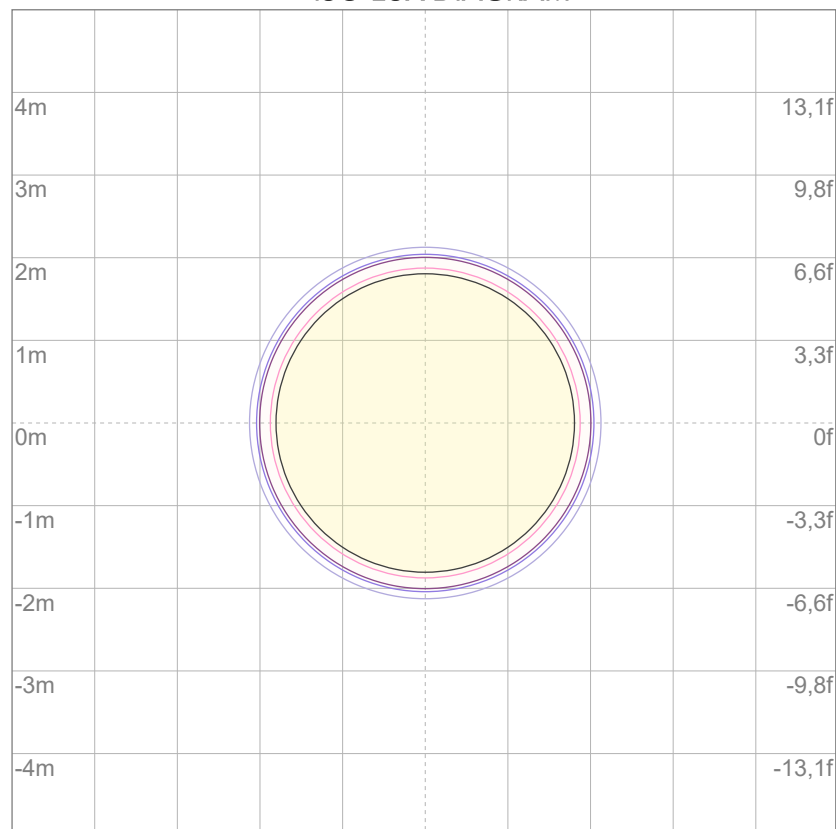
10%	5181 cd
20%	10361 cd
30%	15542 cd
40%	20722 cd
50%	25903 cd
60%	31084 cd
70%	36264 cd
80%	41445 cd

Conditions:

Number of c-planes: 2

Candela at center: 51806 cd

ISO LUX DIAGRAM



3%	15,5 lx
5%	25,9 lx
10%	51,8 lx
30%	155 lx
50%	259 lx

Conditions:

Number of c-planes: 2

Lux at center: 518 lx

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



Total lumen output:

4451 lm

Peak candela output:

54086 cd

Light quality:

CRI: 93,1

Color temperature:

3214 K

PRODUCT NAME:

ECLCTPLUS IP

MEASURAMENT CONDITIONS:

Beam angle:

PRL19

Target:

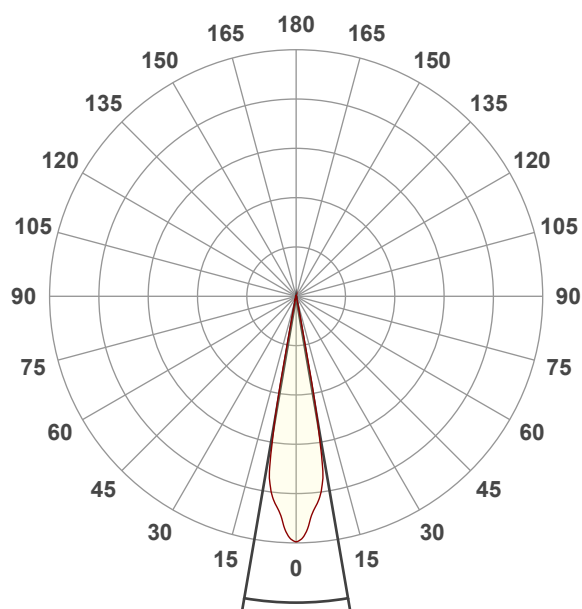
3200K HQ

Operator:

Paolo Carvone

Date and time:

14/07/2020 14:18:05

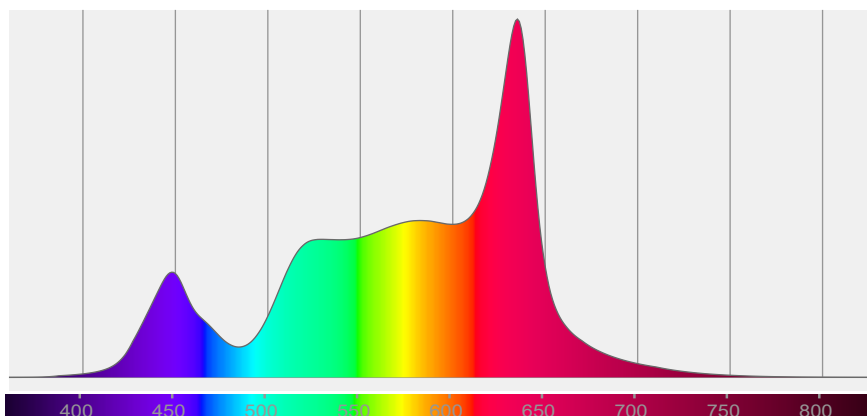


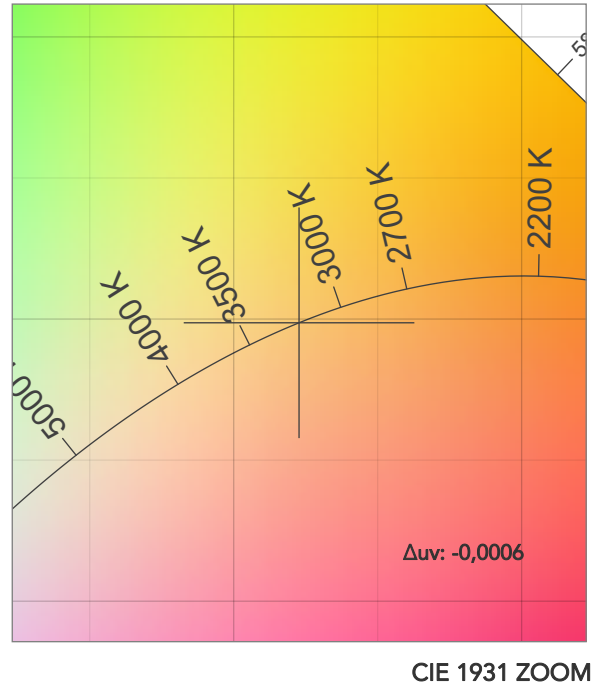
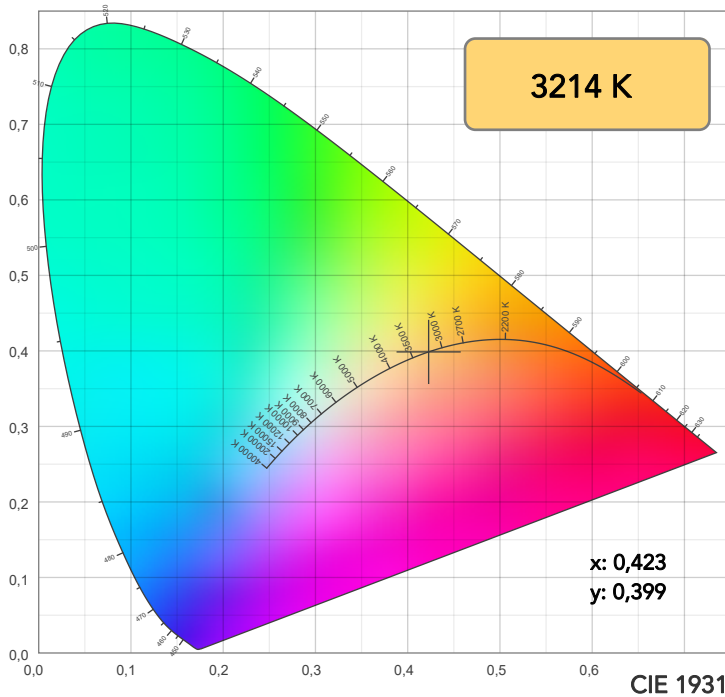
Beam angle 50%: 19,5°

Field angle 10%: 22,4°

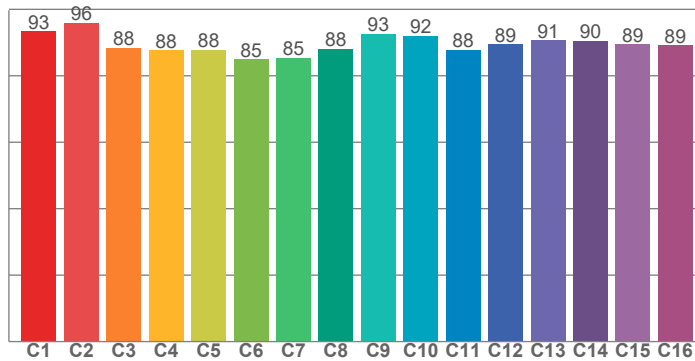
Cut off angle 2.5%: 24,3°

Spectra

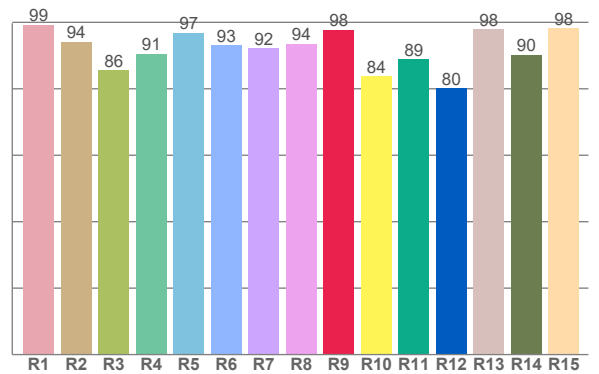




TM30: 89,9



CRI: 93,1 (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
99,3	94,1	85,5	90,5	96,9	93,0	92,2	93,6	97,8	83,8	88,9	80,1	97,8	90,2	98,1

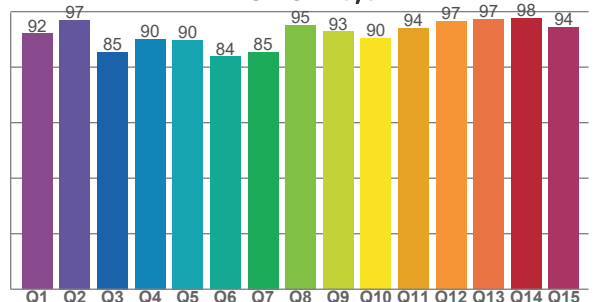
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
93,4	95,9	88,4	87,7	87,8	84,9	85,4	88,1	92,6	92,0	87,8	89,4	90,6	90,5	89,4	89,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
92,0	96,9	85,4	90,2	89,8	83,8	85,5	95,1	92,7	90,5	94,1	96,6	97,2	97,7	94,3

CQS: 90,8



COLOR PARAMETERS

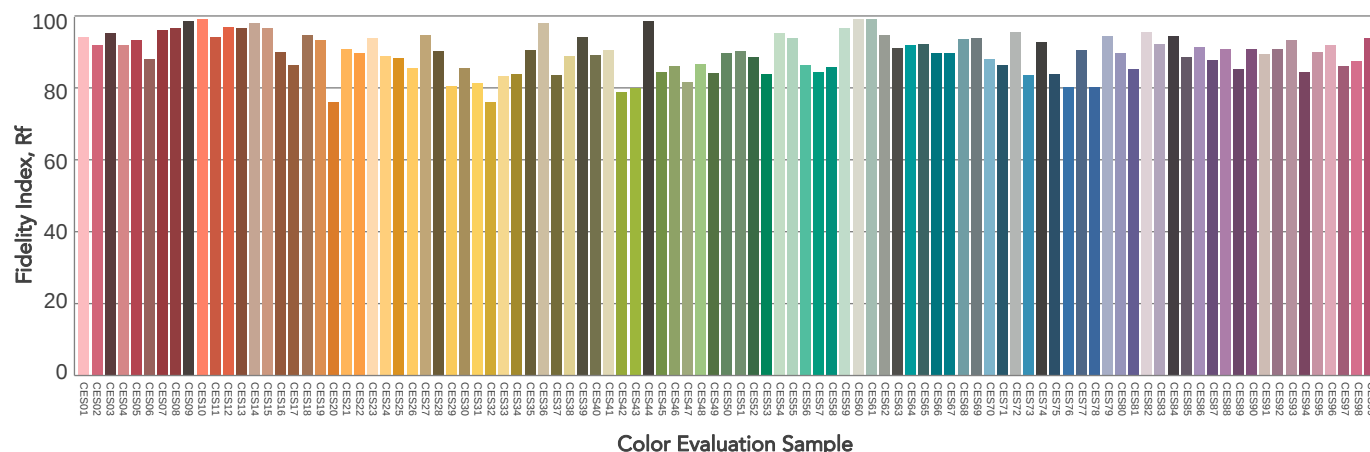
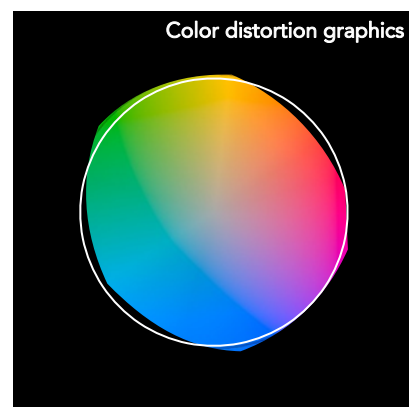
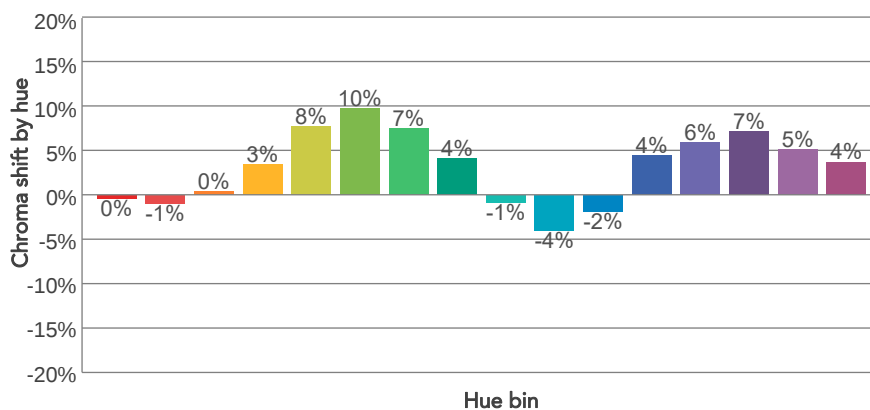
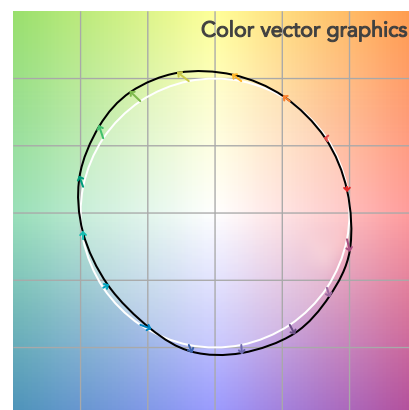
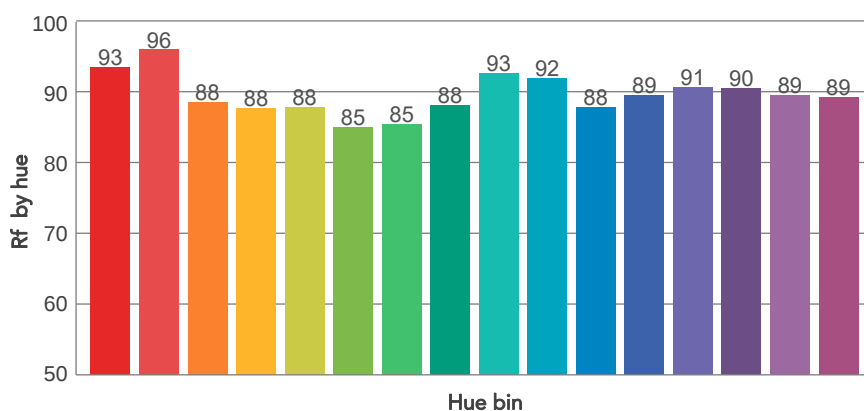
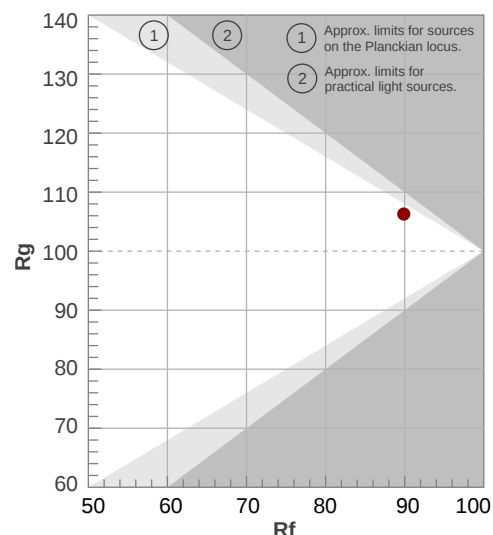
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
3214 K	93,1	97,8	89,9	106,3	90,8	83	0,423	0,399	-0,0006

TM30 DETAILS

Rf 89,9
Fidelity index Rf

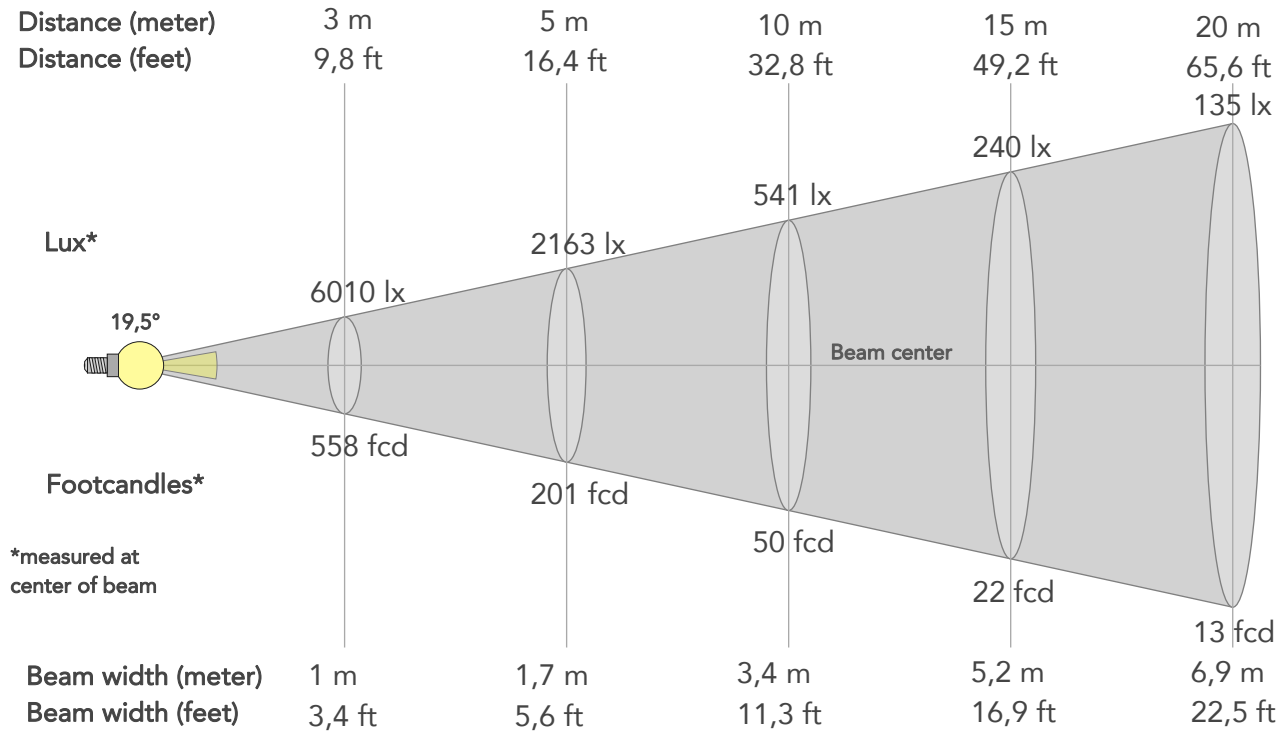
Rg 106,3
Gammut index

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	93	0%	-3%
2	96	-1%	1%
3	88	0%	6%
4	88	3%	7%
5	88	8%	7%
6	85	10%	2%
7	85	7%	-6%
8	88	4%	-7%
9	93	-1%	-5%
10	92	-4%	0%
11	88	-2%	8%
12	89	4%	3%
13	91	6%	-1%
14	90	7%	-1%
15	89	5%	-4%
16	89	4%	-8%



BEAM DETAILS

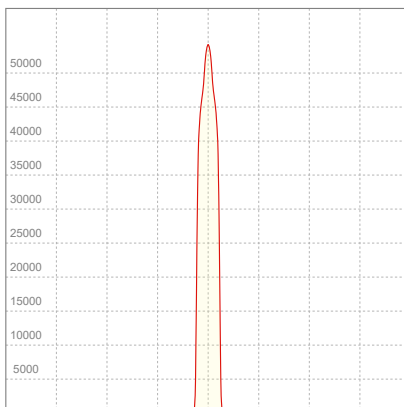
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
19,5°	22,4°	24,3°	100,0%	100,0%



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	5408lx	13521lx	6010lx	3380lx	2163lx	962lx	541lx	240lx	135lx	87lx	60lx	34lx	22lx
Footcand.	5025fcd	1256fcd	558fcd	314fcd	201fcd	89fcd	50fcd	22fcd	13fcd	8fcd	6fcd	3fcd	2fcd
Beam wid.	0,3m	0,7m	1m	1,4m	1,7m	2,6m	3,4m	5,2m	6,9m	8,6m	10,3m	13,7m	17,2m
Beam wid.	1,1ft	2,3ft	3,4ft	4,5ft	5,6ft	8,5ft	11,3ft	16,9ft	22,5ft	28,2ft	33,8ft	45,1ft	56,4ft

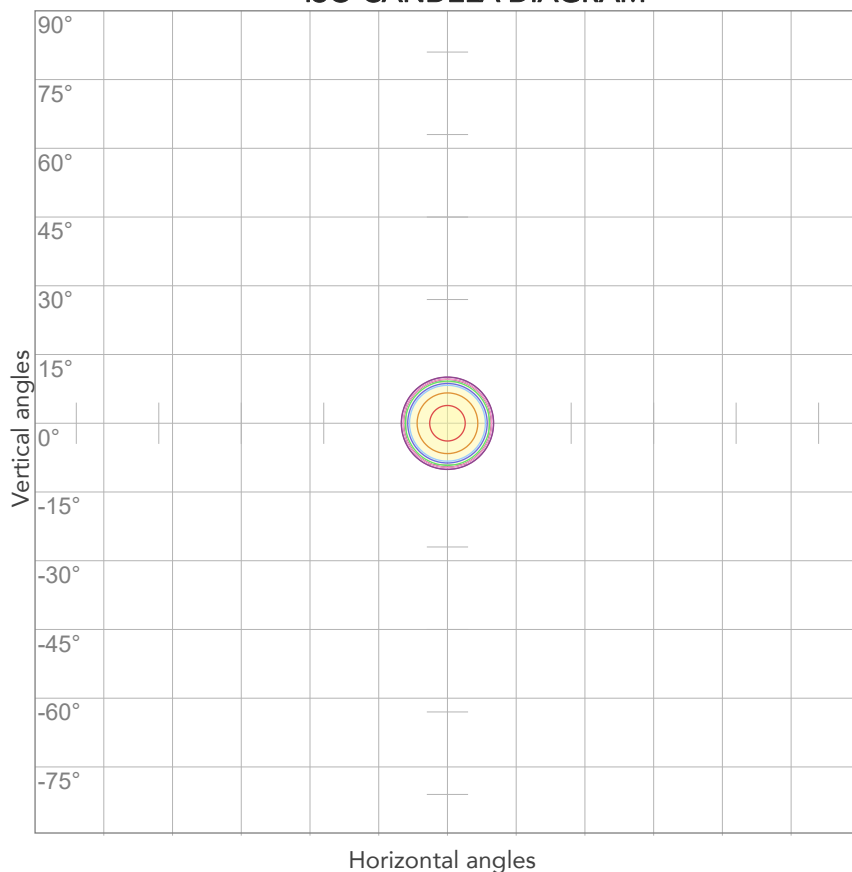
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,854A	179,5W	25lm/W

ISO CANDELA DIAGRAM



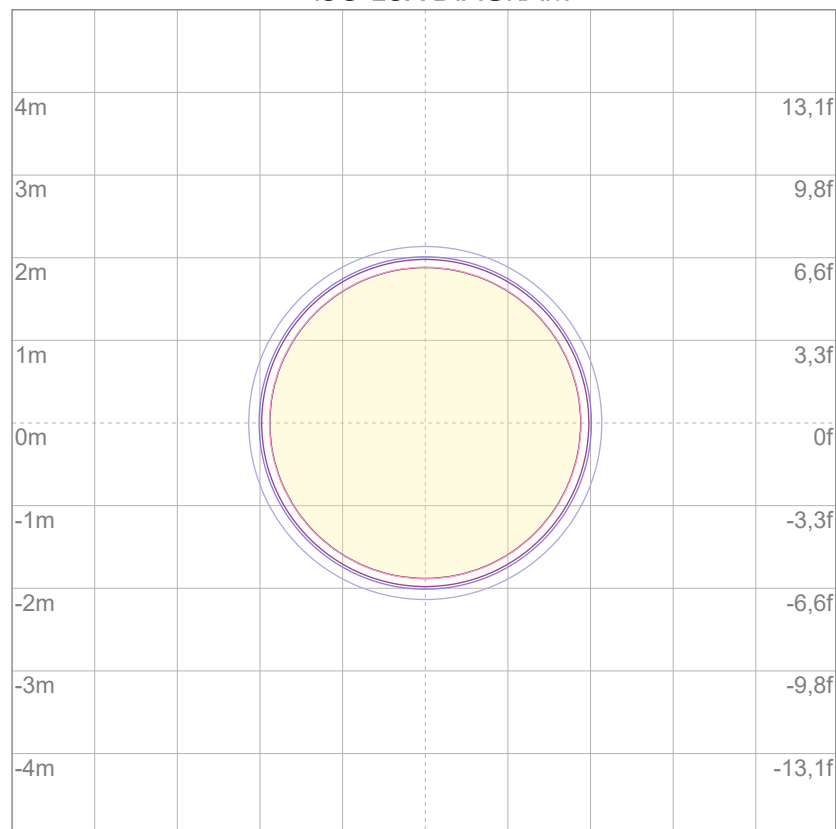
10%	5409 cd
20%	10817 cd
30%	16226 cd
40%	21634 cd
50%	27043 cd
60%	32451 cd
70%	37860 cd
80%	43269 cd

Conditions:

Number of c-planes: 2

Candela at center: 54086 cd

ISO LUX DIAGRAM



3%	16,2 lx
5%	27,0 lx
10%	54,1 lx
30%	162 lx
50%	270 lx

Conditions:

Number of c-planes: 2

Lux at center: 541 lx

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



Total lumen output:

4671 lm

Peak candela output:

56688 cd

Light quality:

CRI: 95,3

Color temperature:

4014 K

PRODUCT NAME:

ECLCTPLUS IP

MEASURAMENT CONDITIONS:

Beam angle:

PRL19

Target:

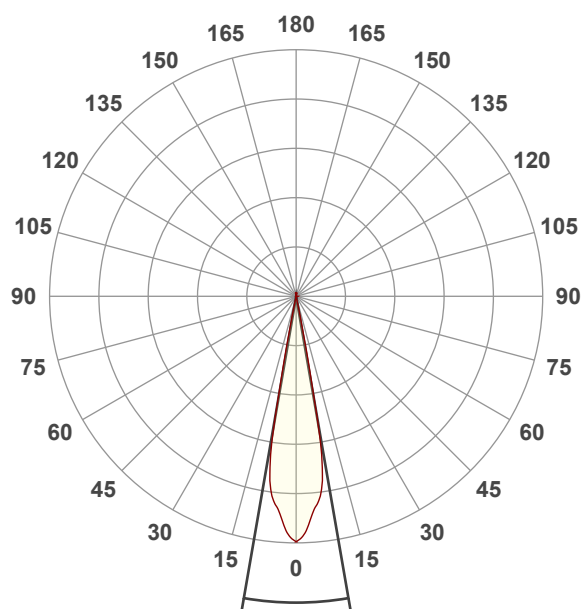
4000K HQ

Operator:

Paolo Carvone

Date and time:

14/07/2020 14:20:33

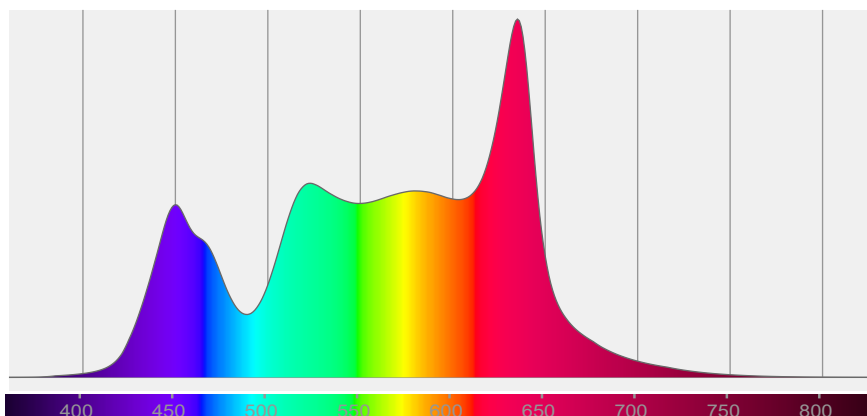


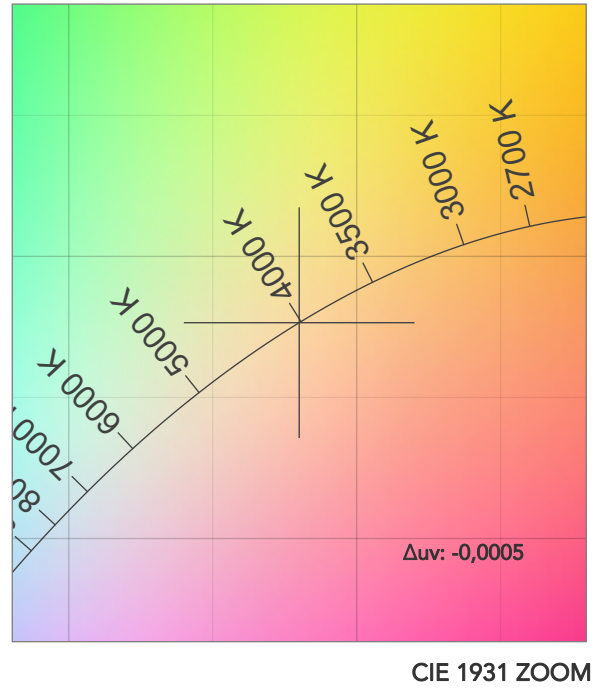
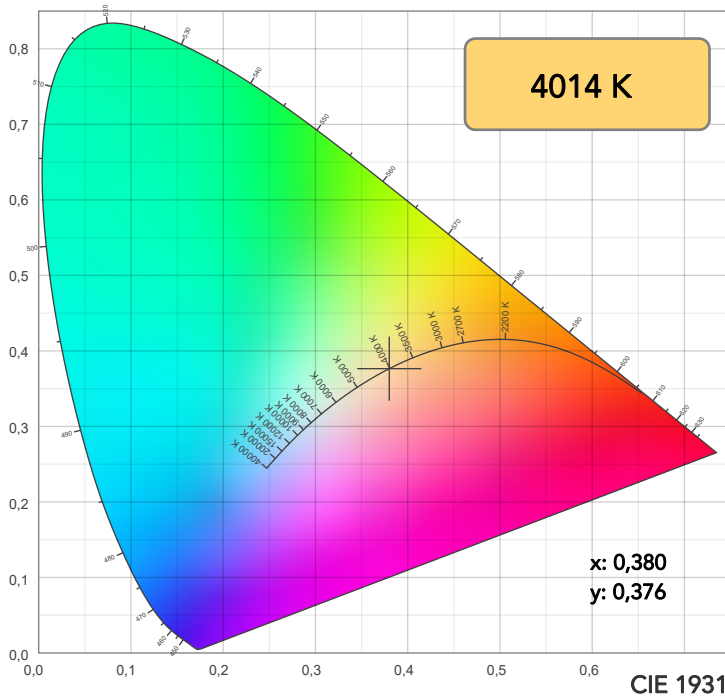
Beam angle 50%: 19,7°

Field angle 10%: 22,8°

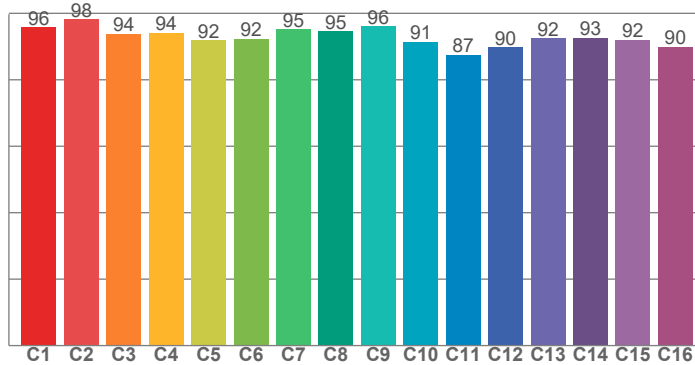
Cut off angle 2.5%: 23,7°

Spectra

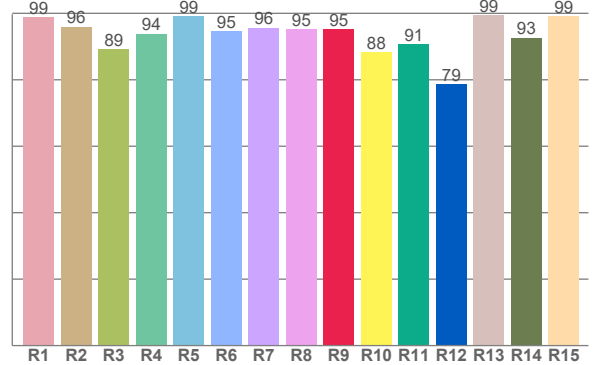




TM30: 93,0



CRI: 95,3 (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	95,9	89,2	93,8	99,2	94,7	95,6	95,3	95,1	88,4	90,6	78,7	99,4	92,6	99,1

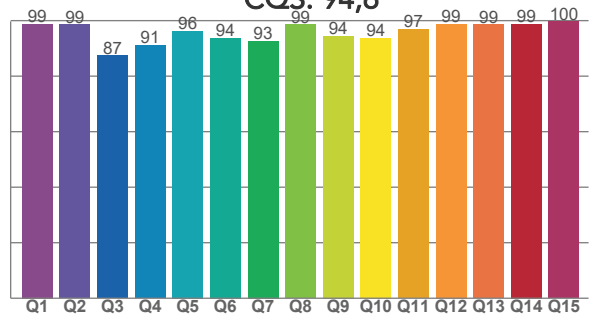
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
95,8	98,2	93,8	94,2	91,8	92,4	95,2	94,6	96,1	91,4	87,5	89,8	92,5	92,6	92,0	89,9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
98,8	98,6	87,4	91,1	96,3	93,8	92,6	98,6	94,4	93,7	96,9	98,9	98,5	98,8	99,7

CQS: 94,6



COLOR PARAMETERS

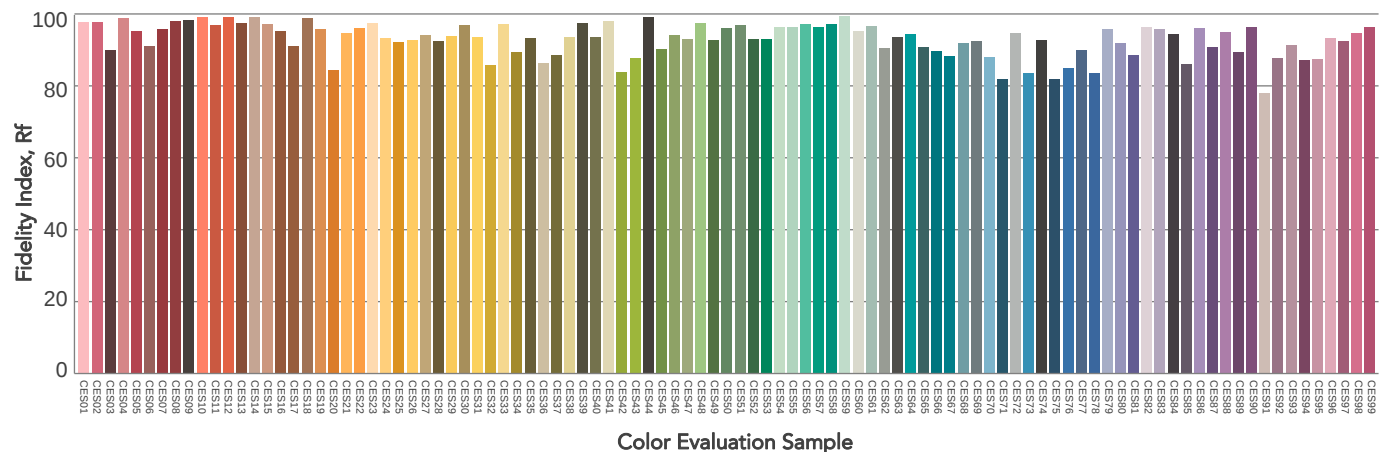
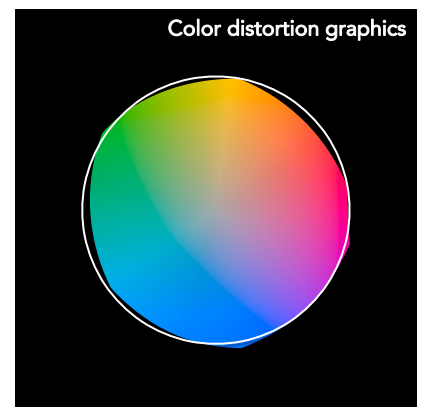
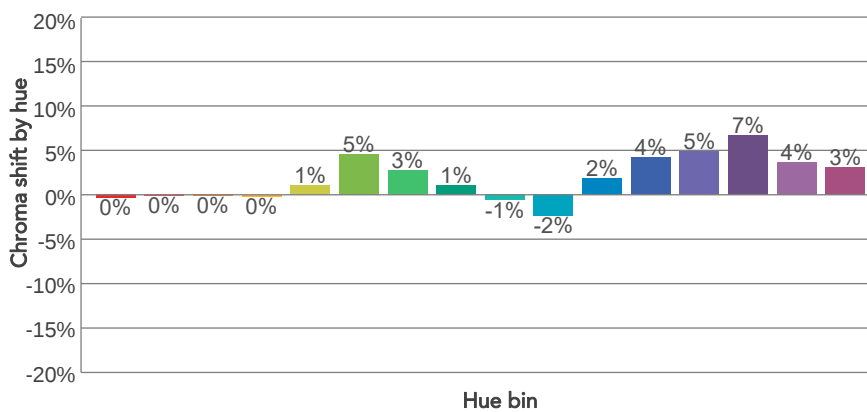
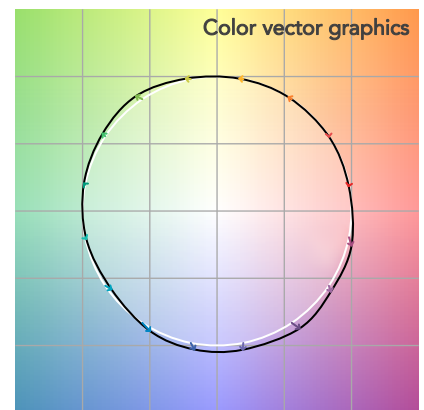
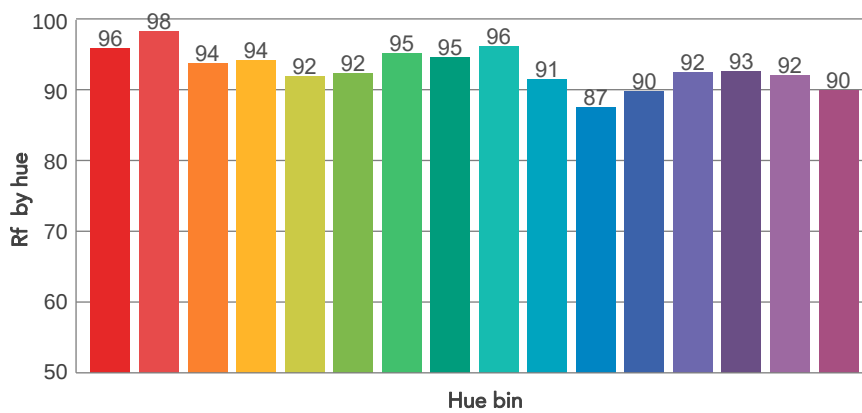
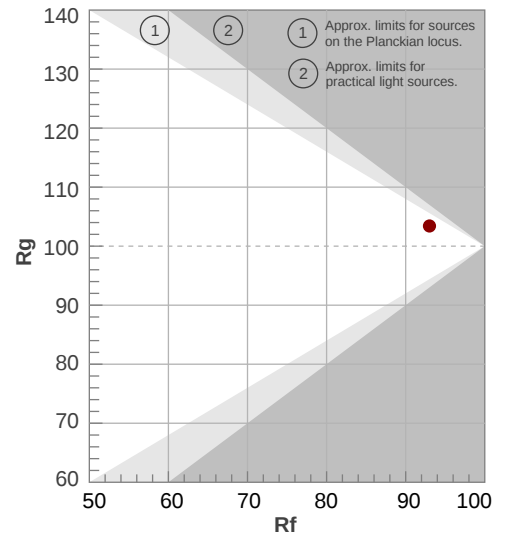
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
4014 K	95,3	95,1	93,0	103,4	94,6	91	0,380	0,376	-0,0005

TM30 DETAILS

Rf 93,0
Fidelity index Rf

Rg 103,4
Gammut index

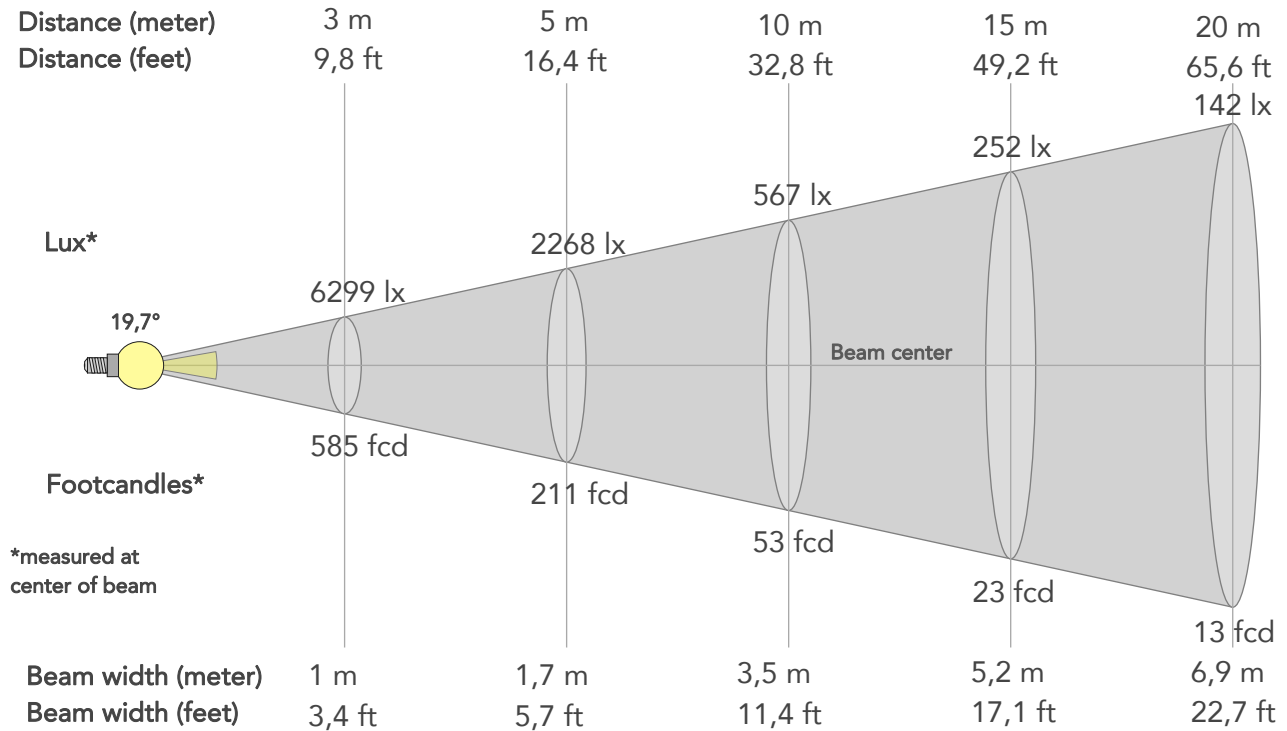
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	96	0%	-1%
2	98	0%	0%
3	94	0%	3%
4	94	0%	3%
5	92	1%	4%
6	92	5%	2%
7	95	3%	-1%
8	95	1%	-1%
9	96	-1%	1%
10	91	-2%	5%
11	87	2%	8%
12	90	4%	3%
13	92	5%	-1%
14	93	7%	3%
15	92	4%	-3%
16	90	3%	-6%



BEAM DETAILS



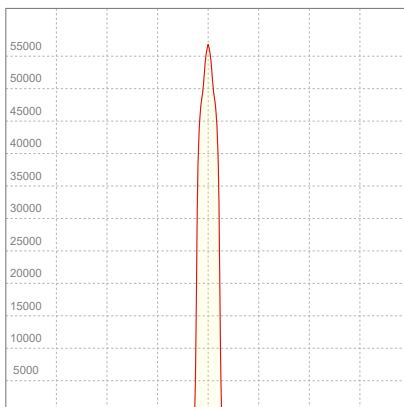
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
19,7°	22,8°	23,7°	100,0%	100,0%



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	56688lx	14172lx	6299lx	3543lx	2268lx	1008lx	567lx	252lx	142lx	91lx	63lx	35lx	23lx
Footcand.	5267fcd	1317fcd	585fcd	329fcd	211fcd	94fcd	53fcd	23fcd	13fcd	8fcd	6fcd	3fcd	2fcd
Beam wid.	0,3m	0,7m	1m	1,4m	1,7m	2,6m	3,5m	5,2m	6,9m	8,7m	10,4m	13,9m	17,3m
Beam wid.	1,1ft	2,3ft	3,4ft	4,5ft	5,7ft	8,5ft	11,4ft	17,1ft	22,7ft	28,4ft	34,1ft	45,5ft	56,8ft

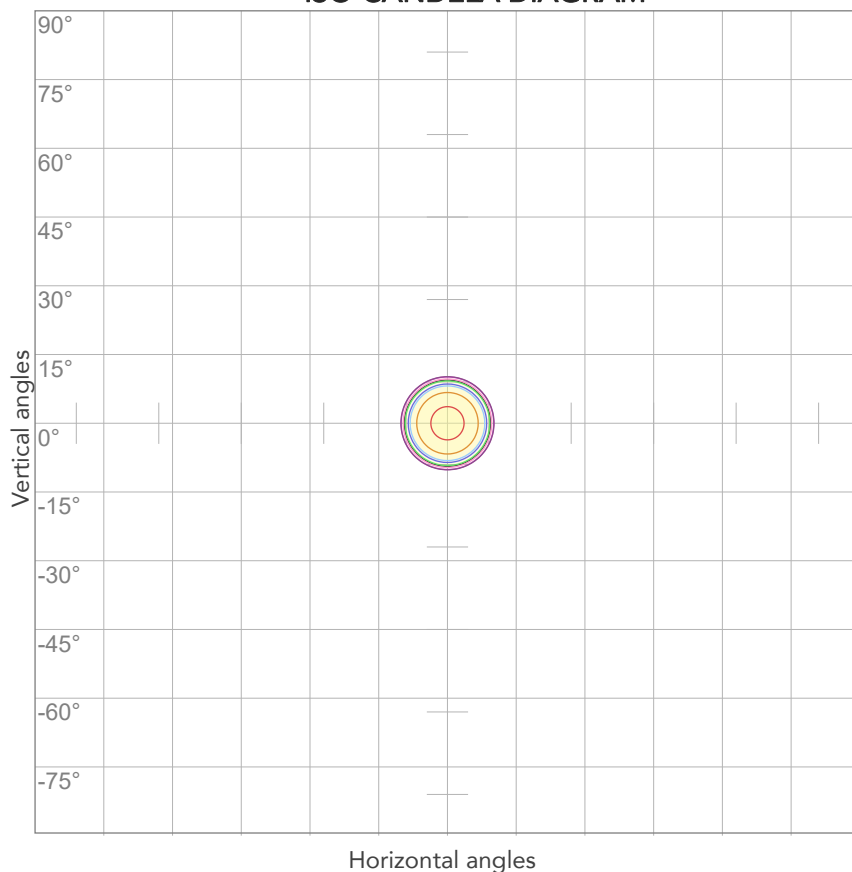
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,926A	196,6W	24lm/W

ISO CANDELA DIAGRAM



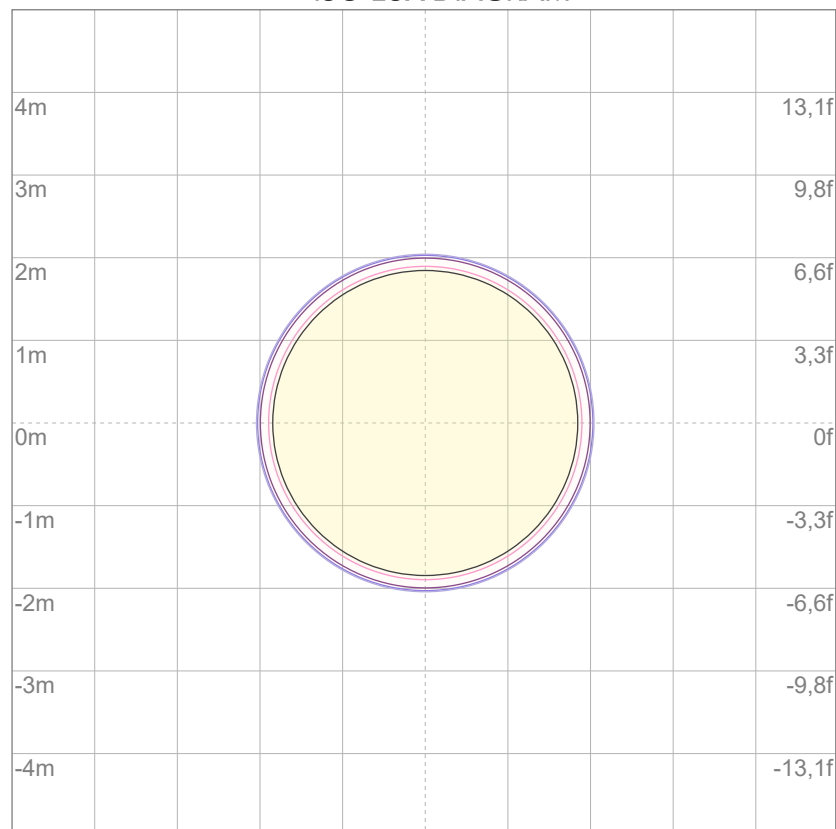
10%	5669 cd
20%	11338 cd
30%	17006 cd
40%	22675 cd
50%	28344 cd
60%	34013 cd
70%	39682 cd
80%	45351 cd

Conditions:

Number of c-planes: 2

Candela at center: 56688 cd

ISO LUX DIAGRAM



3%	17,0 lx
5%	28,3 lx
10%	56,7 lx
30%	170 lx
50%	283 lx

Conditions:

Number of c-planes: 2

Lux at center: 567 lx

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



Total lumen output:

5057 lm

Peak candela output:

59803 cd

Light quality:

CRI: 97,2

Color temperature:

5575 K

PRODUCT NAME:

ECLCTPLUS IP

MEASURAMENT CONDITIONS:

Beam angle:

PRL19

Target:

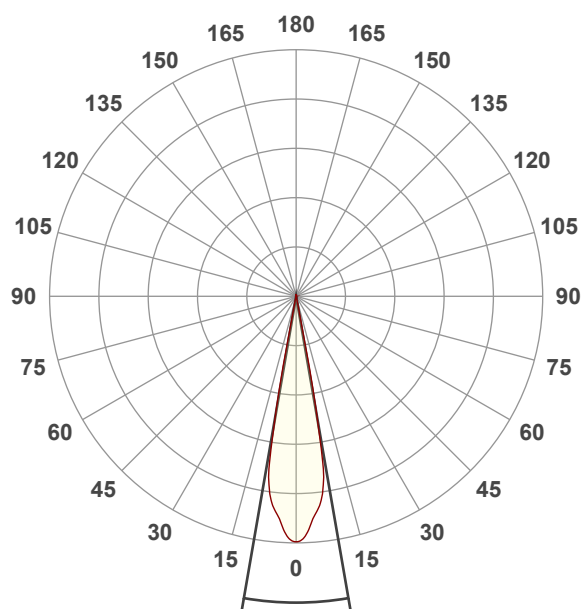
5600K HQ

Operator:

Paolo Carvone

Date and time:

14/07/2020 14:22:06

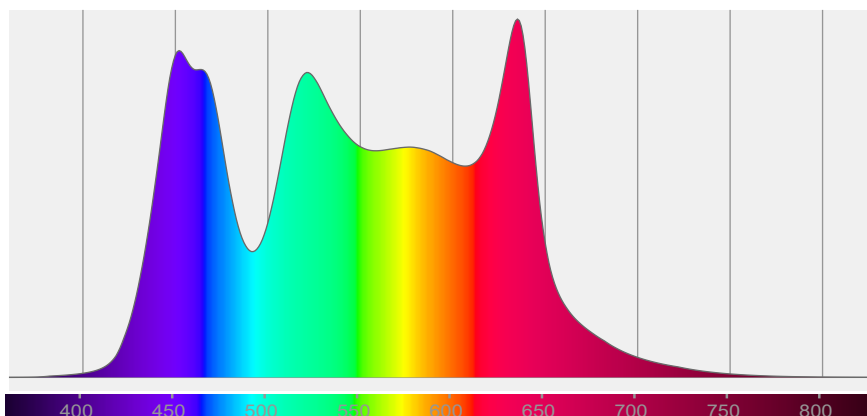


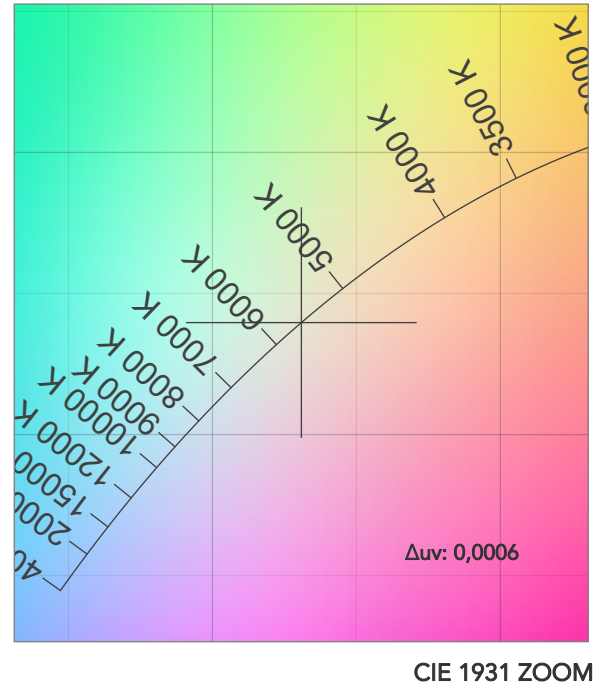
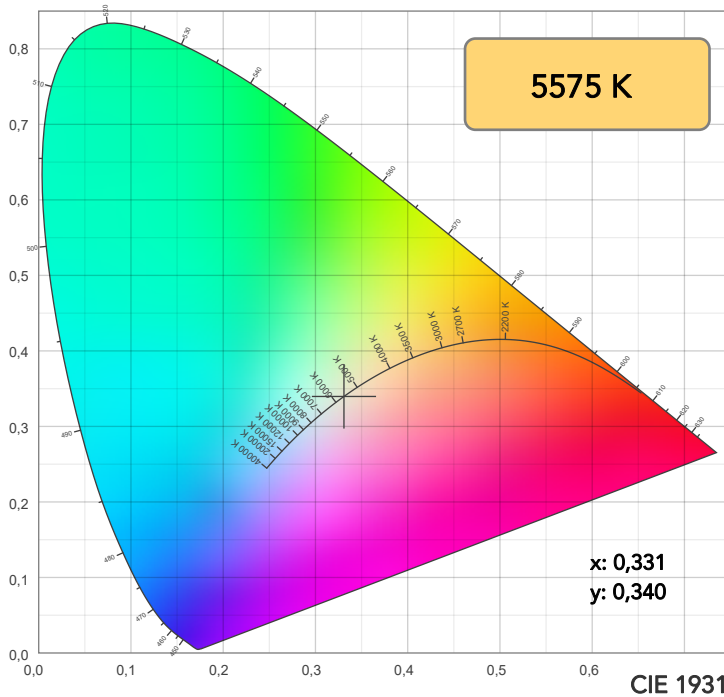
Beam angle 50%: 19,7°

Field angle 10%: 22,6°

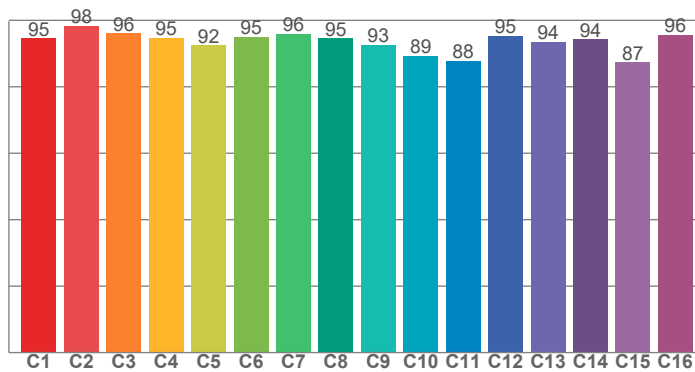
Cut off angle 2.5%: 23,9°

Spectra

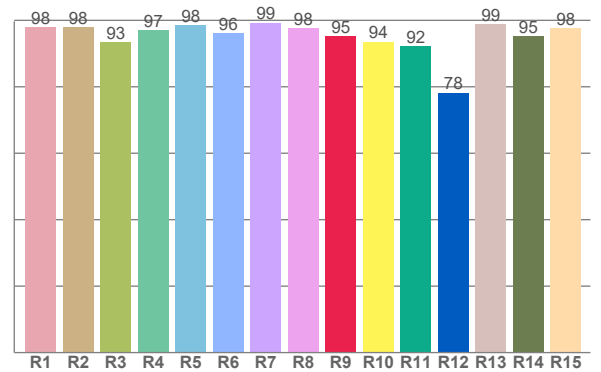




TM30: 93,5



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
97,9	97,9	93,4	97,0	98,5	96,0	99,3	97,6	95,2	93,5	92,1	78,2	98,9	95,3	97,6

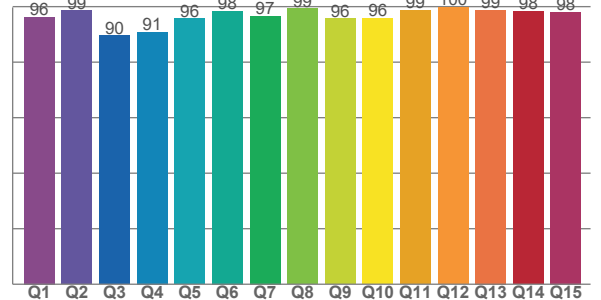
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
94,6	98,4	96,0	94,8	92,5	95,1	96,0	94,5	92,6	89,4	87,9	95,3	93,6	94,2	87,3	95,5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
96,2	98,6	89,6	90,8	95,8	98,5	96,6	99,4	95,7	95,8	98,7	99,8	98,8	98,3	98,1

CQS: 95,6



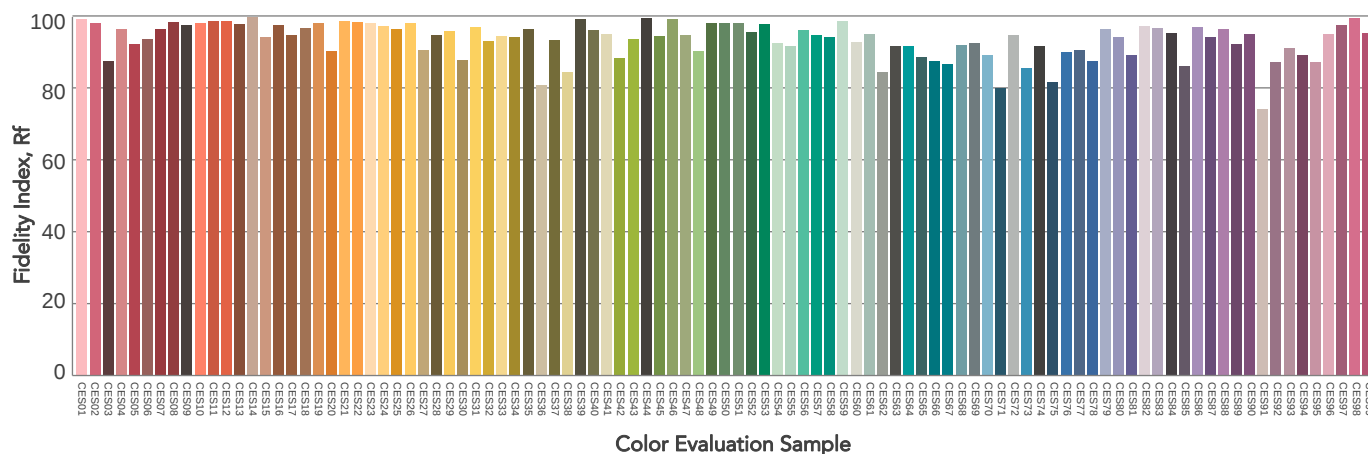
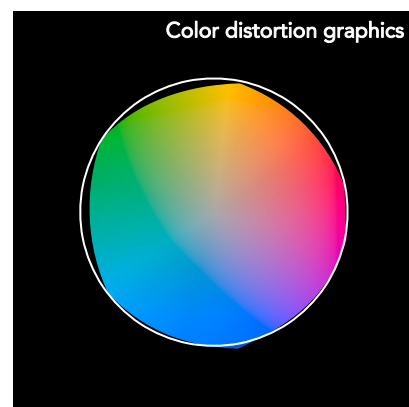
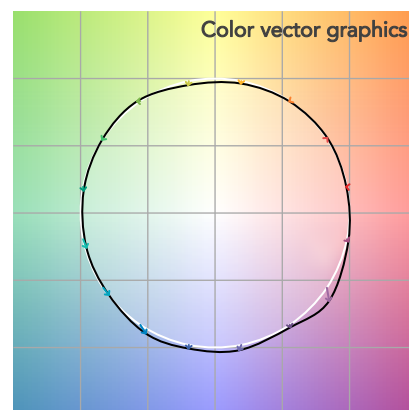
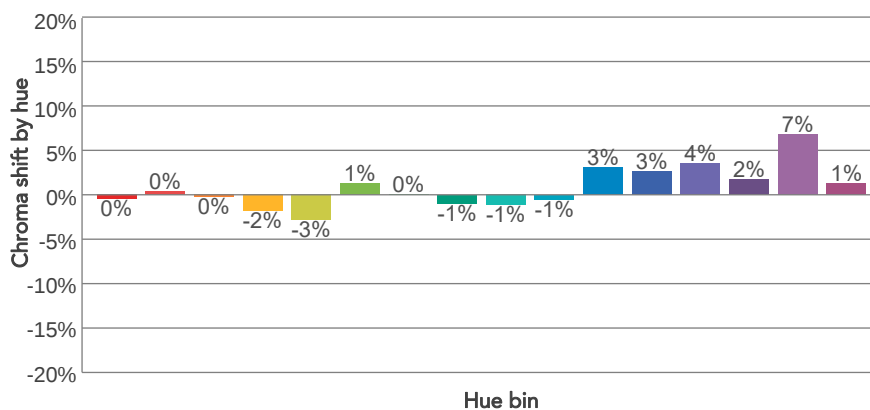
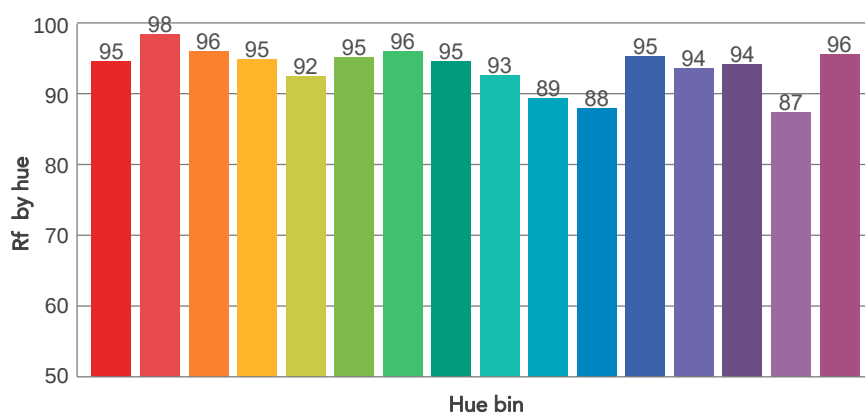
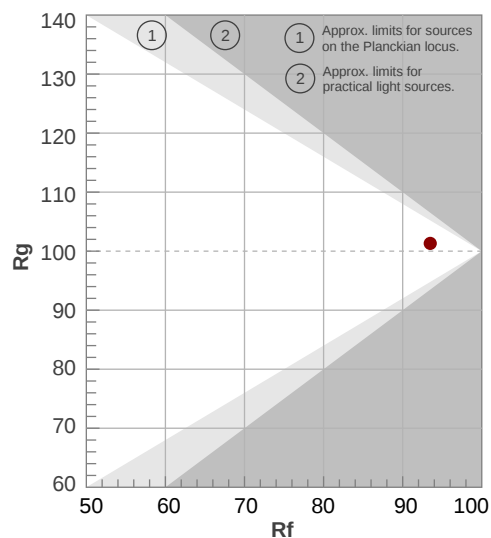
COLOR PARAMETERS

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
5575 K	97,2	95,2	93,5	101,3	95,6	96	0,331	0,340	0,0006

Fidelity index R_f

Gammut index

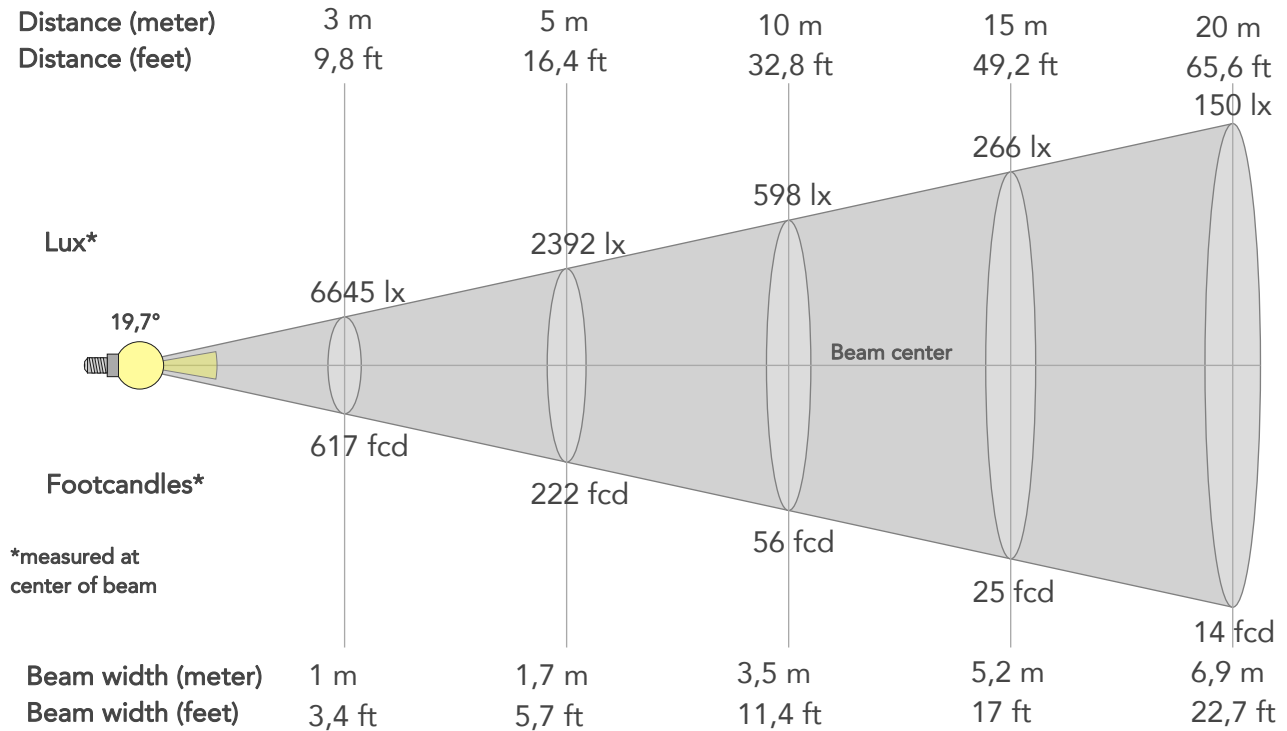
		Graphic shifts (%)	
Hue Bin	R_l	Chroma	Hue
1	95	0%	0%
2	98	0%	0%
3	96	0%	0%
4	95	-2%	0%
5	92	-3%	1%
6	95	1%	2%
7	96	0%	1%
8	95	-1%	3%
9	93	-1%	6%
10	89	-1%	7%
11	88	3%	7%
12	95	3%	0%
13	94	4%	-2%
14	94	2%	-1%
15	87	7%	-7%
16	96	1%	-1%



BEAM DETAILS



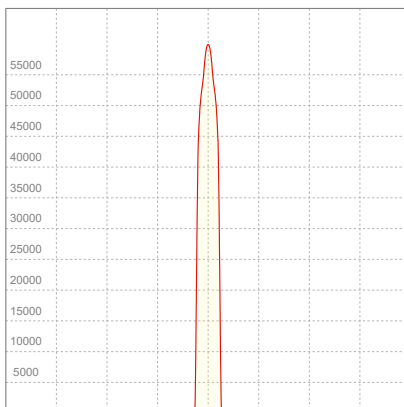
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
19,7°	22,6°	23,9°	100,0%	100,0%



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	59803lx	14951lx	6645lx	3738lx	2392lx	1063lx	598lx	266lx	150lx	96lx	66lx	37lx	24lx
Footcand.	5556fcd	1389fcd	617fcd	347fcd	222fcd	99fcd	56fcd	25fcd	14fcd	9fcd	6fcd	3fcd	2fcd
Beam wid.	0,3m	0,7m	1m	1,4m	1,7m	2,6m	3,5m	5,2m	6,9m	8,7m	10,4m	13,9m	17,3m
Beam wid.	1,1ft	2,3ft	3,4ft	4,5ft	5,7ft	8,5ft	11,4ft	17ft	22,7ft	28,4ft	34,1ft	45,4ft	56,8ft

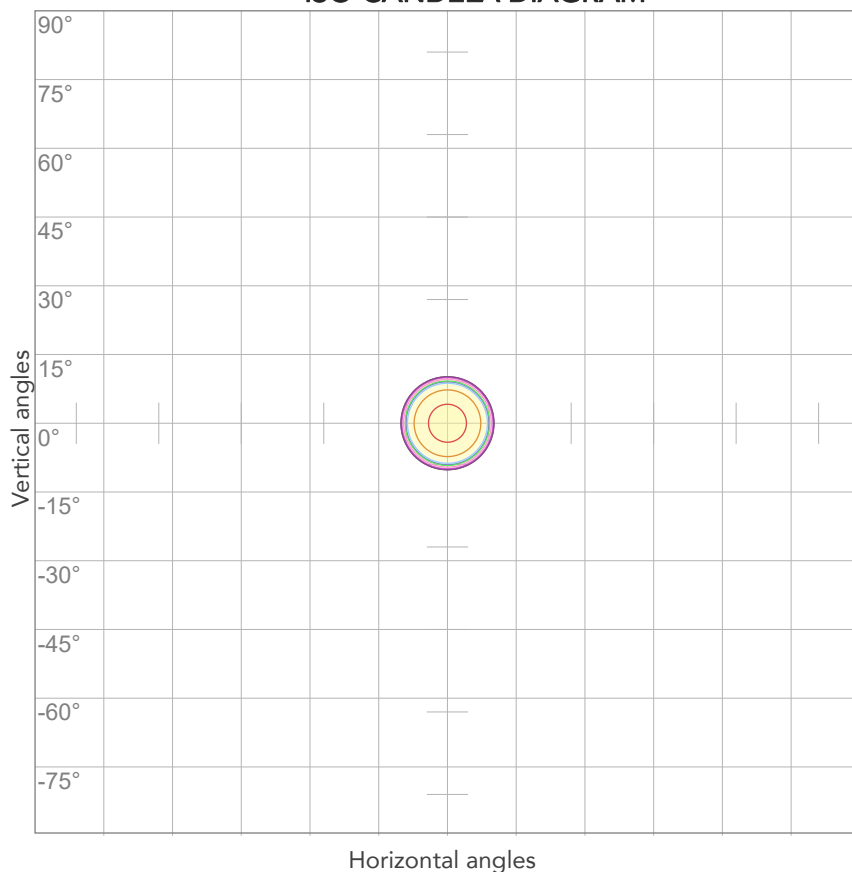
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	1,06A	225,8W	22lm/W

ISO CANDELA DIAGRAM



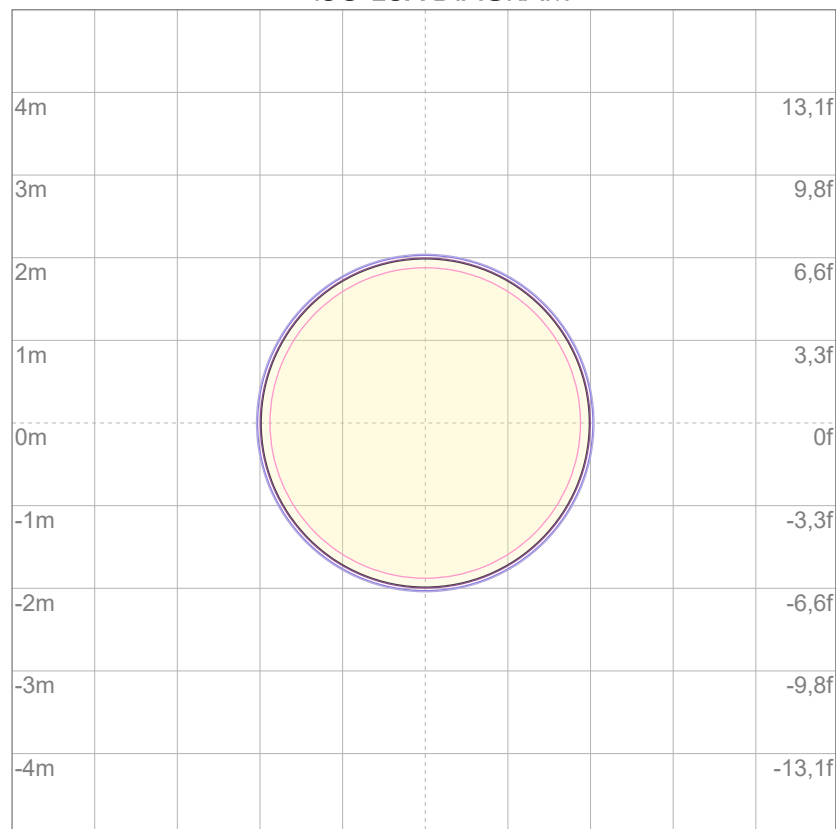
10%	5980 cd
20%	11961 cd
30%	17941 cd
40%	23921 cd
50%	29902 cd
60%	35882 cd
70%	41862 cd
80%	47842 cd

Conditions:

Number of c-planes: 2

Candela at center: 59803 cd

ISO LUX DIAGRAM



3%	17,9 lx
5%	29,9 lx
10%	59,8 lx
30%	179 lx
50%	299 lx

Conditions:

Number of c-planes: 2

Lux at center: 598 lx

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



Total lumen output:

5066 lm

Peak candela output:

59329 cd

Light quality:

CRI: 97,4

Color temperature:

6030 K

PRODUCT NAME:

ECLCTPLUS IP

MEASURAMENT CONDITIONS:

Beam angle:

PRL19

Target:

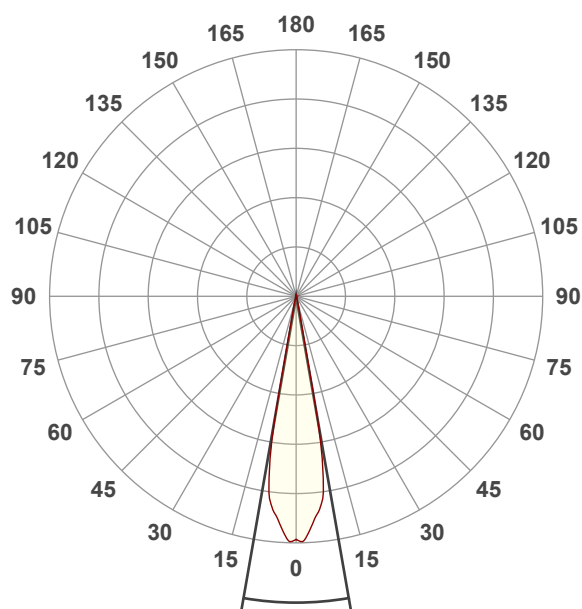
6000K HQ

Operator:

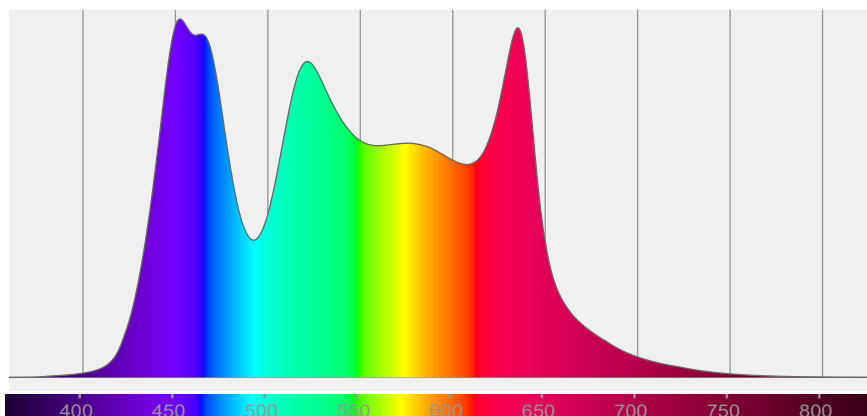
Paolo Carvone

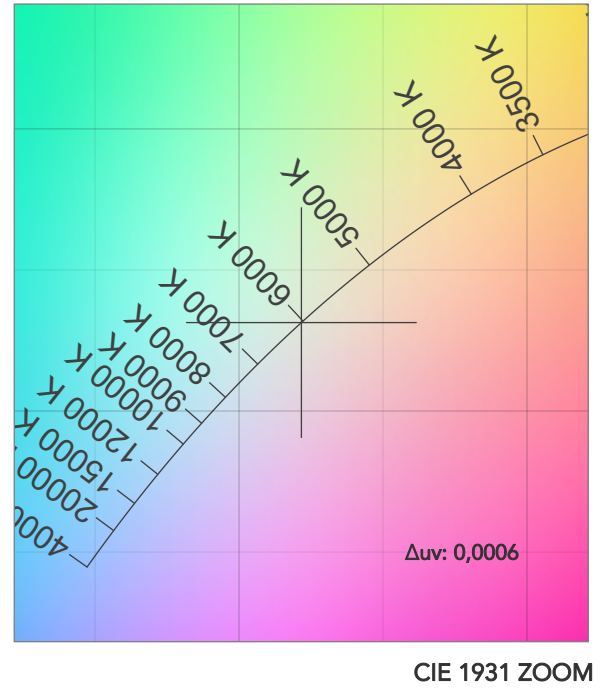
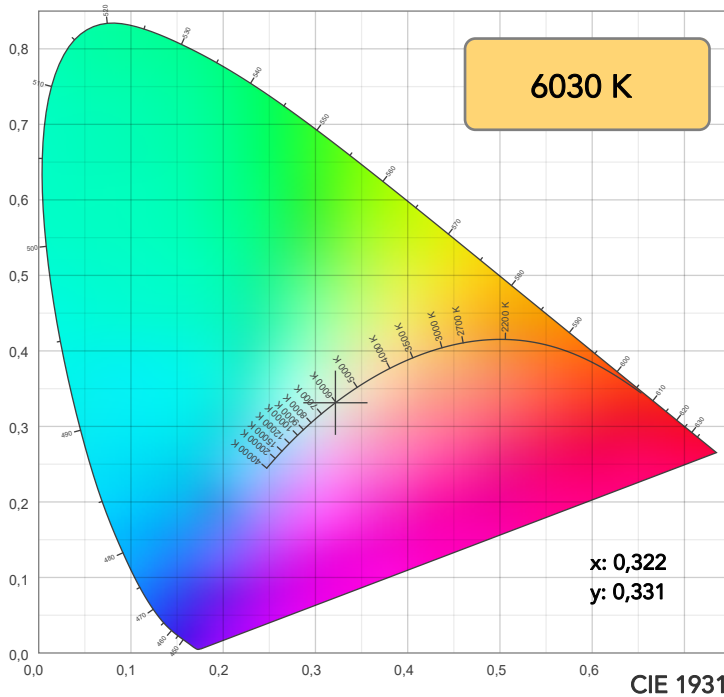
Date and time:

14/07/2020 14:23:30

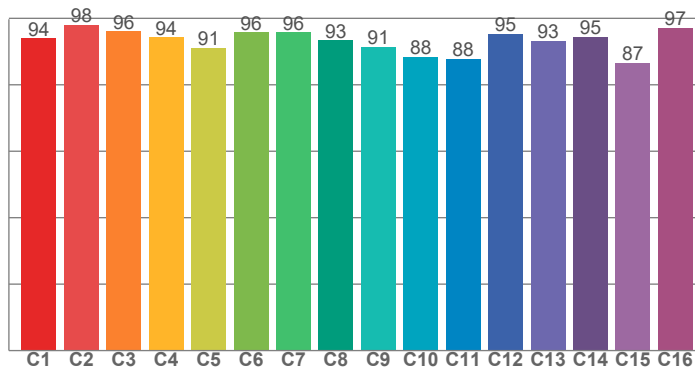


Spectra

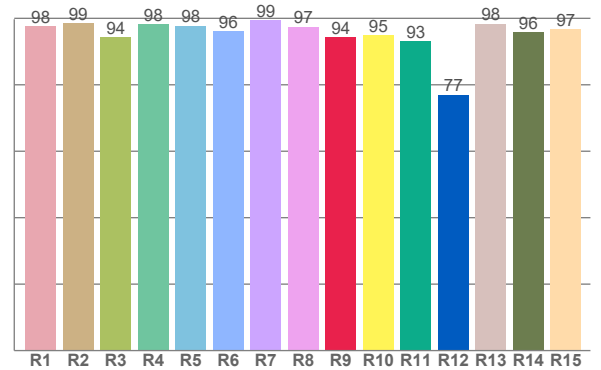




TM30: 93,1



CRI: 97,4 (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
97,5	98,5	94,2	98,2	97,8	96,0	99,5	97,4	94,2	94,9	93,2	77,0	98,3	95,8	96,7

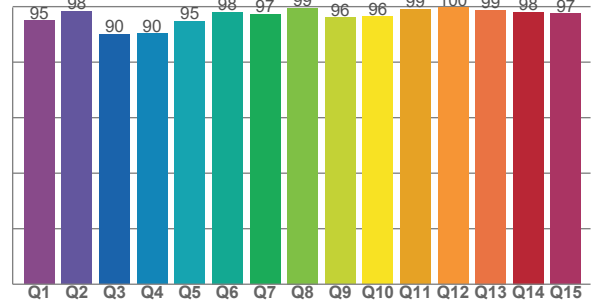
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
94,0	98,1	96,0	94,3	91,0	95,8	95,8	93,4	91,4	88,4	87,7	95,4	93,2	94,5	86,6	97,1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
95,0	98,3	90,0	90,2	94,7	98,0	97,3	99,5	96,1	96,4	99,0	99,6	98,8	98,1	97,5

CQS: 95,5



COLOR PARAMETERS

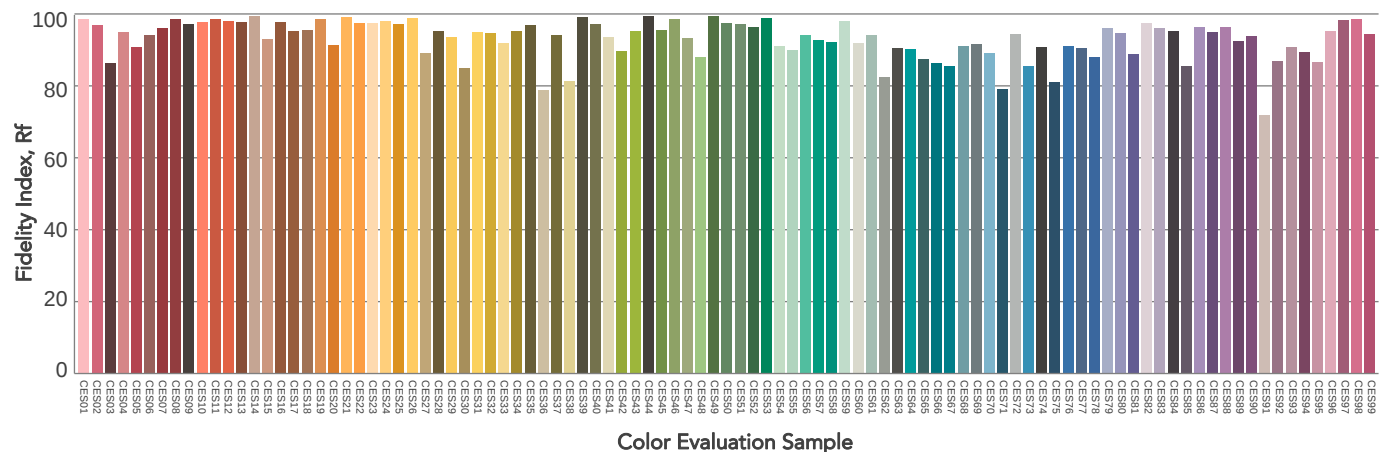
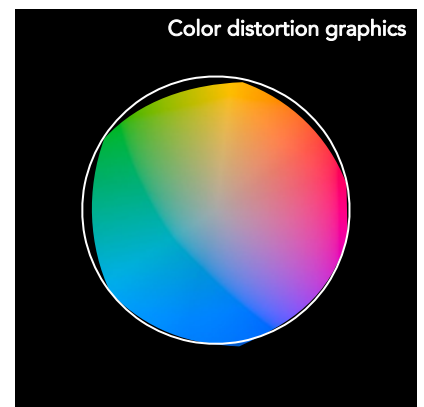
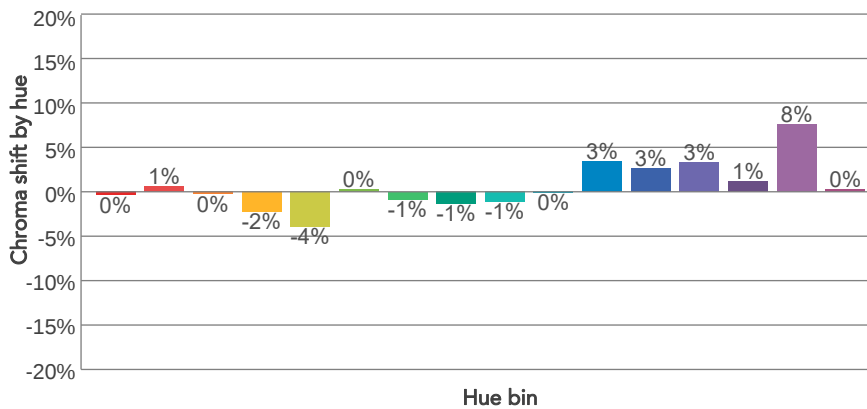
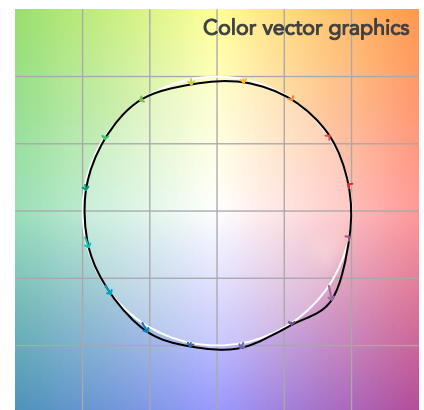
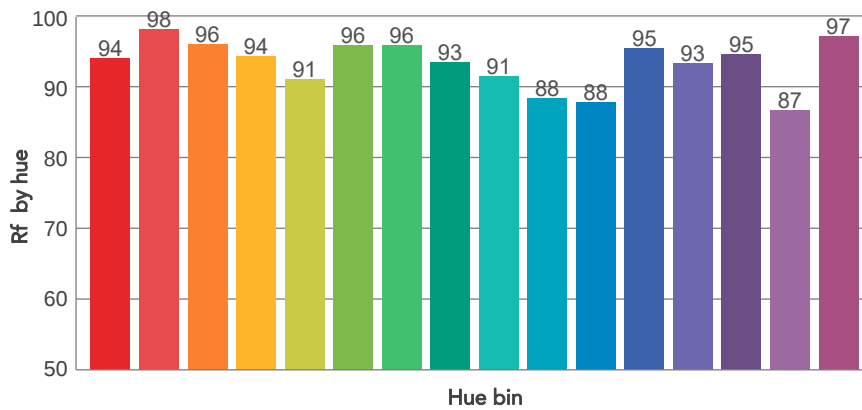
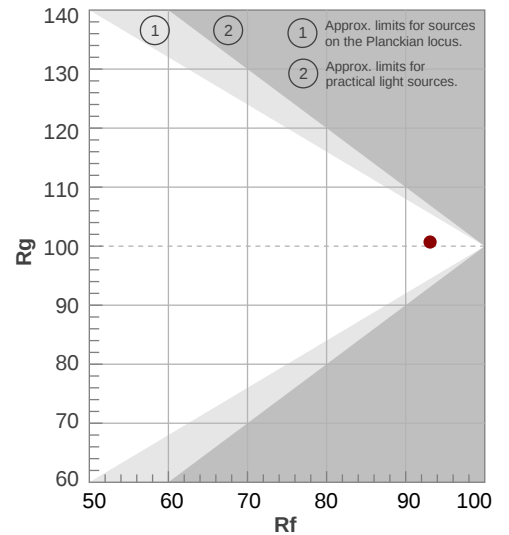
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
6030 K	97,4	94,2	93,1	100,7	95,5	96	0,322	0,331	0,0006

TM30 DETAILS

Rf 93,1
Fidelity index Rf

Rg 100,7
Gammut index

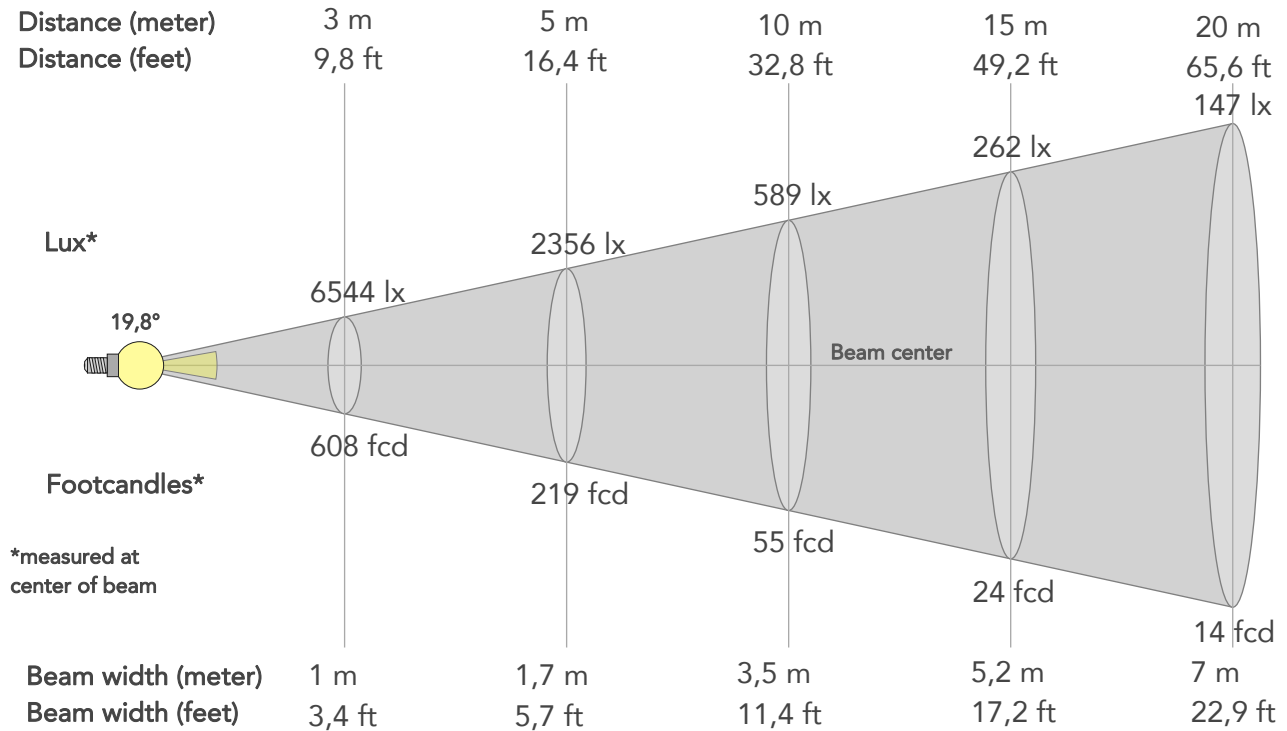
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	94	0%	0%
2	98	1%	0%
3	96	0%	-1%
4	94	-2%	-1%
5	91	-4%	0%
6	96	0%	2%
7	96	-1%	2%
8	93	-1%	4%
9	91	-1%	8%
10	88	0%	7%
11	88	3%	7%
12	95	3%	0%
13	93	3%	-3%
14	95	1%	-1%
15	87	8%	-7%
16	97	0%	0%



BEAM DETAILS



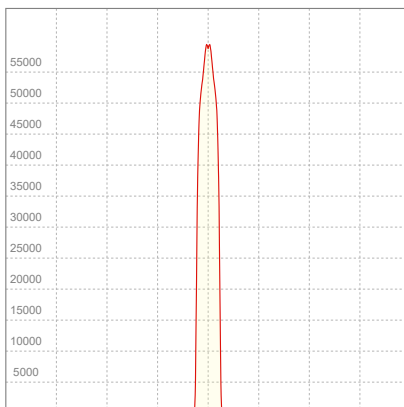
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
19,8°	22,5°	24,9°	100,0%	100,0%



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	58897lx	14724lx	6544lx	3681lx	2356lx	1047lx	589lx	262lx	147lx	94lx	65lx	37lx	24lx
Footcand.	5472fcd	1368fcd	608fcd	342fcd	219fcd	97fcd	55fcd	24fcd	14fcd	9fcd	6fcd	3fcd	2fcd
Beam wid.	0,3m	0,7m	1m	1,4m	1,7m	2,6m	3,5m	5,2m	7m	8,7m	10,5m	14m	17,4m
Beam wid.	1,2ft	2,3ft	3,4ft	4,6ft	5,7ft	8,6ft	11,4ft	17,2ft	22,9ft	28,6ft	34,3ft	45,8ft	57,2ft

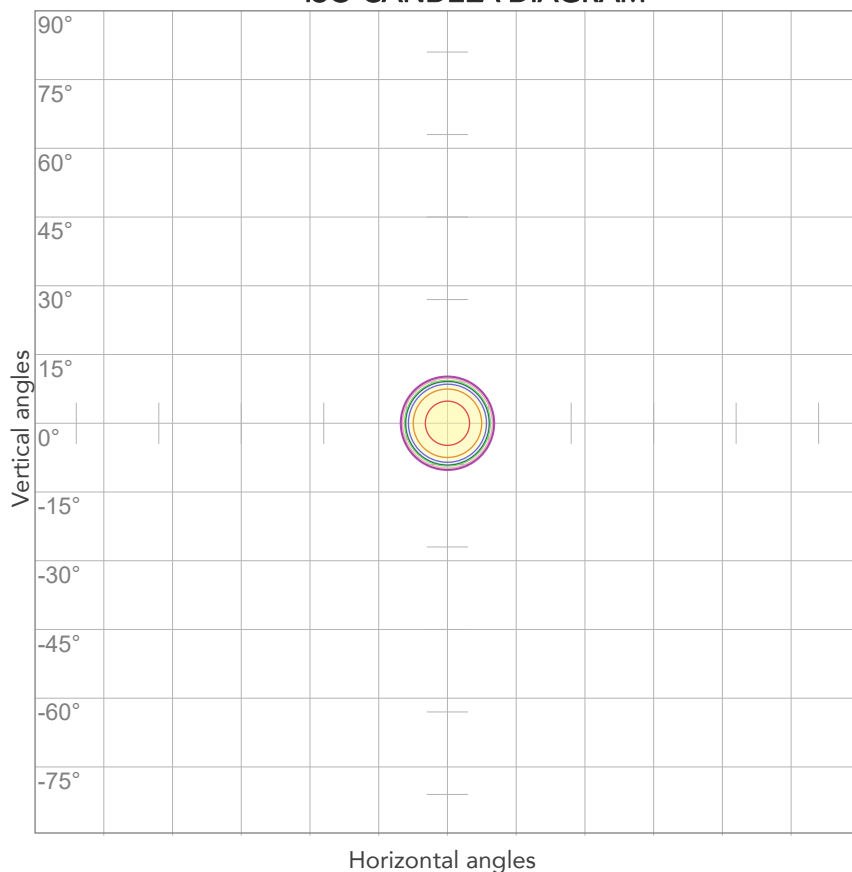
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	1,07A	229,8W	22lm/W

ISO CANDELA DIAGRAM



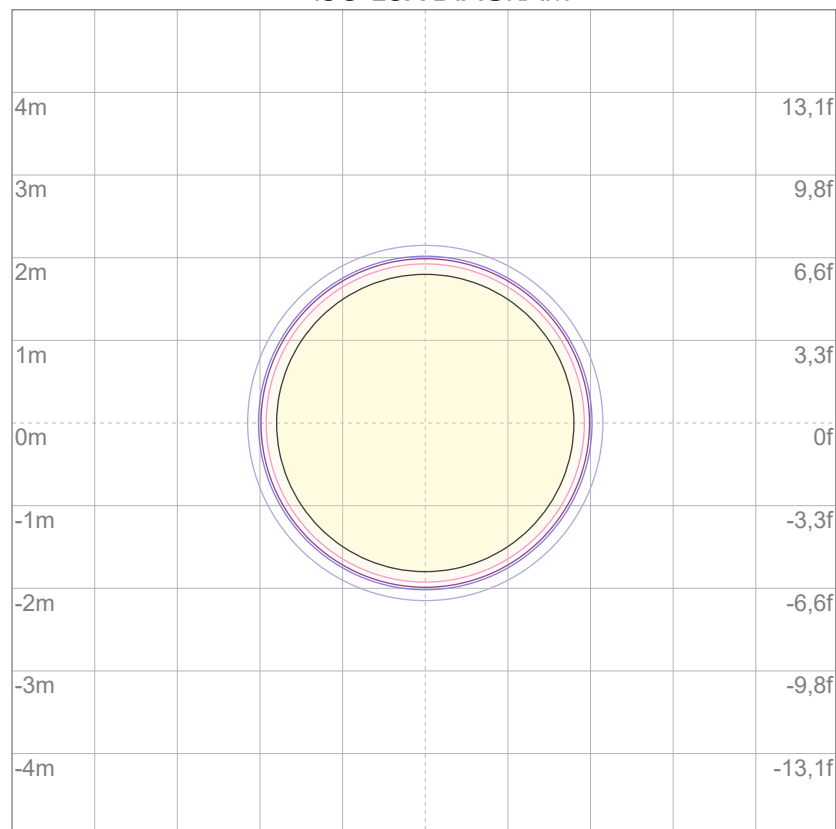
10%	5890 cd
20%	11779 cd
30%	17669 cd
40%	23559 cd
50%	29448 cd
60%	35338 cd
70%	41228 cd
80%	47118 cd

Conditions:

Number of c-planes: 2

Candela at center: 58897 cd

ISO LUX DIAGRAM



3%	17,7 lx
5%	29,4 lx
10%	58,9 lx
30%	177 lx
50%	294 lx

Conditions:

Number of c-planes: 2

Lux at center: 589 lx

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