

Photometric Test Report



HaluPix Duo

400W IP65 dual layer LED matrix panel with 7x7
led 2700K 4° + 21x21 led RGBW Video pixels

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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:

11388 lm

Peak candela output:

596263 cd

Light quality:

CRI: 82,8

Color temperature:

2718 K

PRODUCT NAME:

HALUPIXDUO

MEASUREMENT CONDITIONS:

Beam angle:

Total (Beam + Pixel Layers)

Target:

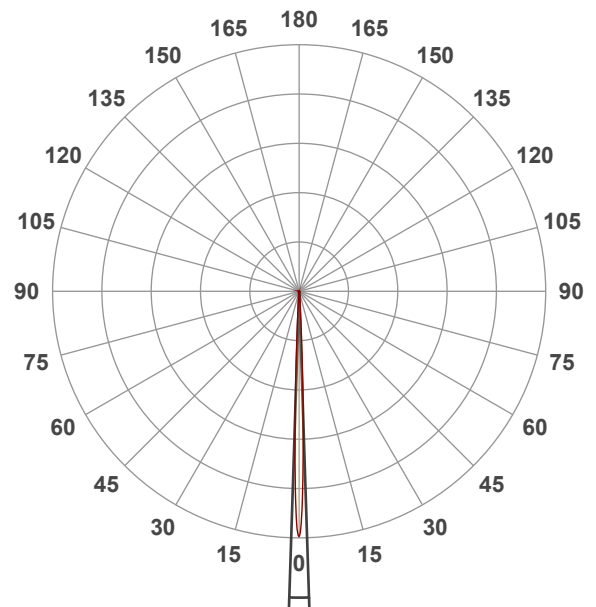
Full On

Operator:

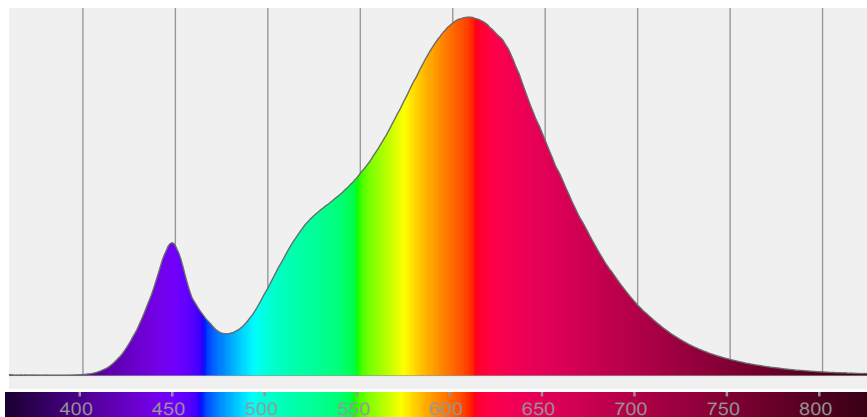
Salvatore Giglio

Date and time:

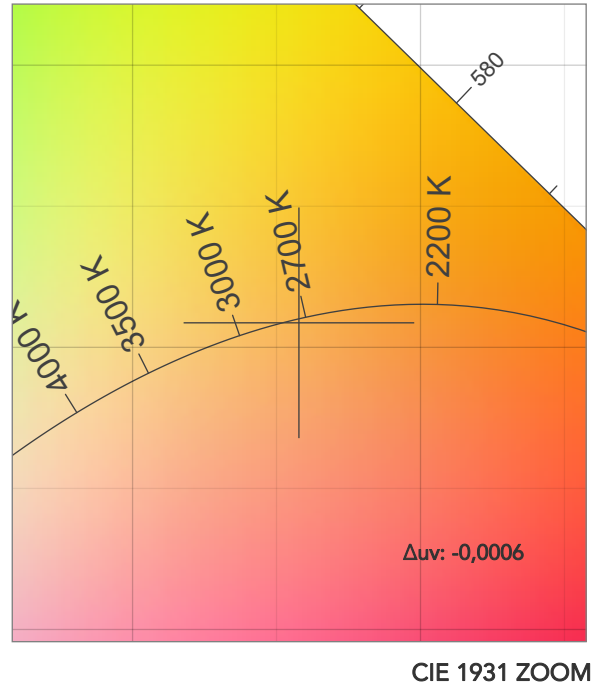
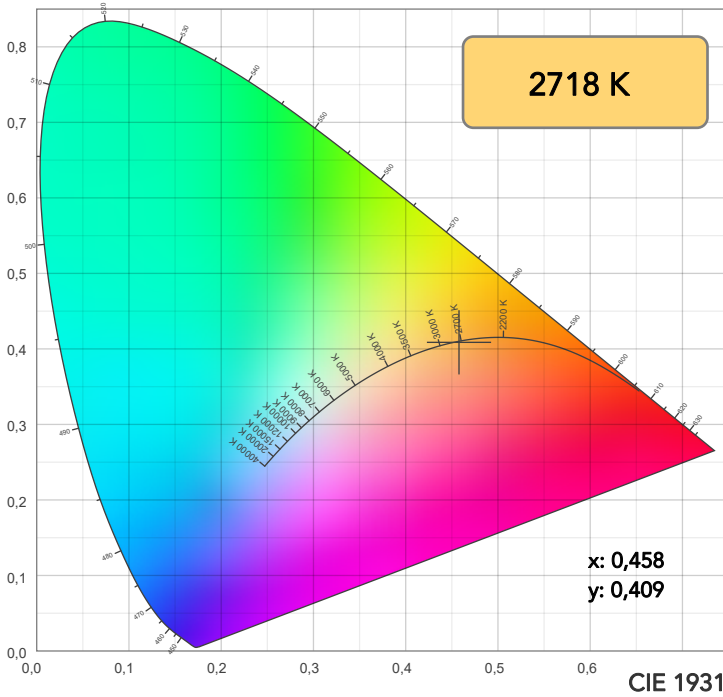
28/08/2024 15:47:45



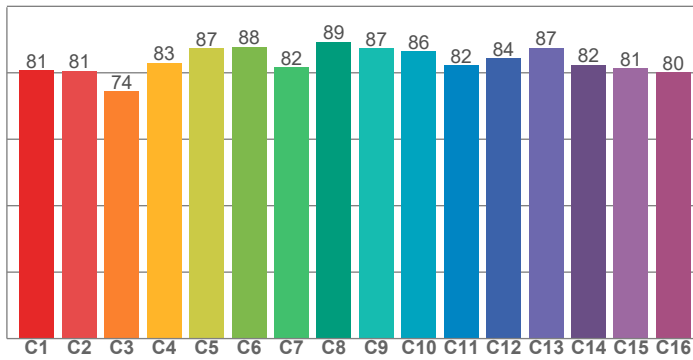
Spectra



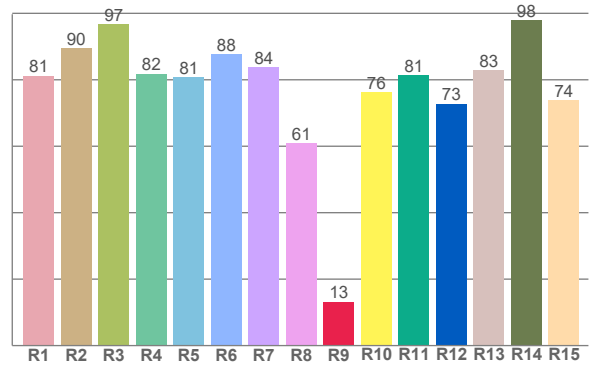
COLOR DETAILS



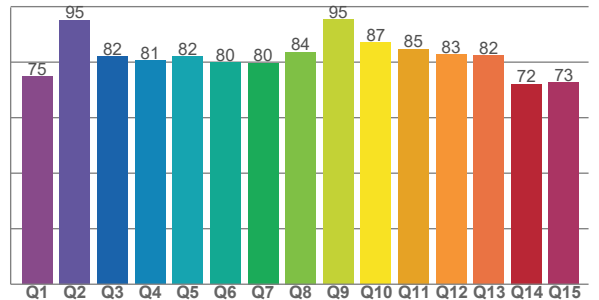
TM30: 83,3



CRI: 82,8 (R1-R8)



CQS: 81,0



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
81,2	89,6	96,8	81,8	80,8	87,6	83,7	61,0	13,2	76,3	81,4	72,8	82,9	98,0	73,8

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
80,8	80,5	74,4	83,0	87,3	87,9	81,6	89,3	87,4	86,4	82,2	84,3	87,5	82,3	81,3	80,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
74,8	95,1	81,9	80,6	82,0	79,9	79,7	83,7	95,3	87,1	84,8	82,7	82,3	72,2	72,8

COLOR PARAMETERS

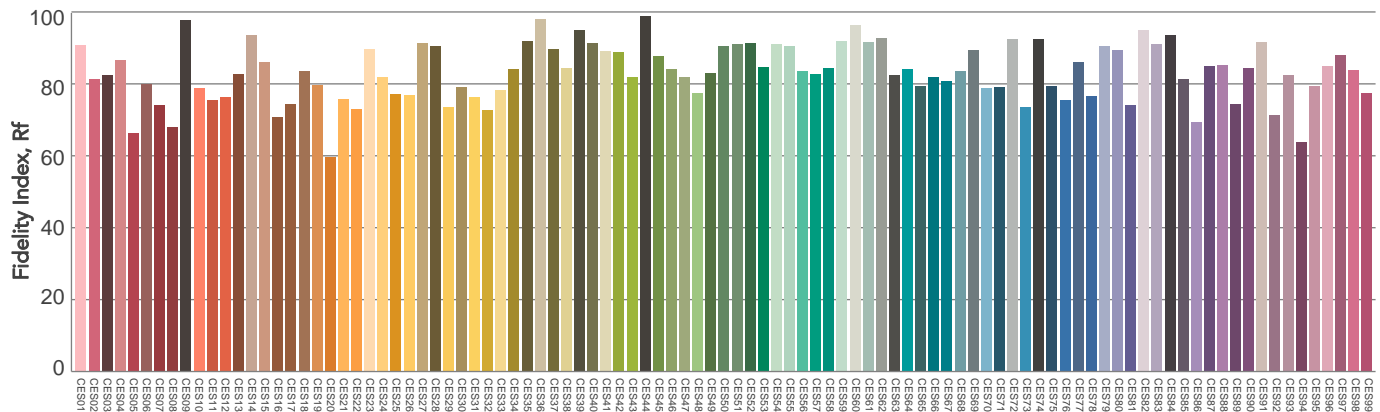
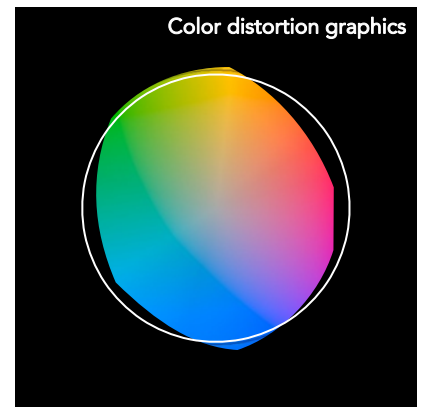
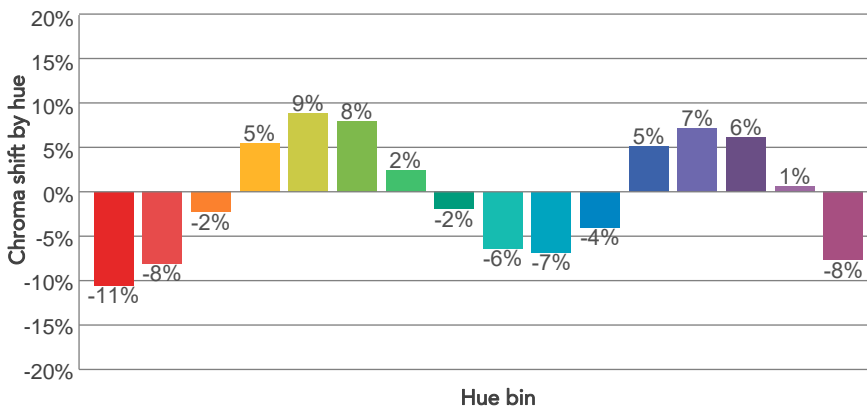
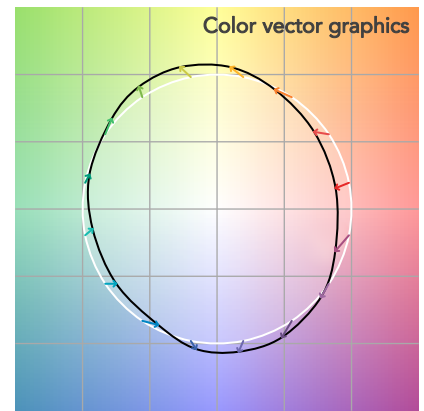
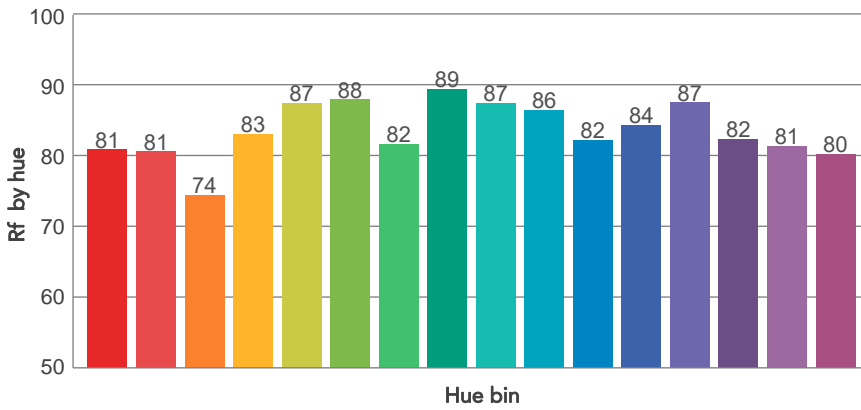
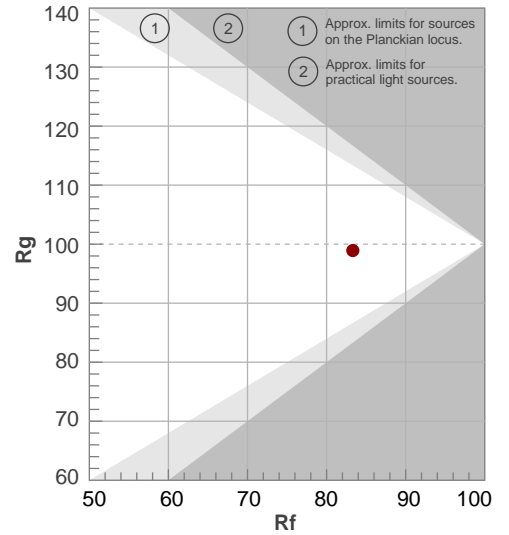
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
2718 K	82,8	13,2	83,3	98,9	81,0	65	0,458	0,409	-0,0006

TM30 DETAILS

Rf 83,3
Fidelity index Rf

Rg 98,9
Gammut index

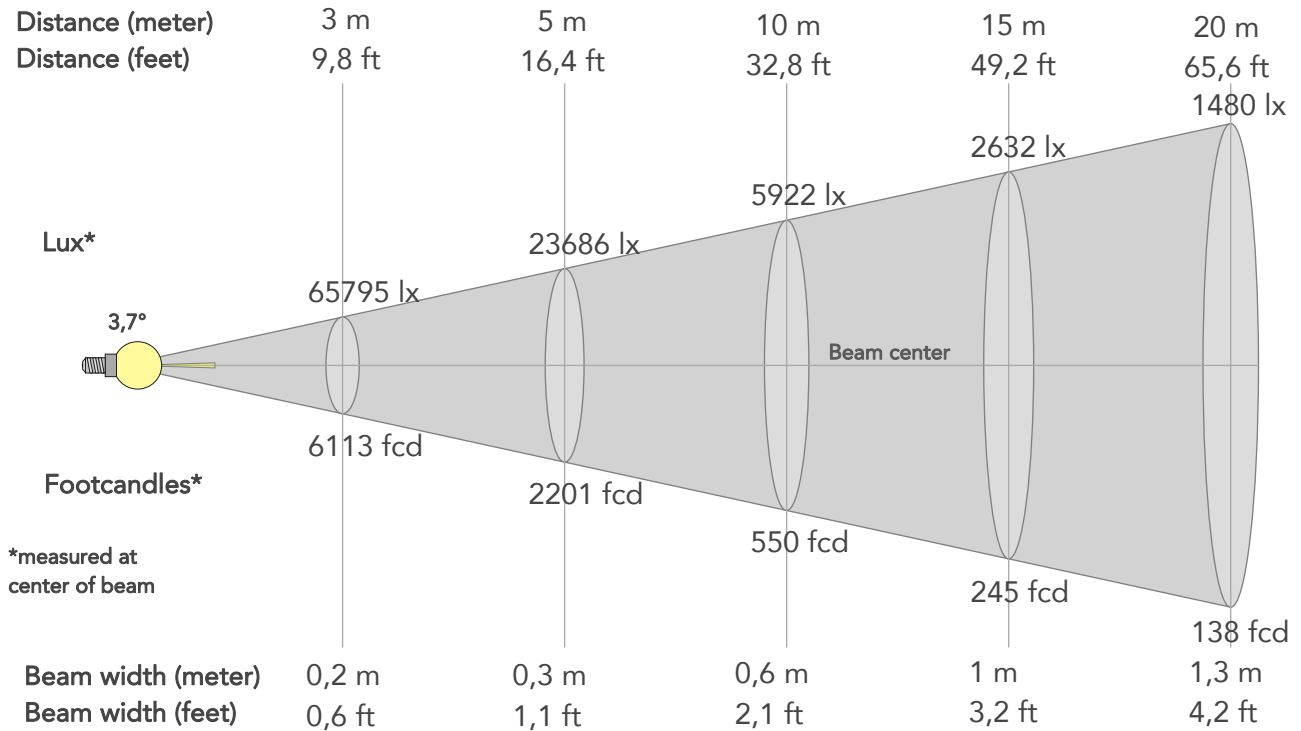
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	81	-11%	-2%
2	81	-8%	8%
3	74	-2%	14%
4	83	5%	11%
5	87	9%	6%
6	88	8%	-2%
7	82	2%	-12%
8	89	-2%	-7%
9	87	-6%	-3%
10	86	-7%	5%
11	82	-4%	11%
12	84	5%	5%
13	87	7%	-5%
14	82	6%	-13%
15	81	1%	-12%
16	80	-8%	-14%



BEAM DETAILS



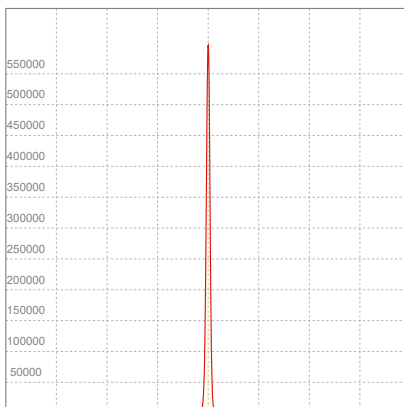
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
3,7°	6,9°	9,2°	86,9%	67,6%



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	592158lx	148040lx	65795lx	37010lx	23686lx	10527lx	5922lx	2632lx	1480lx	947lx	658lx	370lx	237lx
Footcand.	55013fcd	13753fcd	6113fcd	3438fcd	2201fcd	978fcd	550fcd	245fcd	138fcd	88fcd	61fcd	34fcd	22fcd
Beam wid.	0,1m	0,1m	0,2m	0,3m	0,3m	0,5m	0,6m	1m	1,3m	1,6m	1,9m	2,6m	3,2m
Beam wid.	0,2ft	0,4ft	0,6ft	0,8ft	1,1ft	1,6ft	2,1ft	3,2ft	4,2ft	5,3ft	6,3ft	8,4ft	10,6ft

LINEAR DISTRIBUTION DIAGRAM

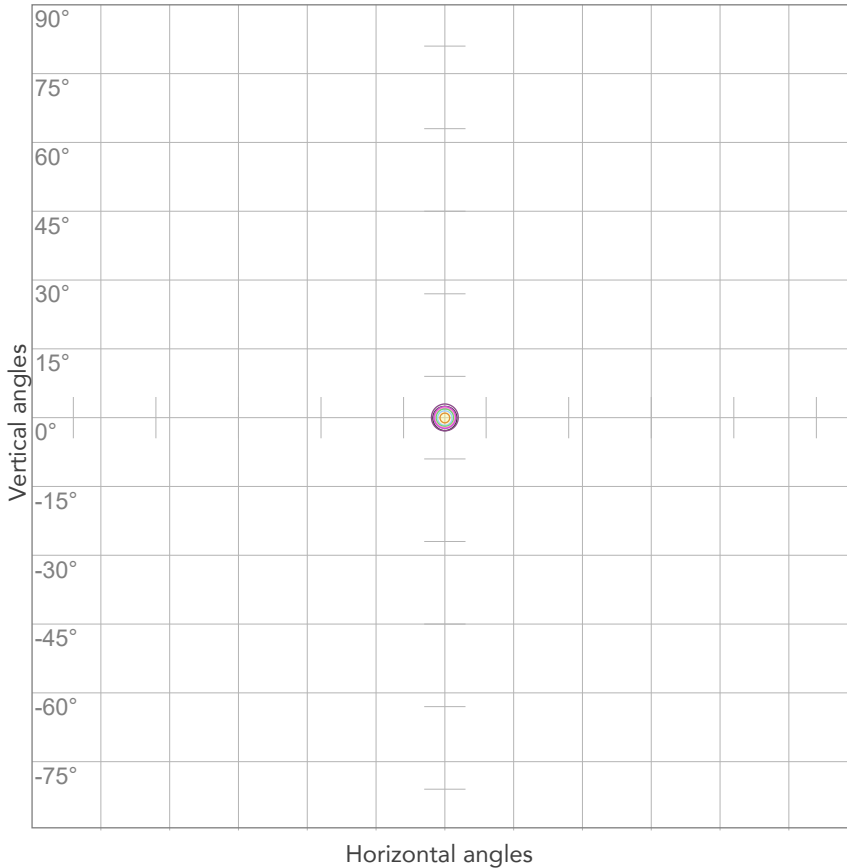


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Efficiency
224V	2,28A	505,7W	0,99	23lm/W

ISO DIAGRAMS

ISO CANDELA DIAGRAM



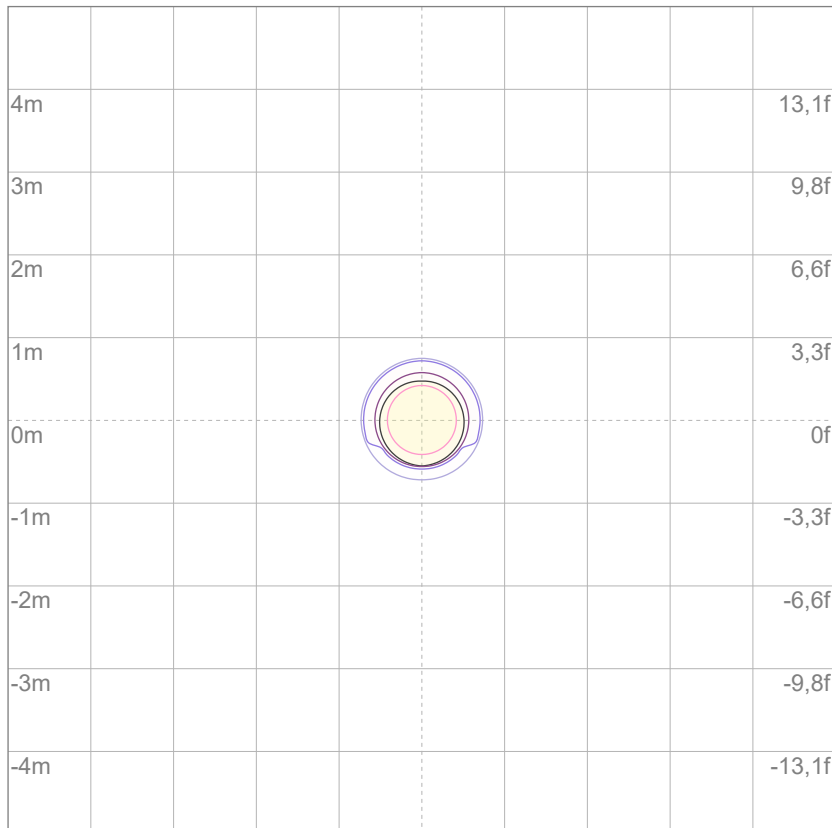
10%	59216 cd
20%	118432 cd
30%	177647 cd
40%	236863 cd
50%	296079 cd
60%	355295 cd
70%	414511 cd
80%	473726 cd

Conditions:

Number of c-planes: 2

Candela at center: 592158 cd

ISO LUX DIAGRAM



3%	178 lx
5%	296 lx
10%	592 lx
30%	1776 lx
50%	2961 lx

Conditions:

Number of c-planes: 2

Lux at center: 5922 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:

7391 lm

Peak candela output:

1285452 cd

Light quality:

CRI: 80,9

Color temperature:

2749 K

PRODUCT NAME:

HALUPIXDUO

MEASUREMENT CONDITIONS:

Beam angle:

Beam Layer

Target:

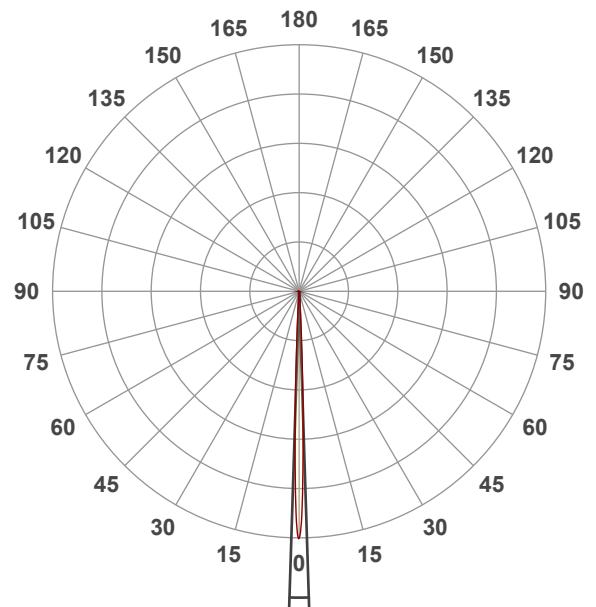
Full On

Operator:

Salvatore Giglio

Date and time:

28/08/2024 16:04:46

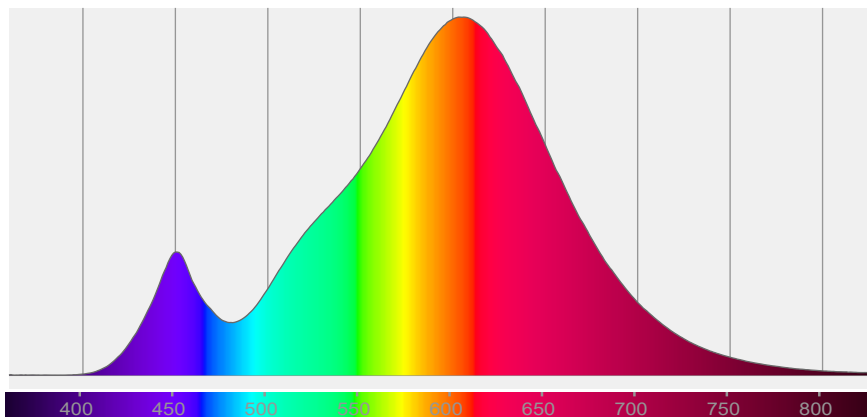


Beam angle 50%: 3,6°

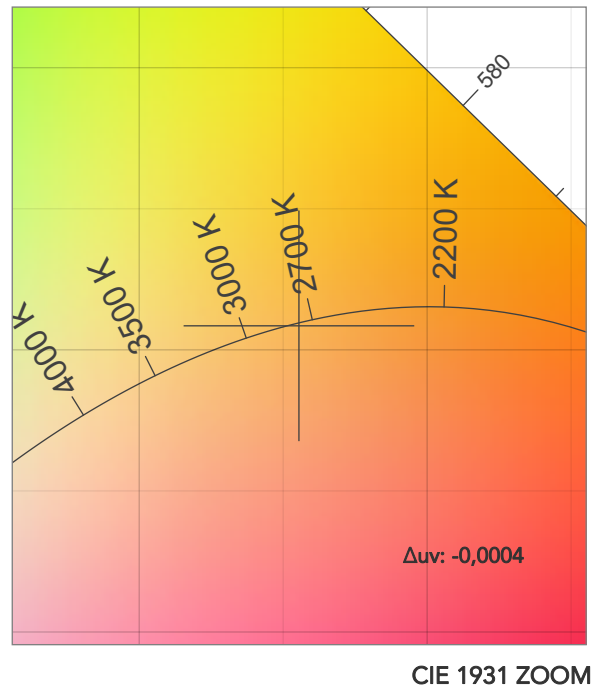
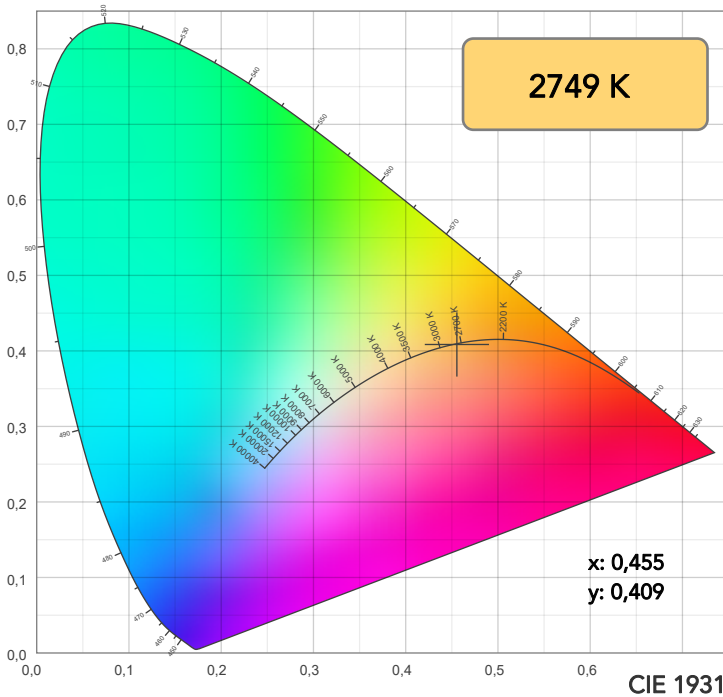
Field angle 10%: 6,8°

Cut off angle 2.5%: 8,8°

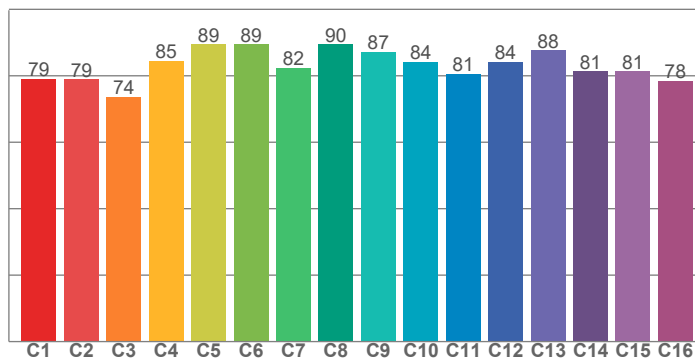
Spectra



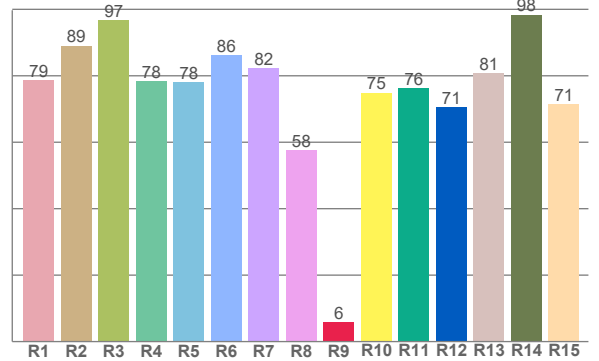
COLOR DETAILS



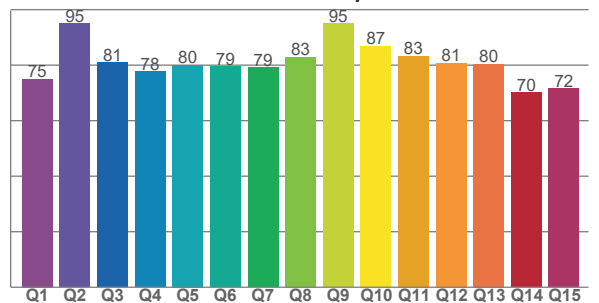
TM30: 83,0



CRI: 80,9 (R1-R8)



CQS: 79,9



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
78,7	89,0	96,7	78,3	78,2	86,2	82,3	57,5	5,9	74,9	76,1	70,6	80,8	98,4	71,4

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
79,2	78,9	73,6	84,5	89,5	89,4	82,4	89,5	87,3	84,2	80,6	84,2	87,6	81,4	81,3	78,5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
75,0	94,9	81,0	77,8	80,1	79,5	79,1	82,9	95,0	86,9	83,3	80,8	80,4	70,1	71,5

COLOR PARAMETERS

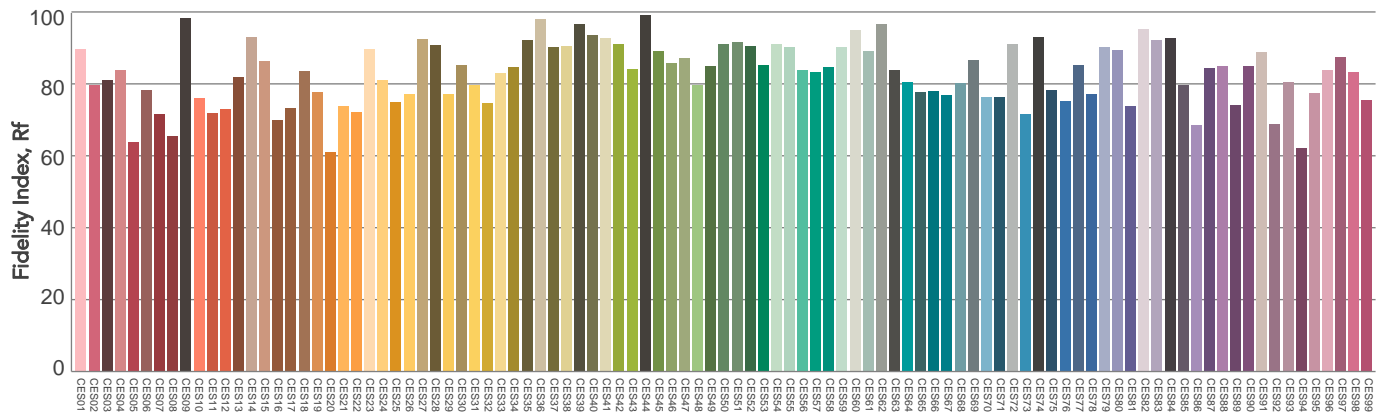
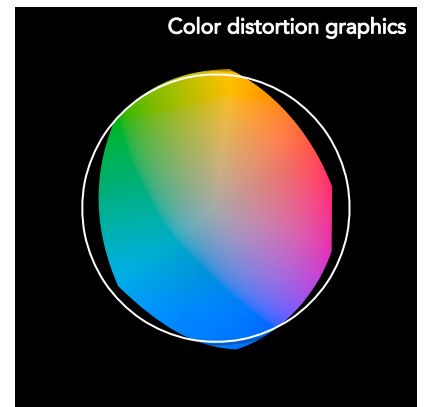
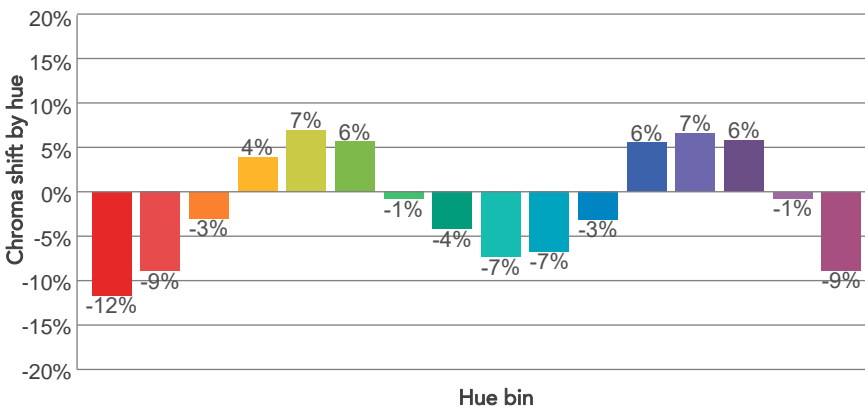
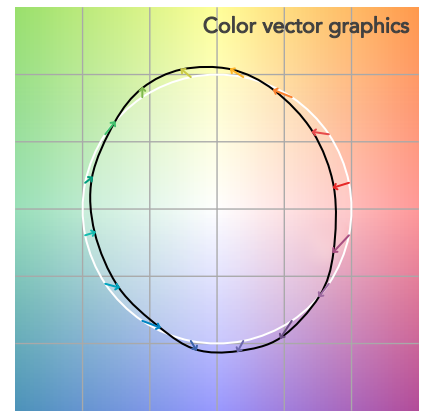
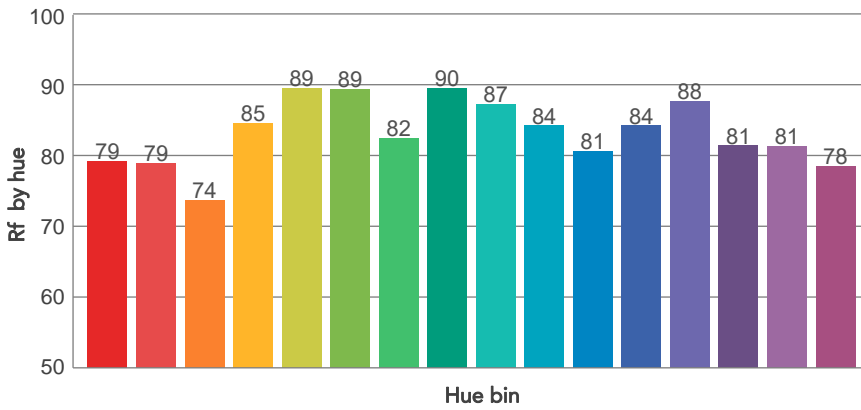
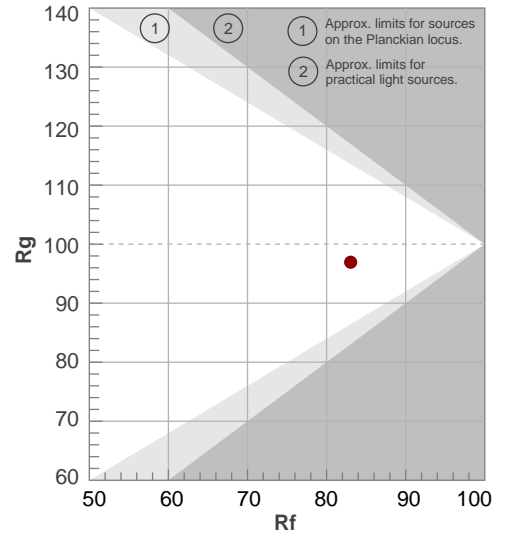
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
2749 K	80,9	5,9	83,0	96,9	79,9	65	0,455	0,409	-0,0004

TM30 DETAILS

Rf 83,0
Fidelity index Rf

Rg 96,9
Gammut index

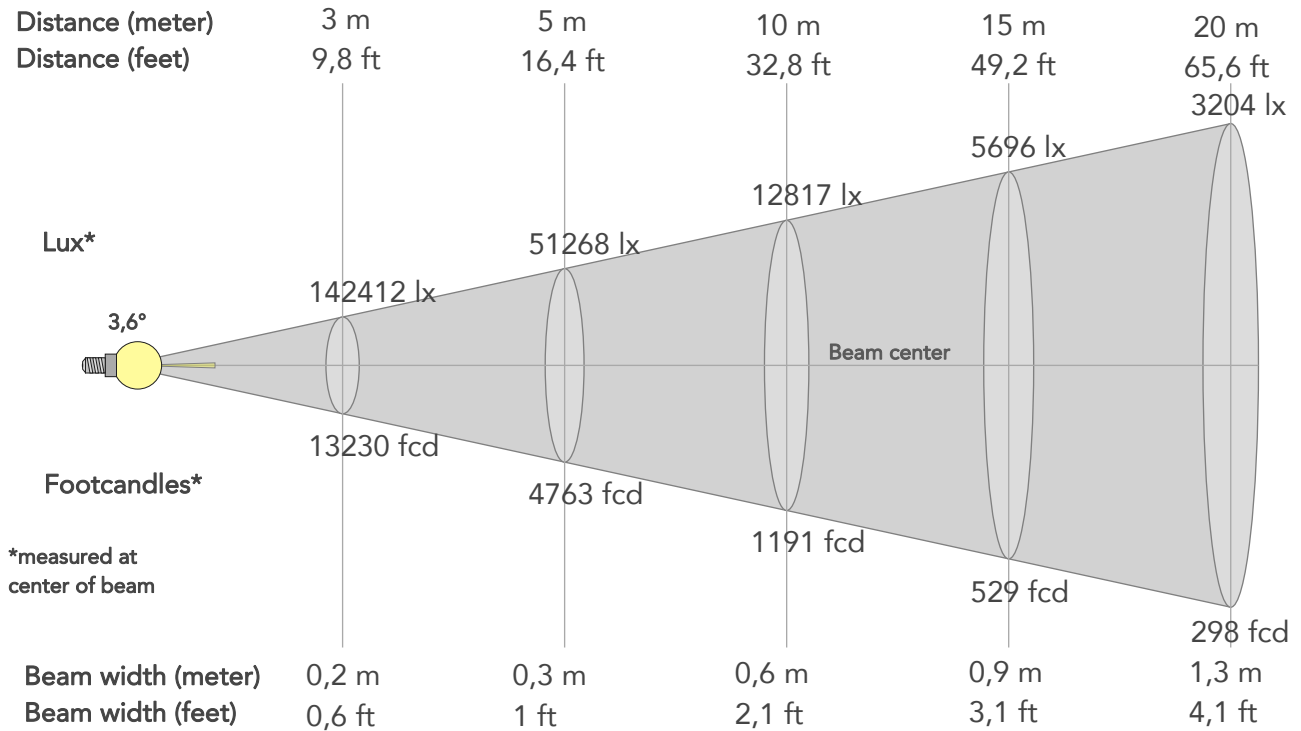
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	79	-12%	-1%
2	79	-9%	8%
3	74	-3%	14%
4	85	4%	10%
5	89	7%	6%
6	89	6%	-4%
7	82	-1%	-11%
8	90	-4%	-5%
9	87	-7%	-1%
10	84	-7%	8%
11	81	-3%	13%
12	84	6%	5%
13	88	7%	-5%
14	81	6%	-14%
15	81	-1%	-12%
16	78	-9%	-14%



BEAM DETAILS



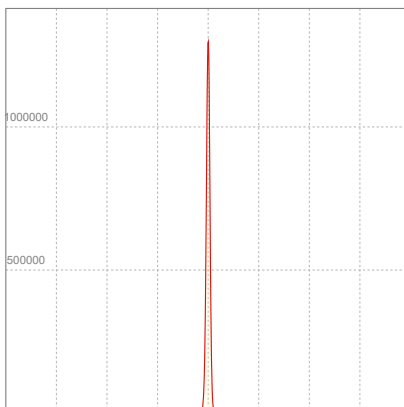
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
3,6°	6,8°	8,8°	95,9%	93,3%



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	1281706lx	320426lx	142412lx	80107lx	51268lx	22786lx	12817lx	5696lx	3204lx	2051lx	1424lx	801lx	513lx
Footcand.	119074fcd	29769fcd	13230fcd	7442fcd	4763fcd	2117fcd	1191fcd	529fcd	298fcd	191fcd	132fcd	74fcd	48fcd
Beam wid.	0,1m	0,1m	0,2m	0,3m	0,3m	0,5m	0,6m	0,9m	1,3m	1,6m	1,9m	2,5m	3,2m
Beam wid.	0,2ft	0,4ft	0,6ft	0,8ft	1ft	1,6ft	2,1ft	3,1ft	4,1ft	5,2ft	6,2ft	8,3ft	10,4ft

LINEAR DISTRIBUTION DIAGRAM

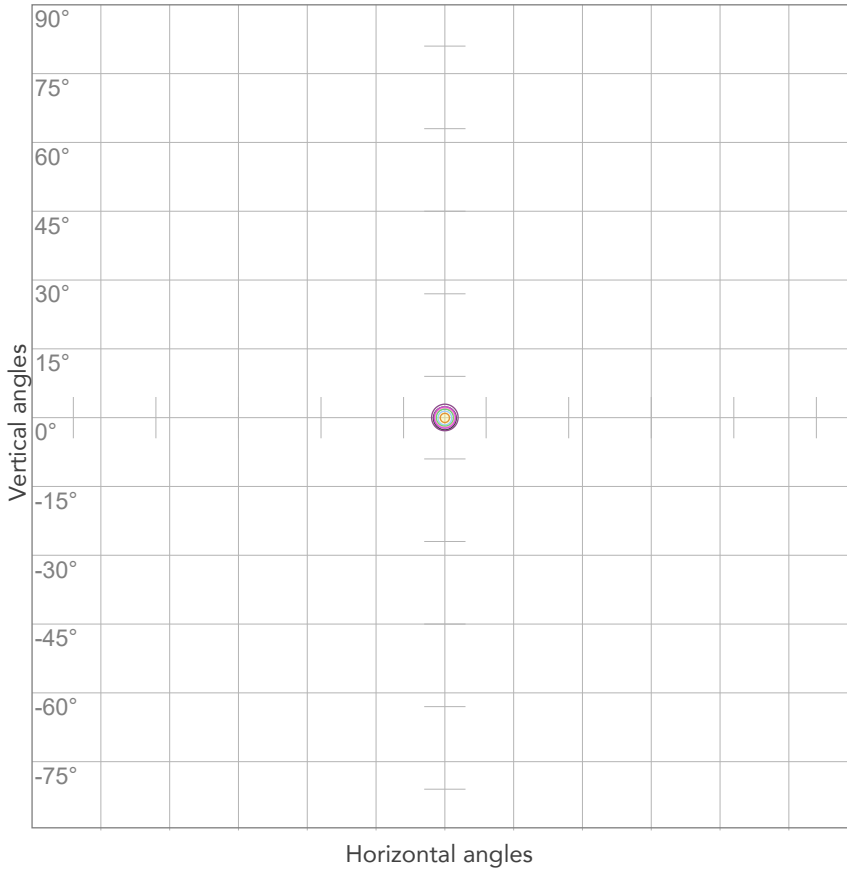


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Efficiency
225V	1,64A	363,7W	0,99	20lm/W

ISO DIAGRAMS

ISO CANDELA DIAGRAM



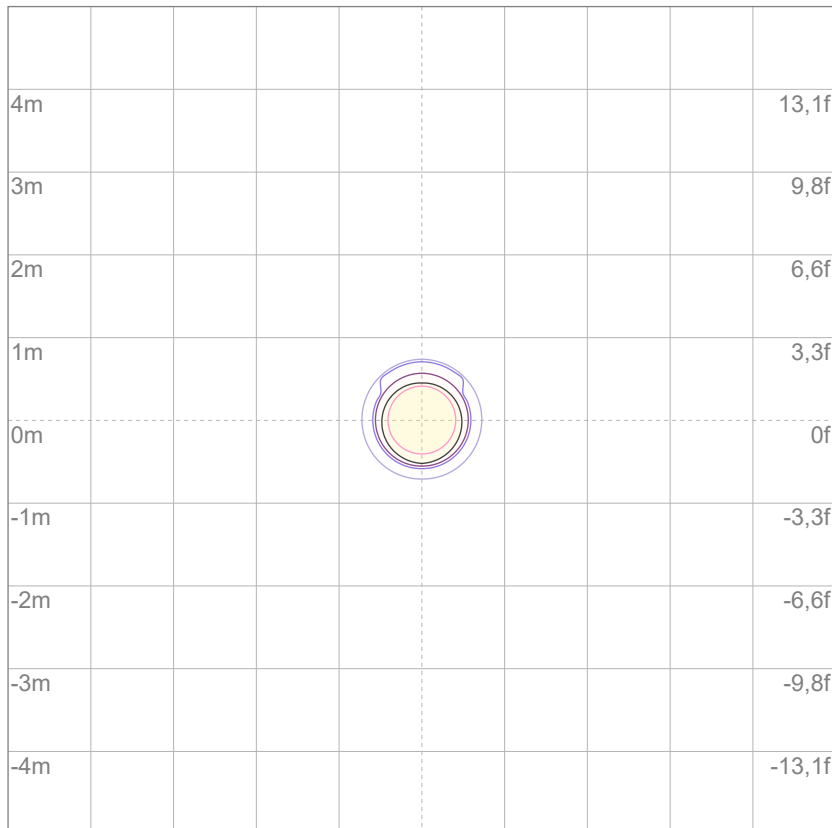
10%	128171 cd
20%	256341 cd
30%	384512 cd
40%	512682 cd
50%	640853 cd
60%	769024 cd
70%	897194 cd
80%	1025365 cd

Conditions:

Number of c-planes: 2

Candela at center: 1281706 cd

ISO LUX DIAGRAM



3%	385 lx
5%	641 lx
10%	1282 lx
30%	3845 lx
50%	6409 lx

Conditions:

Number of c-planes: 2

Lux at center: 12,8K 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:

12555 lm

Peak candela output:

4326 cd

Light quality:

CRI: 36,5

Color temperature:

9959 K

PRODUCT NAME:

HALUPIXDUO

MEASUREMENT CONDITIONS:

Beam angle:

Pixel Layer

Target:

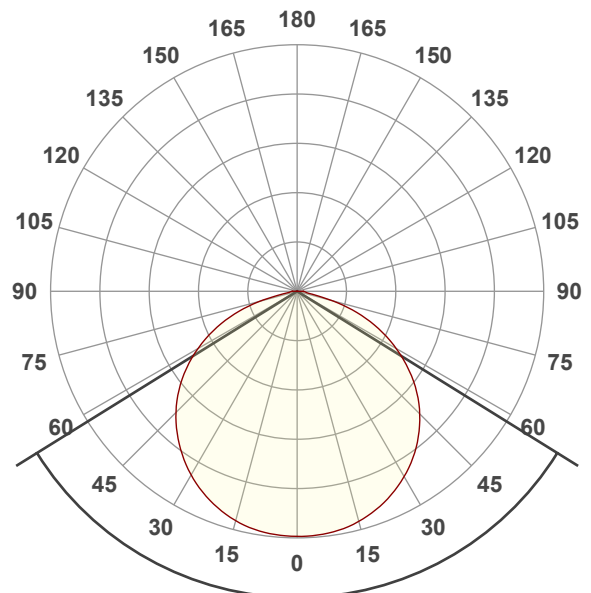
Full On

Operator:

Salvatore Giglio

Date and time:

28/08/2024 15:46:25

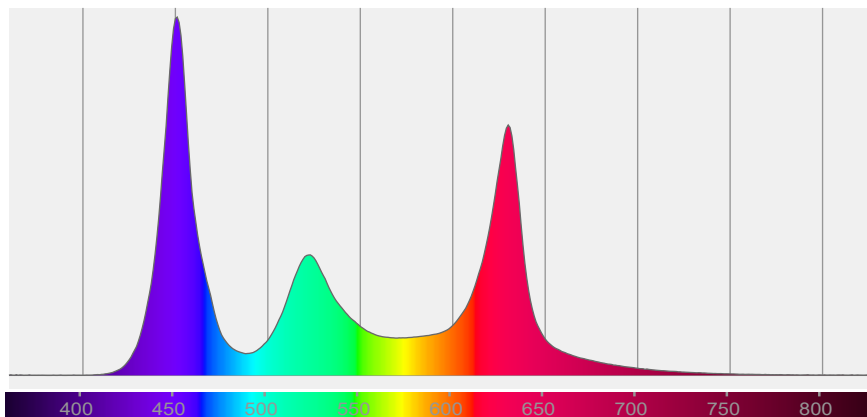


Beam angle 50%: 116,3°

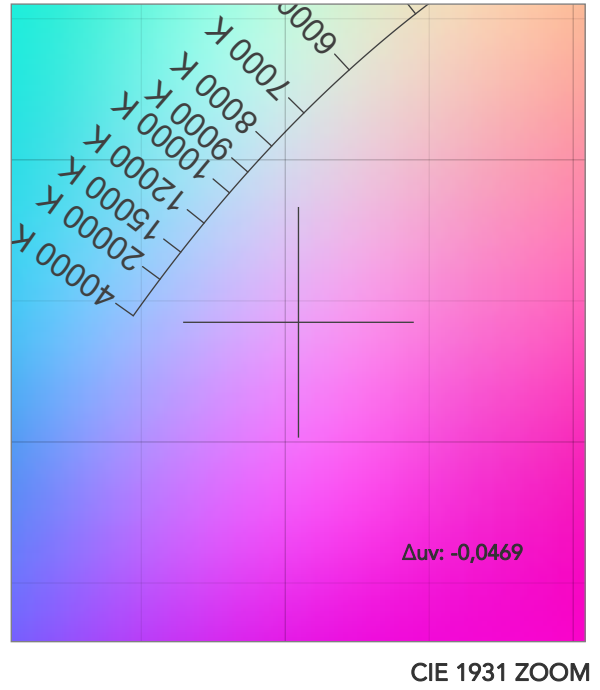
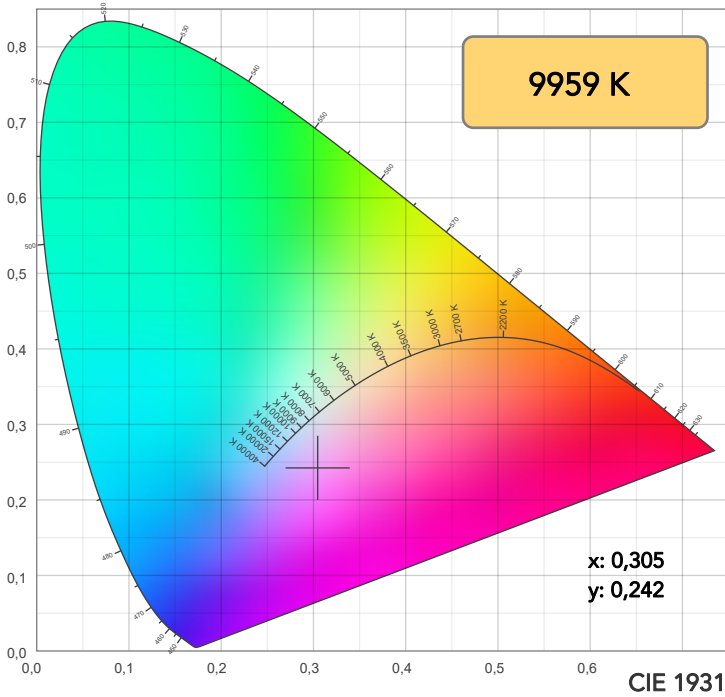
Field angle 10%: 154,3°

Cut off angle 2.5%: 176,4°

Spectra

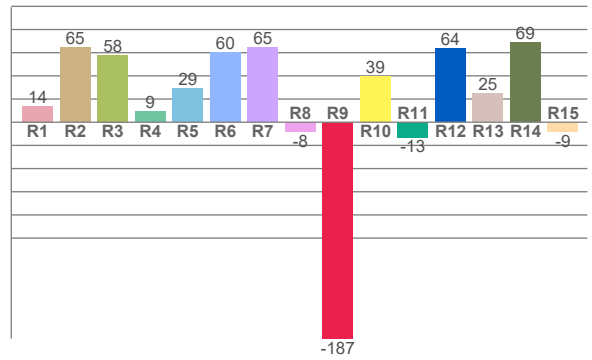
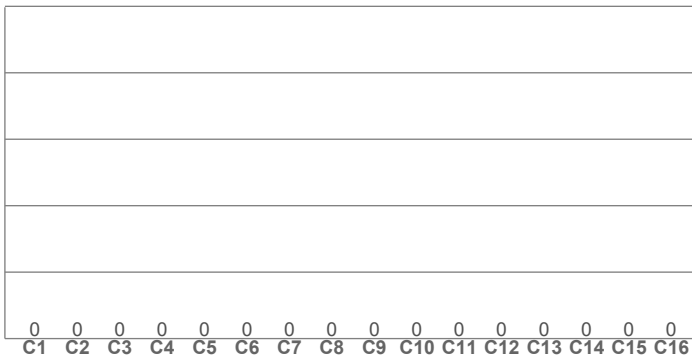


COLOR DETAILS



TM30: 0,0

CRI: 36,5 (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
14,0	64,6	58,2	9,1	29,2	60,1	64,7	-8,2	-186,7	39,5	-13,0	63,5	24,8	68,7	-8,5

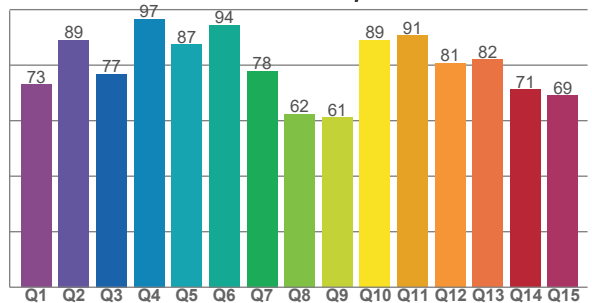
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
73,0	89,0	76,8	96,5	87,5	94,5	77,9	62,4	61,1	89,0	90,6	80,9	82,1	71,3	69,0

CQS: 77,4



COLOR PARAMETERS

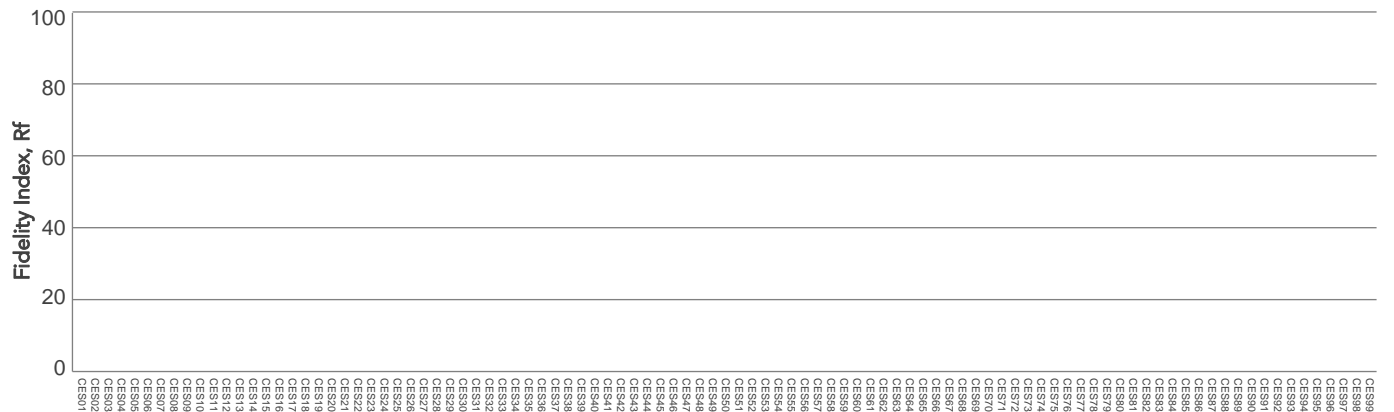
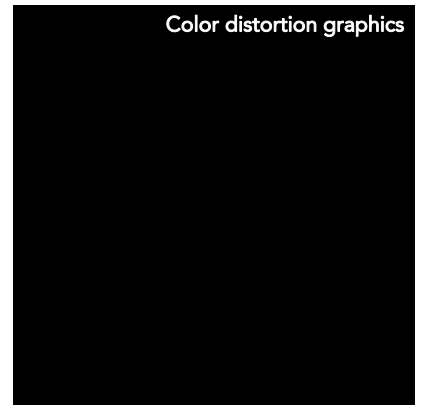
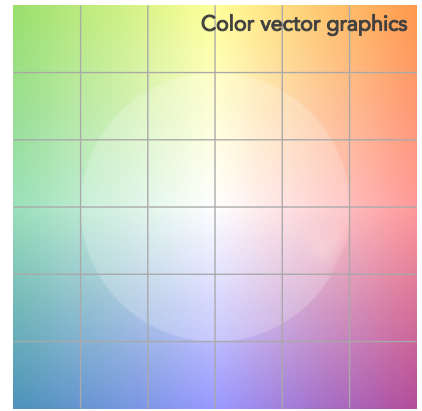
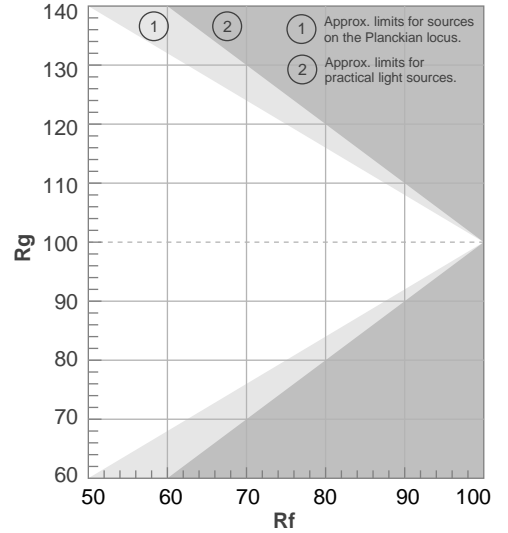
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
9959 K	36,5	-186,7	0,0	n/a	77,4	54	0,305	0,242	-0,0469

TM30 DETAILS

Rf 0,0
Fidelity index Rf

Rg n/a
Gammut index

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	0	0%	0%
2	0	0%	0%
3	0	0%	0%
4	0	0%	0%
5	0	0%	0%
6	0	0%	0%
7	0	0%	0%
8	0	0%	0%
9	0	0%	0%
10	0	0%	0%
11	0	0%	0%
12	0	0%	0%
13	0	0%	0%
14	0	0%	0%
15	0	0%	0%
16	0	0%	0%



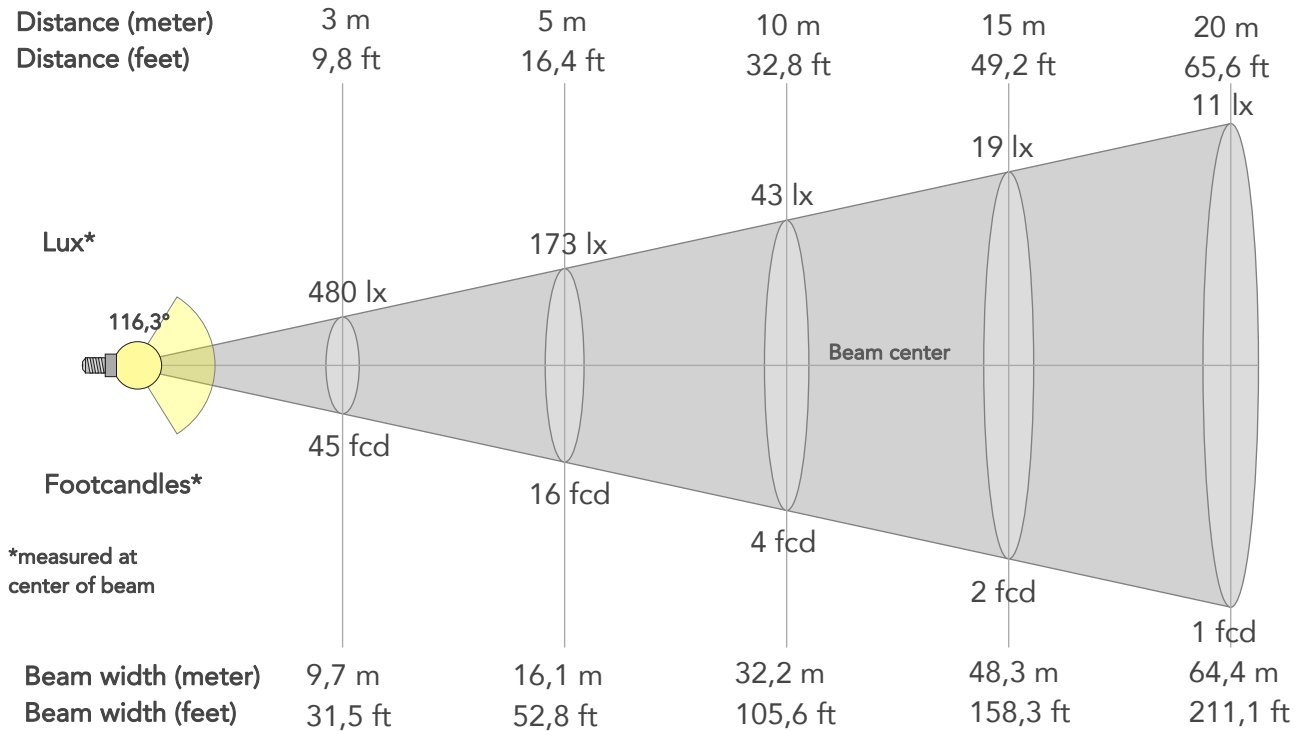
Color Evaluation Sample

- CE S901
- CE S902
- CE S903
- CE S904
- CE S905
- CE S906
- CE S907
- CE S908
- CE S909
- CE S910
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- CE S994
- CE S995
- CE S996
- CE S997
- CE S998
- CE S999
- CE S900

BEAM DETAILS



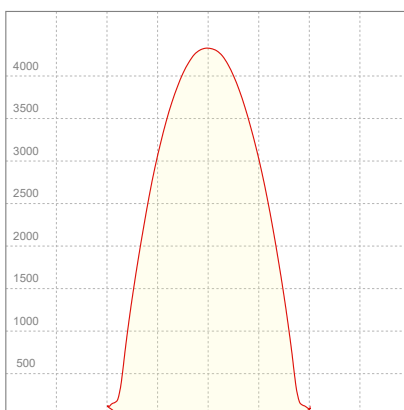
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
116,3°	154,3°	176,4°	80,6%	54,3%



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	4324lx	1081lx	480lx	270lx	173lx	77lx	43lx	19lx	11lx	7lx	5lx	3lx	2lx
Footcand.	402fcd	100fcd	45fcd	25fcd	16fcd	7fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd
Beam wid.	3,2m	6,4m	9,7m	12,9m	16,1m	24,1m	32,2m	48,3m	64,4m	80,5m	96,5m	128,7m	160,9m
Beam wid.	10,6ft	21,2ft	31,5ft	42,2ft	52,8ft	79,2ft	105,6ft	158,3ft	211,1ft	263,9ft	316,7ft	422,2ft	527,8ft

LINEAR DISTRIBUTION DIAGRAM

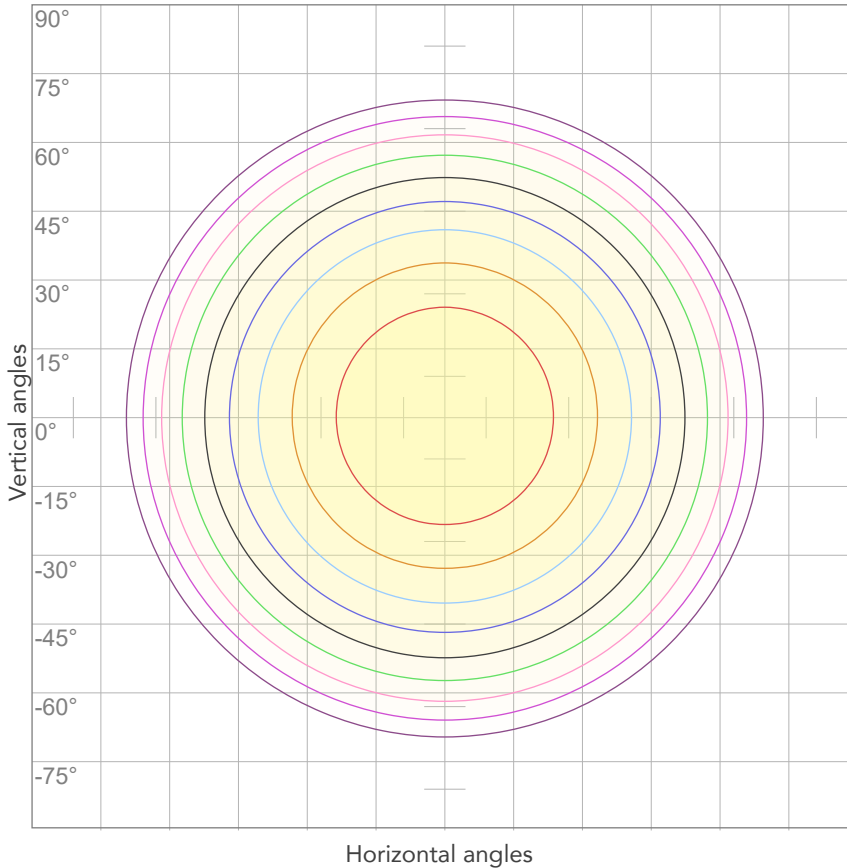


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Efficiency
224V	2,35A	521,6W	0,99	24lm/W

ISO DIAGRAMS

ISO CANDELA DIAGRAM



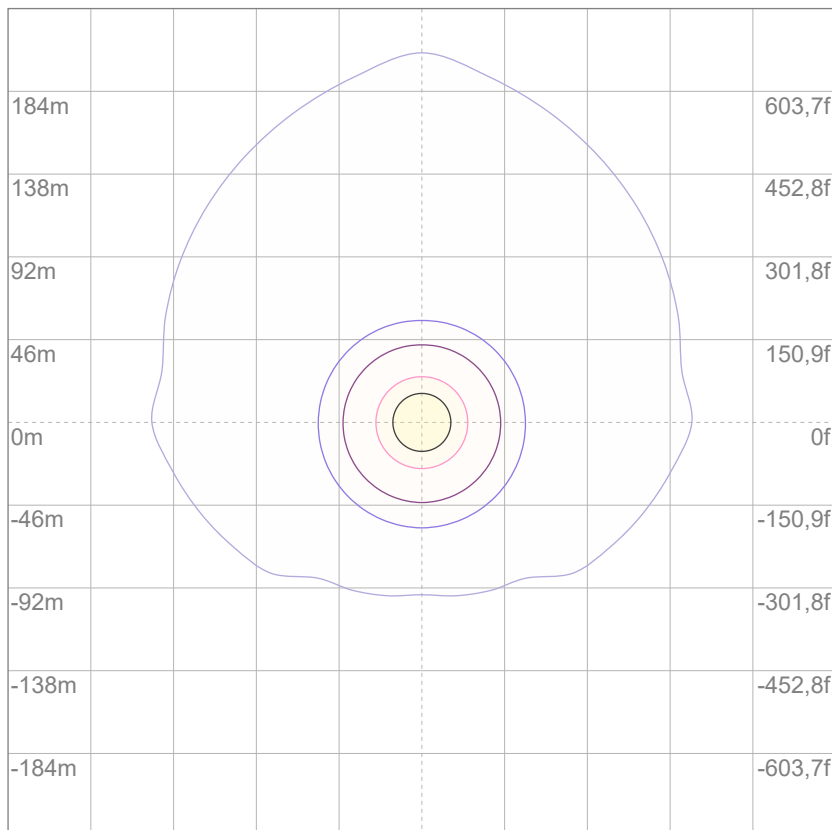
10%	432 cd
20%	865 cd
30%	1297 cd
40%	1730 cd
50%	2162 cd
60%	2595 cd
70%	3027 cd
80%	3459 cd

Conditions:

Number of c-planes: 2

Candela at center: 4324 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	1,30 lx
5%	2,16 lx
10%	4,32 lx
30%	13,0 lx
50%	21,6 lx

Conditions:

Number of c-planes: 2

Lux at center: 43,2 lx

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



Total lumen output:

3734 lm

Peak candela output:

1249 cd

PRODUCT NAME:

HALUPIXDUO

MEASUREMENT CONDITIONS:

Beam angle:

Pixel Layer

Target:

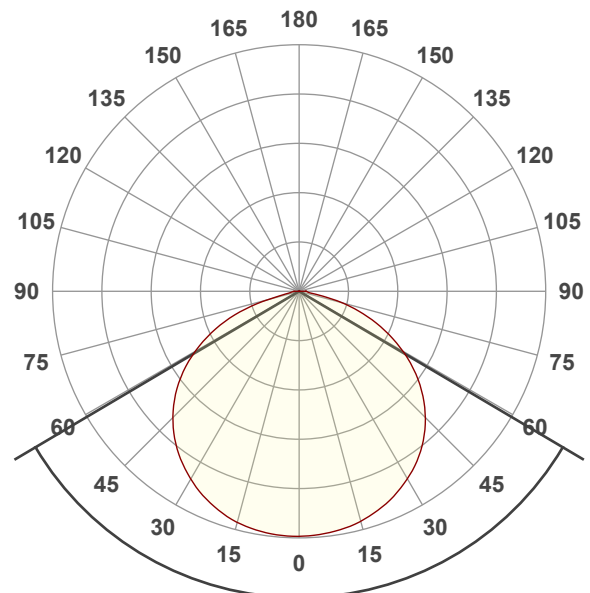
Red

Operator:

Salvatore Giglio

Date and time:

28/08/2024 16:06:06

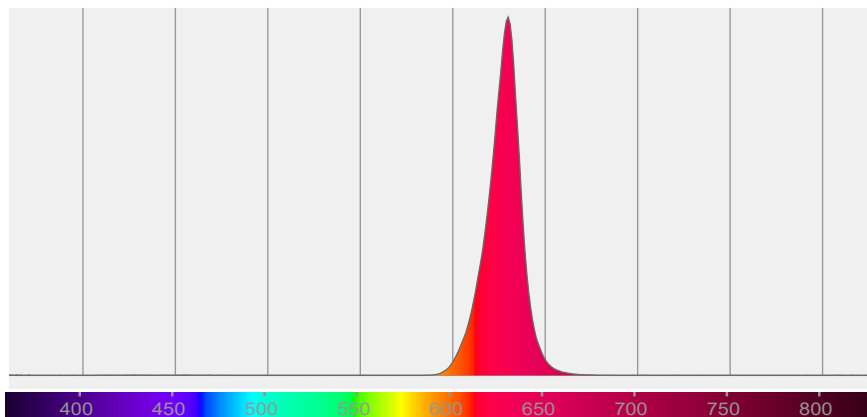


Beam angle 50%: 118,8°

Field angle 10%: 154,6°

Cut off angle 2.5%: 177,2°

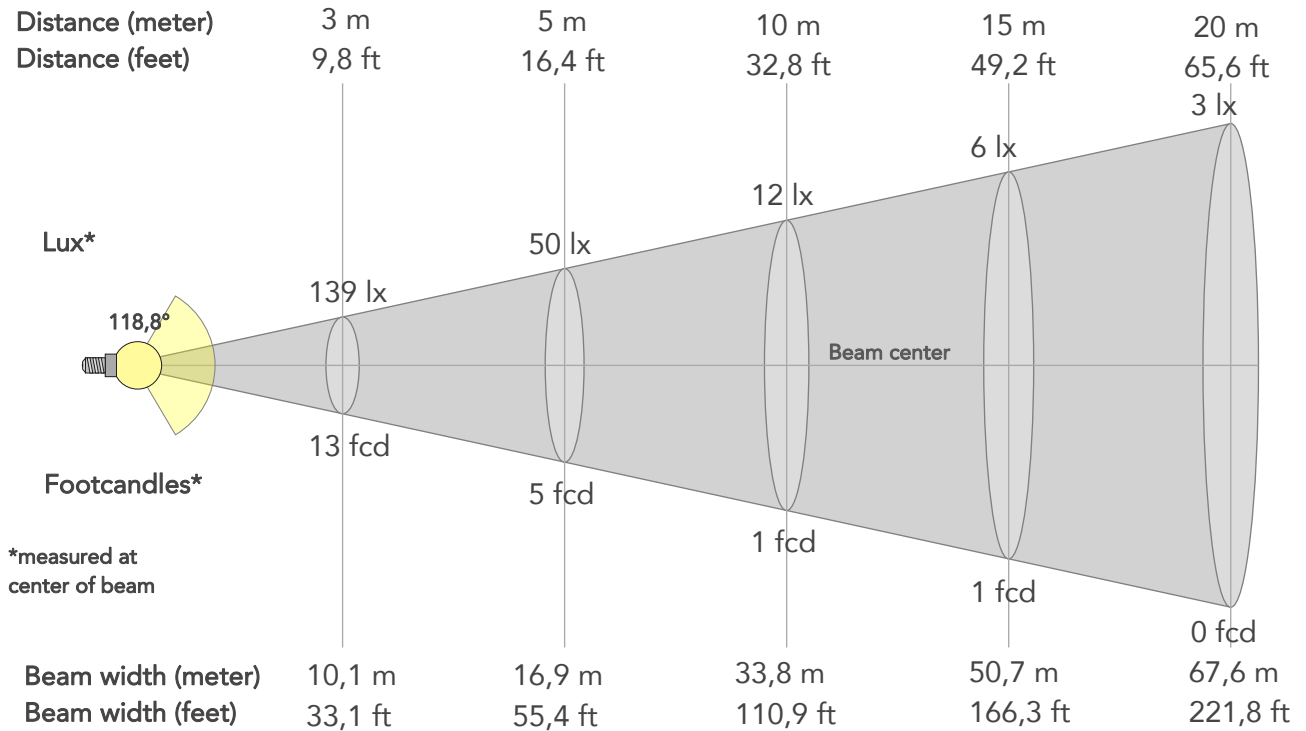
Spectra



BEAM DETAILS



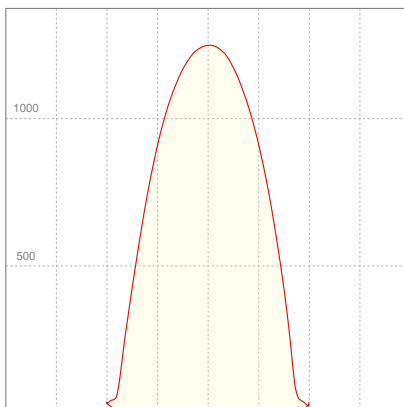
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
118,8°	154,6°	177,2°	80,2%	53,6%



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	1248lx	312lx	139lx	78lx	50lx	22lx	12lx	6lx	3lx	2lx	1lx	1lx	0lx
Footcand.	116fcd	29fcd	13fcd	7fcd	5fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	3,4m	6,8m	10,1m	13,5m	16,9m	25,4m	33,8m	50,7m	67,6m	84,5m	101,4m	135,2m	169m
Beam wid.	11,2ft	22,3ft	33,1ft	44,3ft	55,4ft	83,2ft	110,9ft	166,3ft	221,8ft	277,2ft	332,7ft	443,6ft	554,5ft

LINEAR DISTRIBUTION DIAGRAM

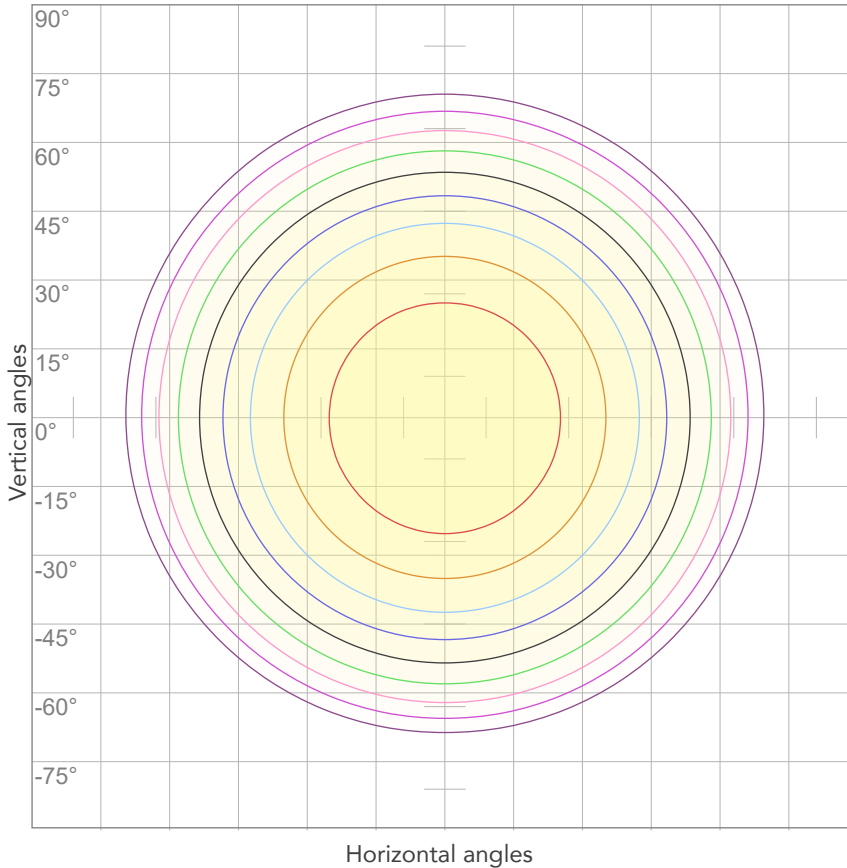


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Efficiency
226V	1,01A	219,6W	0,96	17lm/W

ISO DIAGRAMS

ISO CANDELA DIAGRAM



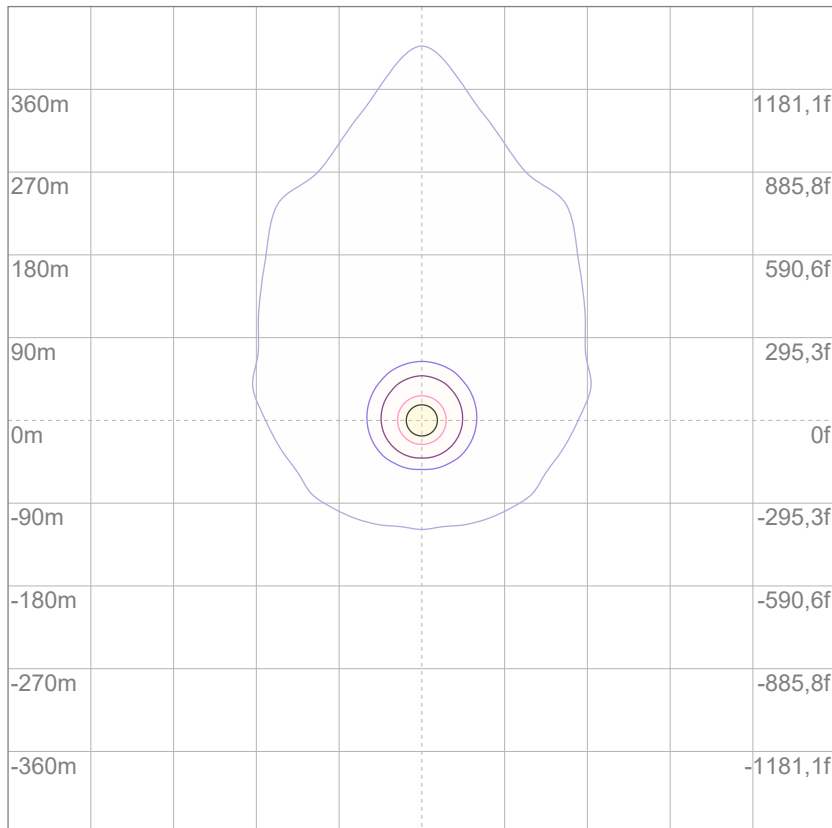
10%	125 cd
20%	250 cd
30%	375 cd
40%	499 cd
50%	624 cd
60%	749 cd
70%	874 cd
80%	999 cd

Conditions:

Number of c-planes: 2

Candela at center: 1248 cd

ISO LUX DIAGRAM



3%	0,375 lx
5%	0,624 lx
10%	1,25 lx
30%	3,75 lx
50%	6,24 lx

Conditions:

Number of c-planes: 2

Lux at center: 12,5 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:

7176 lm

Peak candela output:

2489 cd

PRODUCT NAME:

HALUPIXDUO

MEASUREMENT CONDITIONS:

Beam angle:

Pixel Layer

Target:

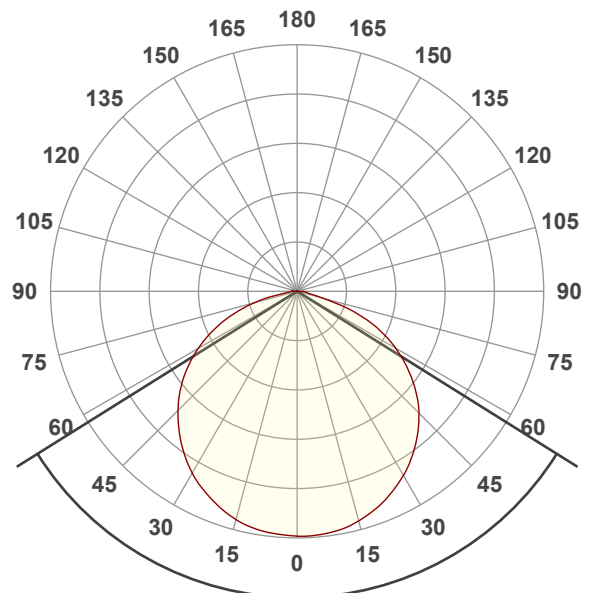
Green

Operator:

Salvatore Giglio

Date and time:

28/08/2024 16:07:17

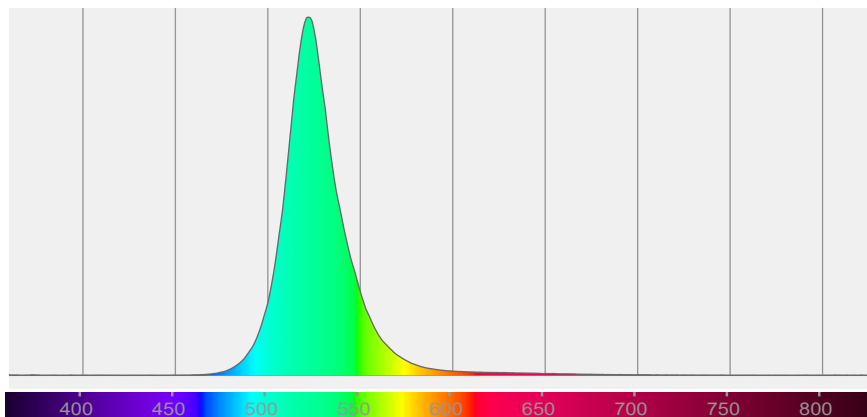


Beam angle 50%: 115,9°

Field angle 10%: 154,6°

Cut off angle 2.5%: 176,1°

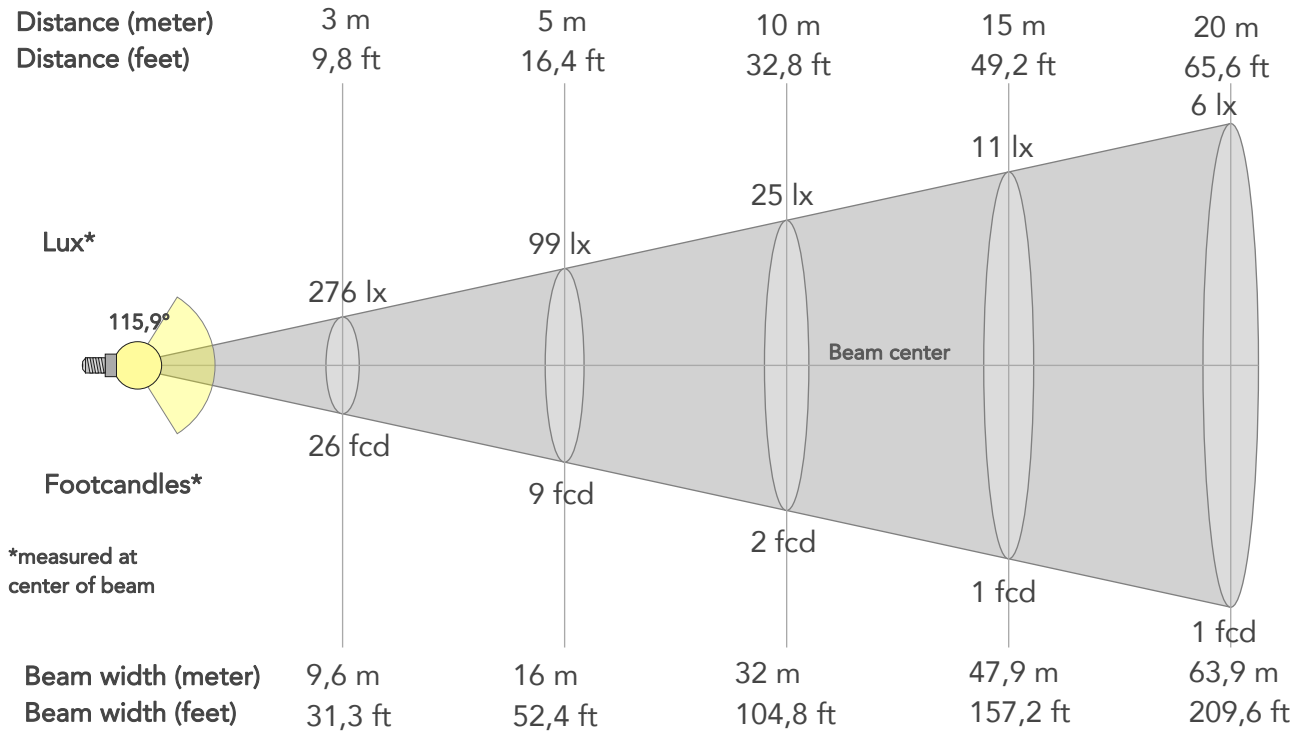
Spectra



BEAM DETAILS



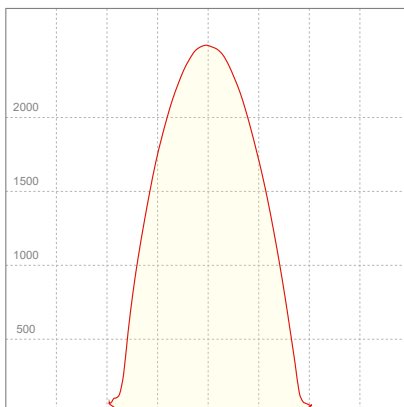
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
115,9°	154,6°	176,1°	80,4%	54,1%



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	2485lx	621lx	276lx	155lx	99lx	44lx	25lx	11lx	6lx	4lx	3lx	2lx	1lx
Footcand.	231fcd	58fcd	26fcd	14fcd	9fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	3,2m	6,4m	9,6m	12,8m	16m	24m	32m	47,9m	63,9m	79,9m	95,9m	127,8m	159,8m
Beam wid.	10,5ft	21,1ft	31,3ft	41,9ft	52,4ft	78,6ft	104,8ft	157,2ft	209,6ft	262ft	314,4ft	419,2ft	524ft

LINEAR DISTRIBUTION DIAGRAM

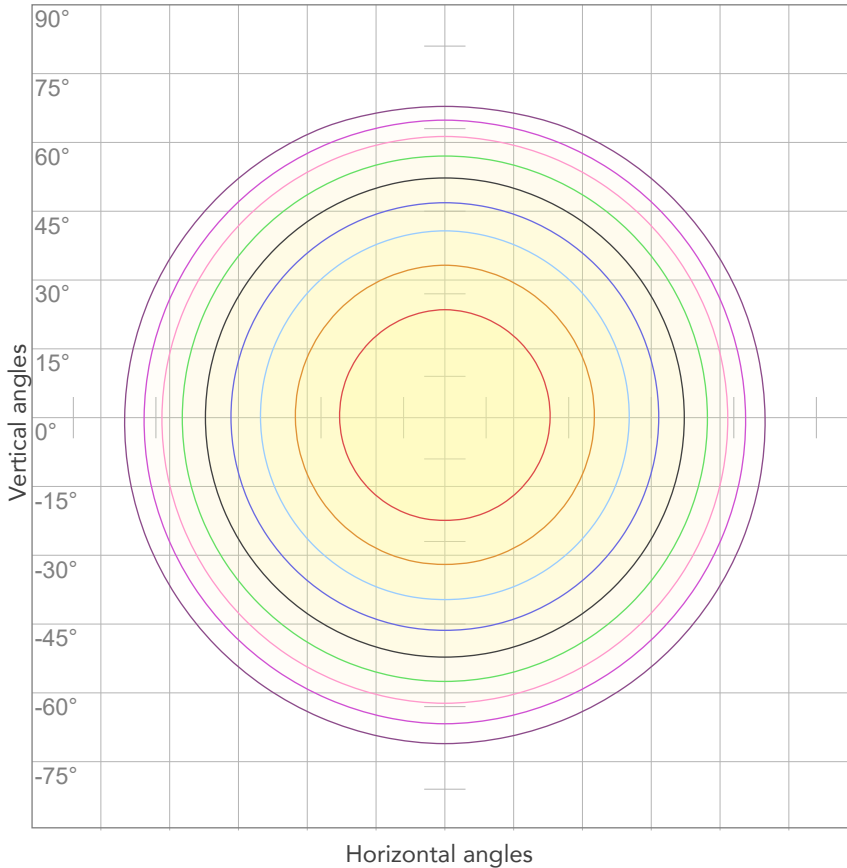


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Efficiency
226V	1,01A	219,8W	0,97	33lm/W

ISO DIAGRAMS

ISO CANDELA DIAGRAM



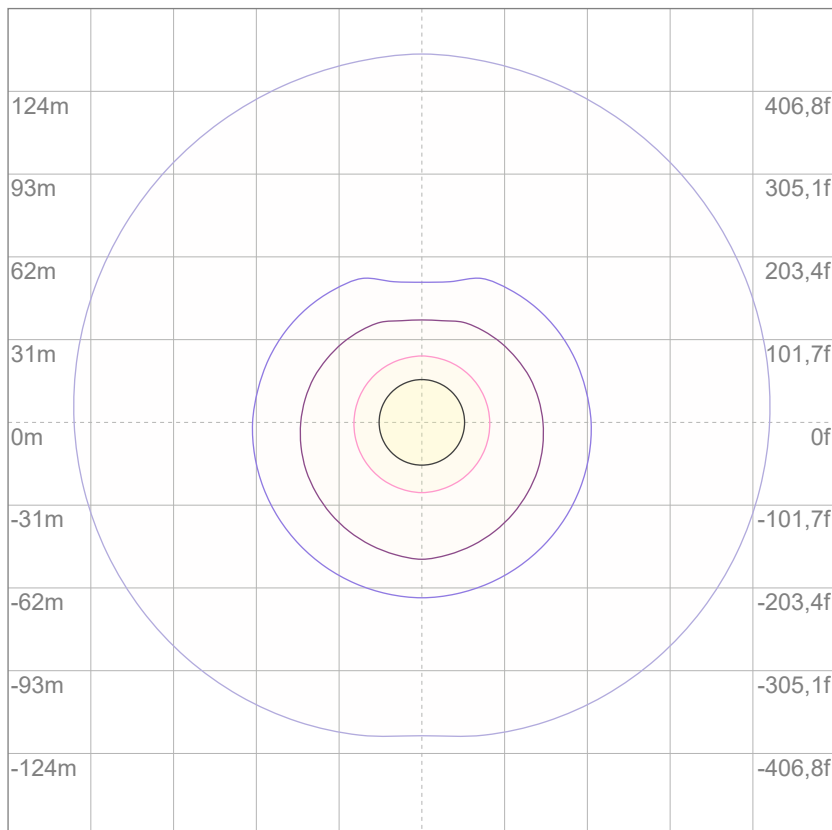
10%	248 cd
20%	497 cd
30%	745 cd
40%	994 cd
50%	1242 cd
60%	1491 cd
70%	1739 cd
80%	1988 cd

Conditions:

Number of c-planes: 2

Candela at center: 2485 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	0,745 lx
5%	1,24 lx
10%	2,48 lx
30%	7,45 lx
50%	12,4 lx

Conditions:

Number of c-planes: 2

Lux at center: 24,8 lx

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



Total lumen output:

1393 lm

Peak candela output:

494 cd

PRODUCT NAME:

HALUPIXDUO

MEASUREMENT CONDITIONS:

Beam angle:

Pixel Layer

Target:

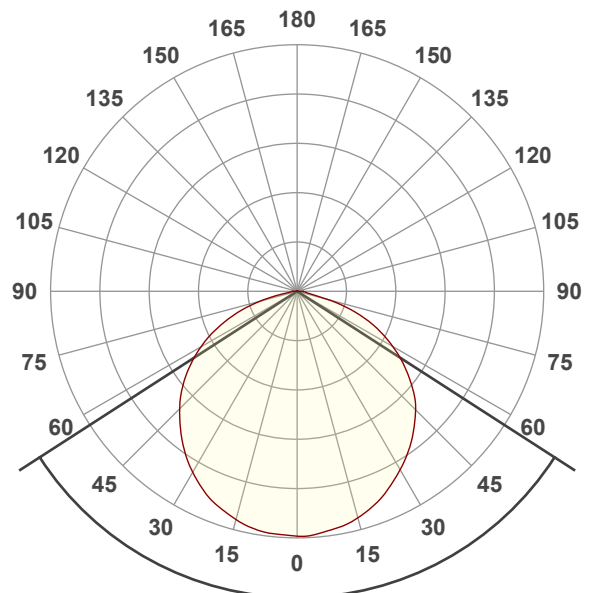
Blue

Operator:

Salvatore Giglio

Date and time:

28/08/2024 16:09:22

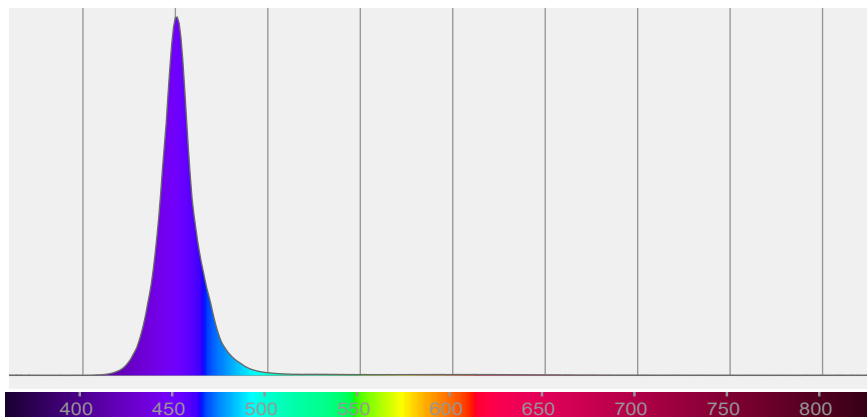


Beam angle 50%: 114,4°

Field angle 10%: 153,9°

Cut off angle 2.5%: 175,3°

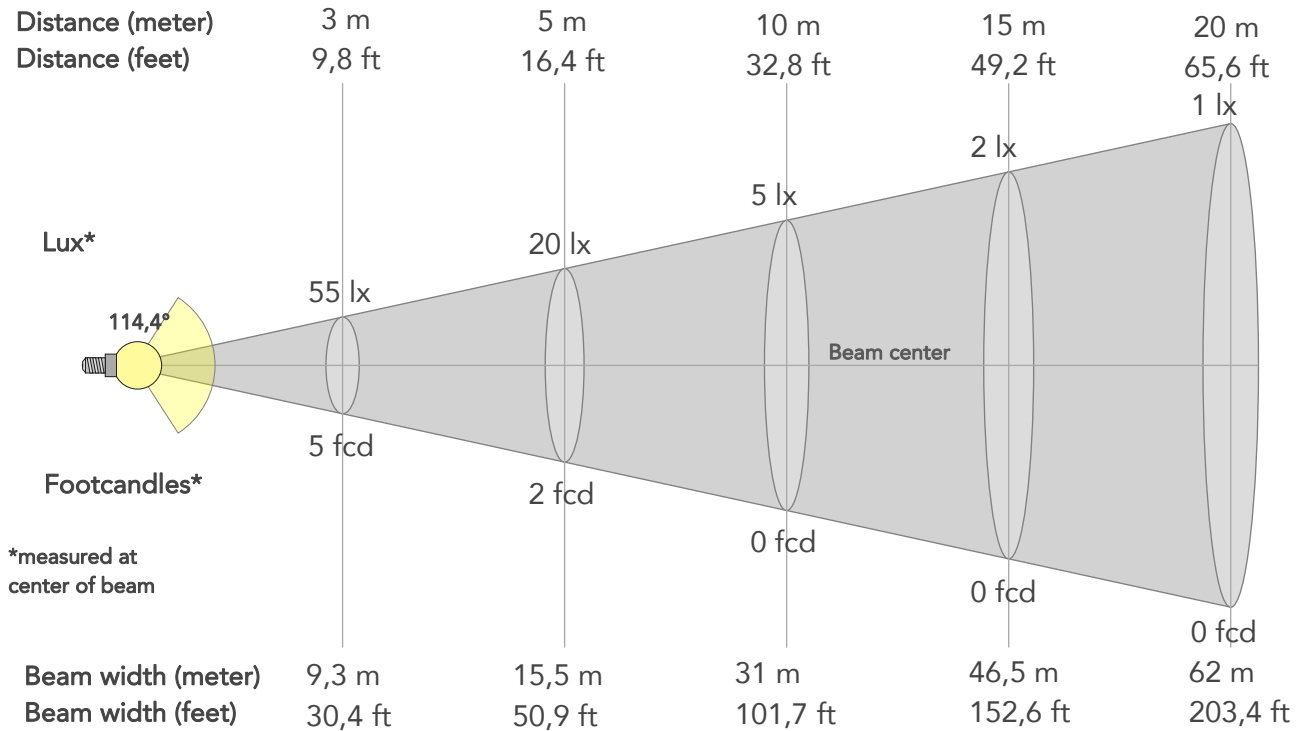
Spectra



BEAM DETAILS



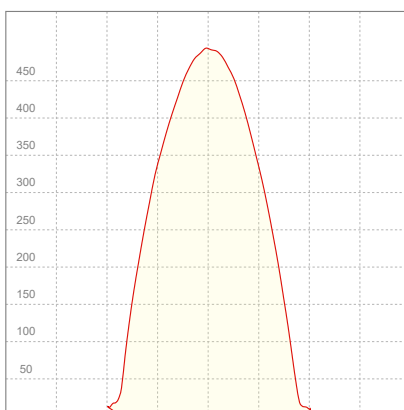
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
114,4°	153,9°	175,3°	80,8%	54,5%



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	493lx	123lx	55lx	31lx	20lx	9lx	5lx	2lx	1lx	1lx	1lx	0lx	0lx
Footcand.	46fcd	11fcd	5fcd	3fcd	2fcd	1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	3,1m	6,2m	9,3m	12,4m	15,5m	23,3m	31m	46,5m	62m	77,5m	93m	124,1m	155,1m
Beam wid.	10,2ft	20,5ft	30,4ft	40,6ft	50,9ft	76,3ft	101,7ft	152,6ft	203,4ft	254,3ft	305,2ft	406,9ft	508,6ft

LINEAR DISTRIBUTION DIAGRAM

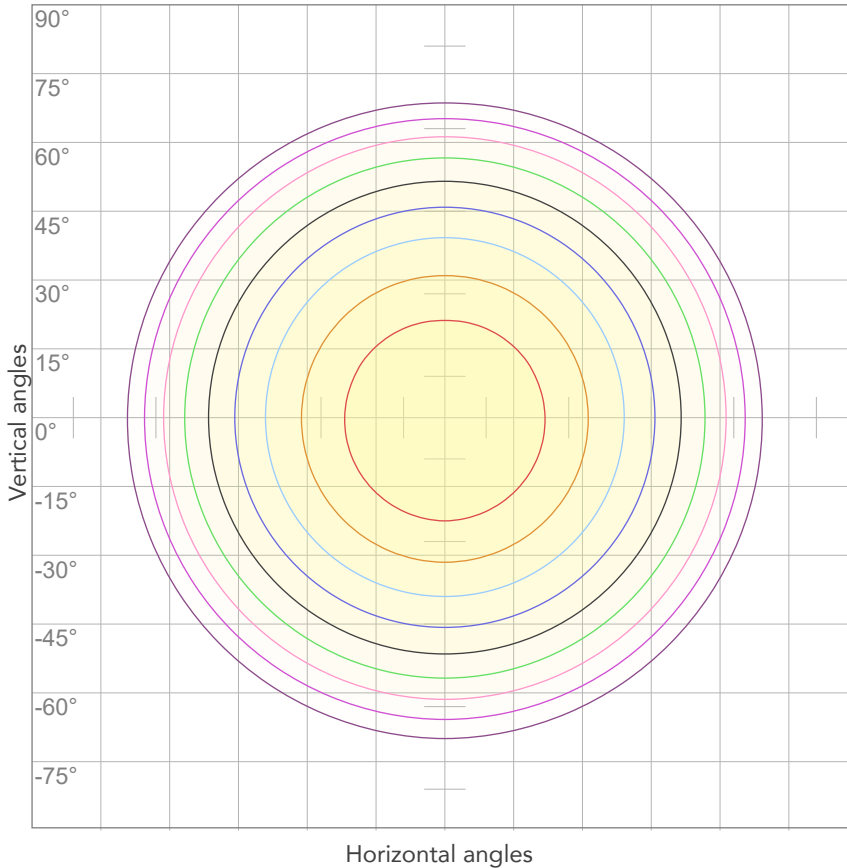


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Efficiency
226V	1,01A	219,5W	0,96	6lm/W

ISO DIAGRAMS

ISO CANDELA DIAGRAM

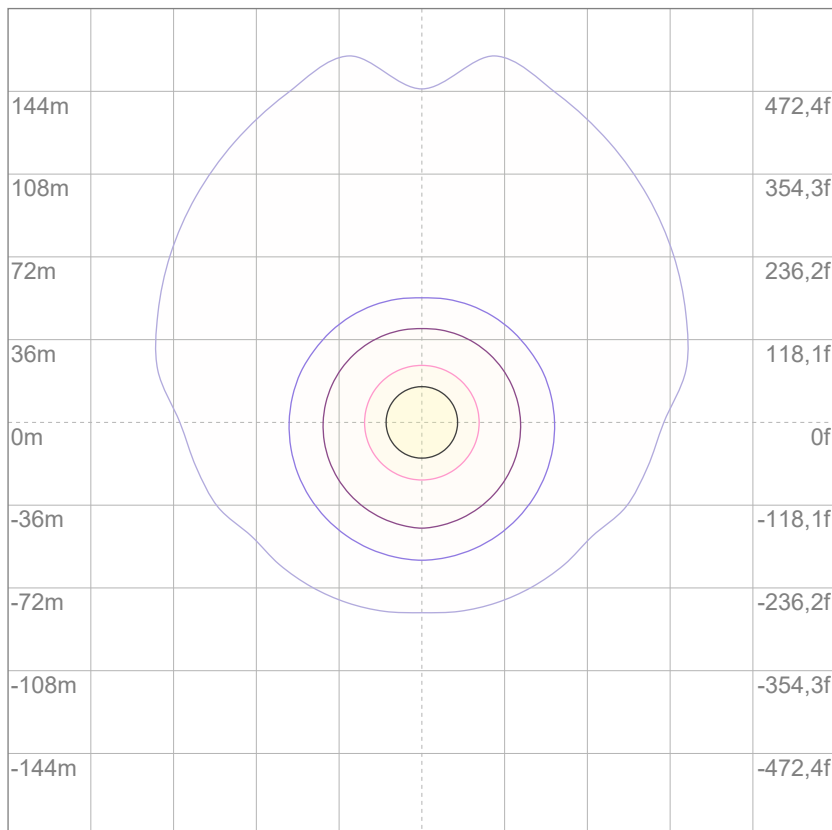


10%	49 cd
20%	99 cd
30%	148 cd
40%	197 cd
50%	246 cd
60%	296 cd
70%	345 cd
80%	394 cd

Conditions:

Number of c-planes: 2
Candela at center: 493 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	0,148 lx
5%	0,246 lx
10%	0,493 lx
30%	1,48 lx
50%	2,46 lx

Conditions:

Number of c-planes: 2
Lux at center: 4,93 lx

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



Total lumen output:

8486 lm

Peak candela output:

2941 cd

Light quality:

CRI: 85,1

Color temperature:

3059 K

PRODUCT NAME:

HALUPIXDUO

MEASURAMENT CONDITIONS:

Beam angle:

Pixel Layer

Target:

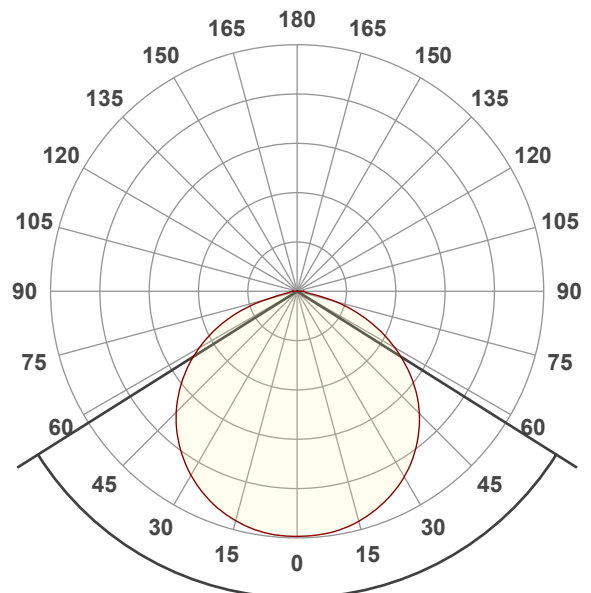
White

Operator:

Salvatore Giglio

Date and time:

28/08/2024 16:11:13

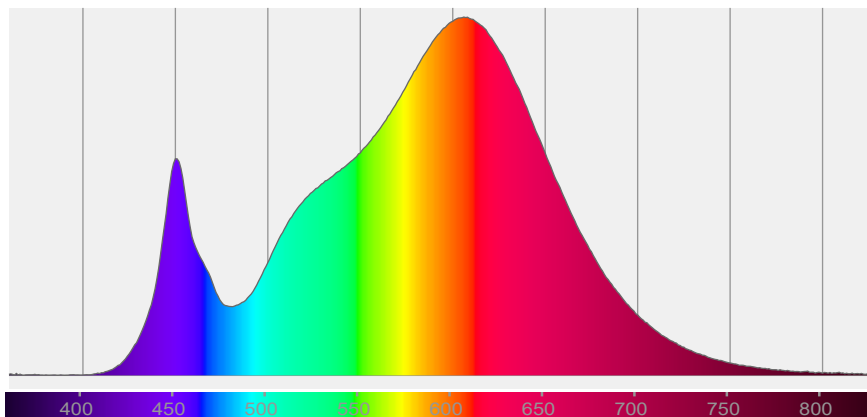


Beam angle 50%: 115,6°

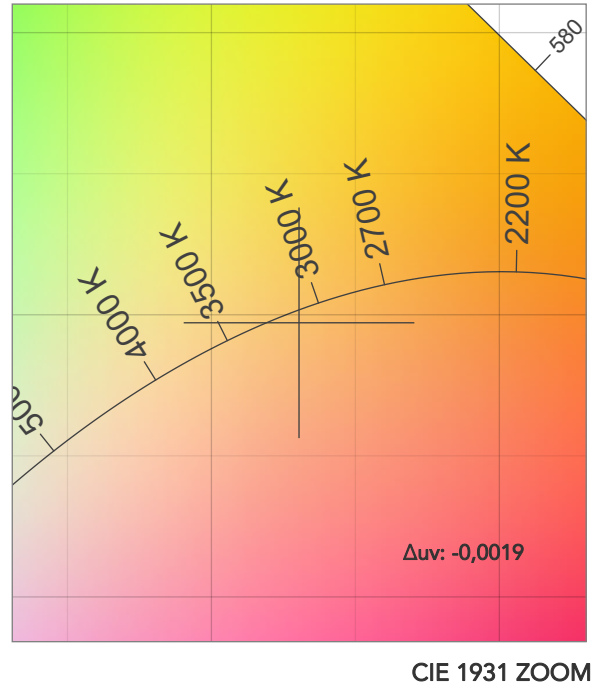
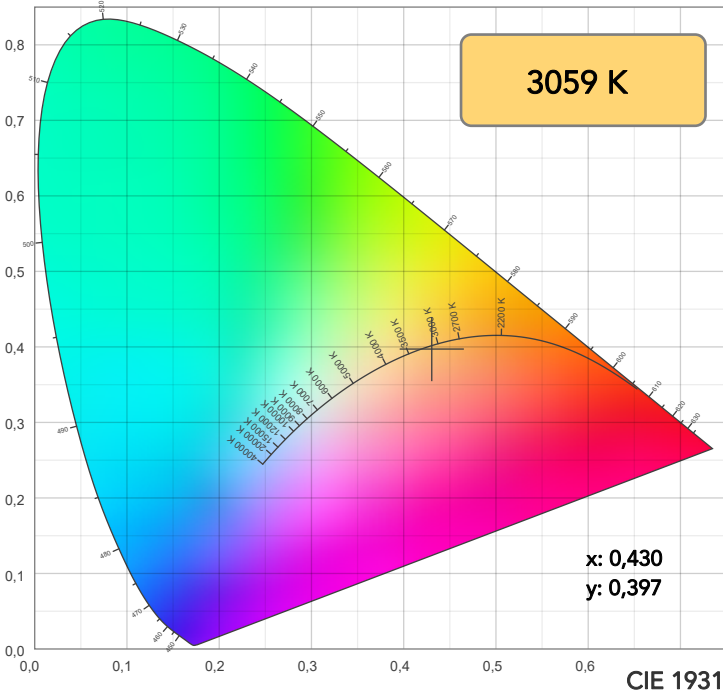
Field angle 10%: 154,1°

Cut off angle 2.5%: 176,8°

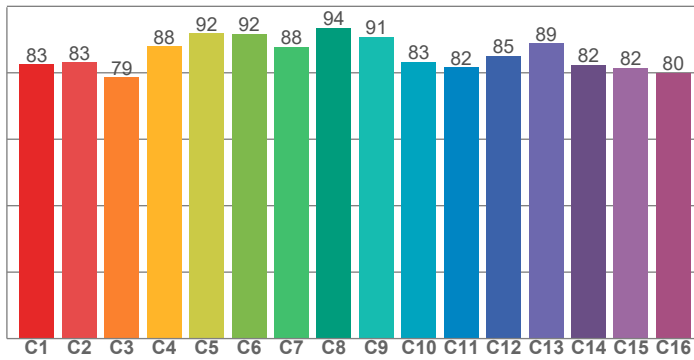
Spectra



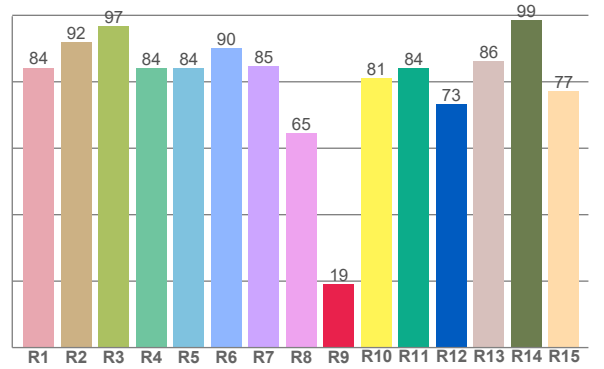
COLOR DETAILS



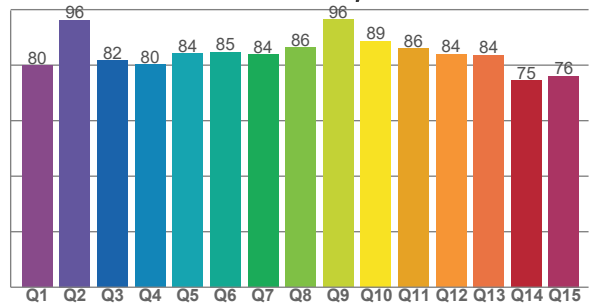
TM30: 85,7



CRI: 85,1 (R1-R8)



CQS: 83,2



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
84,2	92,0	96,8	84,0	84,1	90,0	84,7	64,6	19,1	81,0	84,0	73,4	86,2	98,6	77,3

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
82,6	83,2	78,7	88,0	91,9	91,7	87,9	93,6	90,8	83,4	81,7	85,2	88,9	82,4	81,5	80,0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
79,9	96,2	81,6	80,2	84,2	84,7	83,9	86,3	96,5	88,7	85,9	83,9	83,7	74,5	76,1

COLOR PARAMETERS

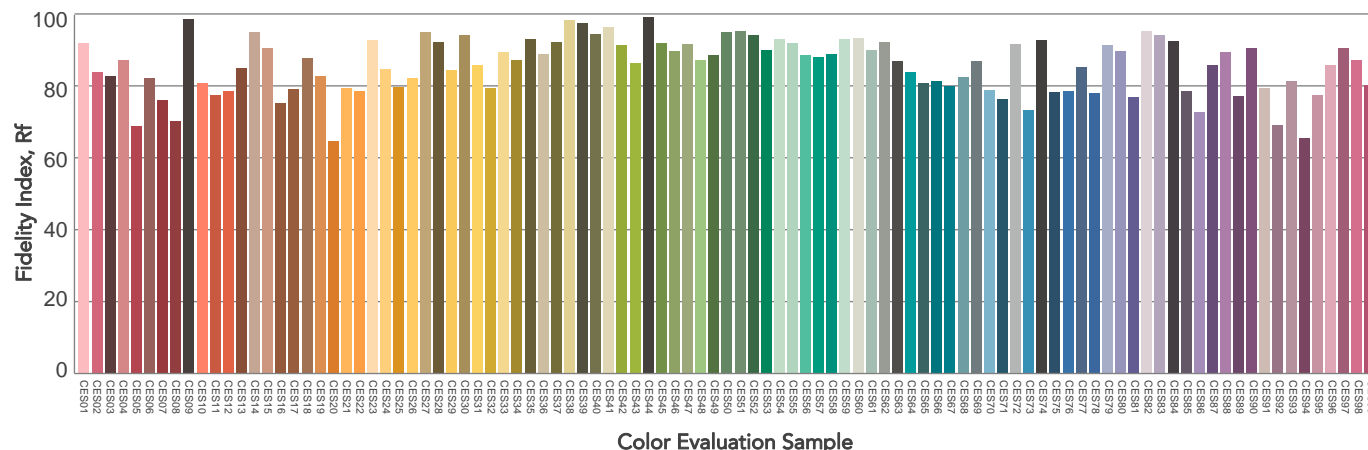
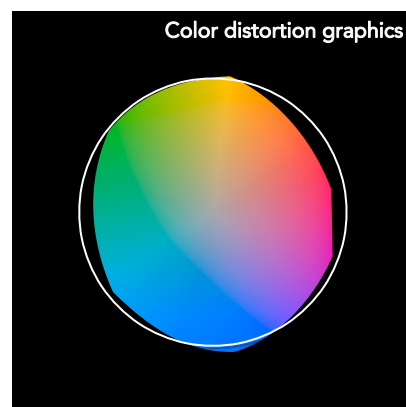
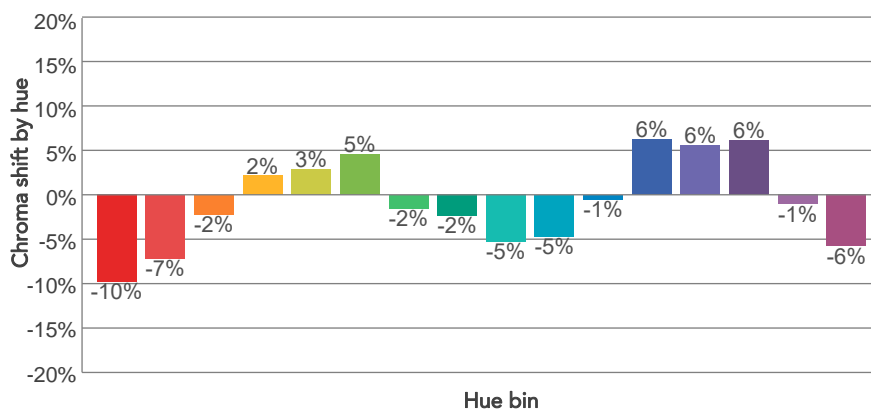
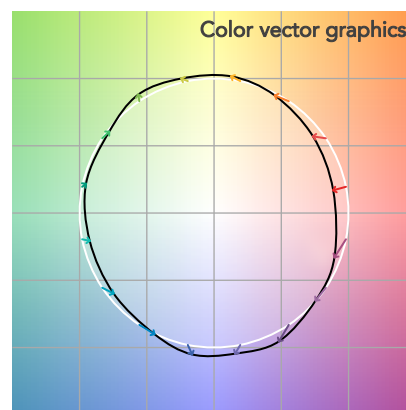
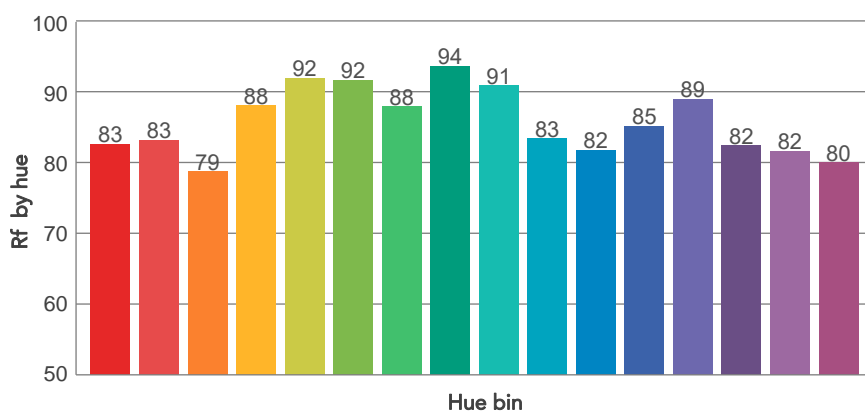
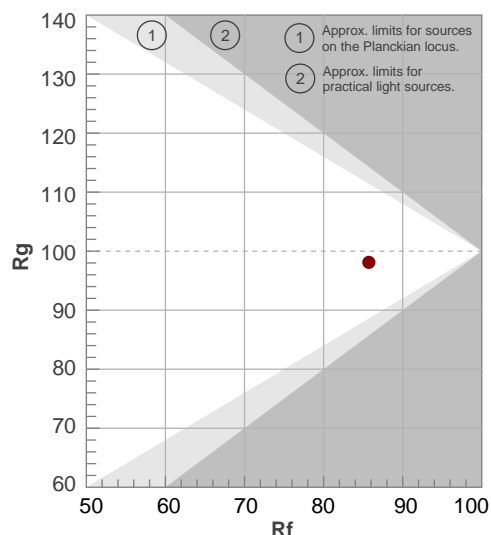
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
3059 K	85,1	19,1	85,7	98,1	83,2	72	0,430	0,397	-0,0019

TM30 DETAILS

Rf 85,7
Fidelity index Rf

Rg 98,1
Gammut index

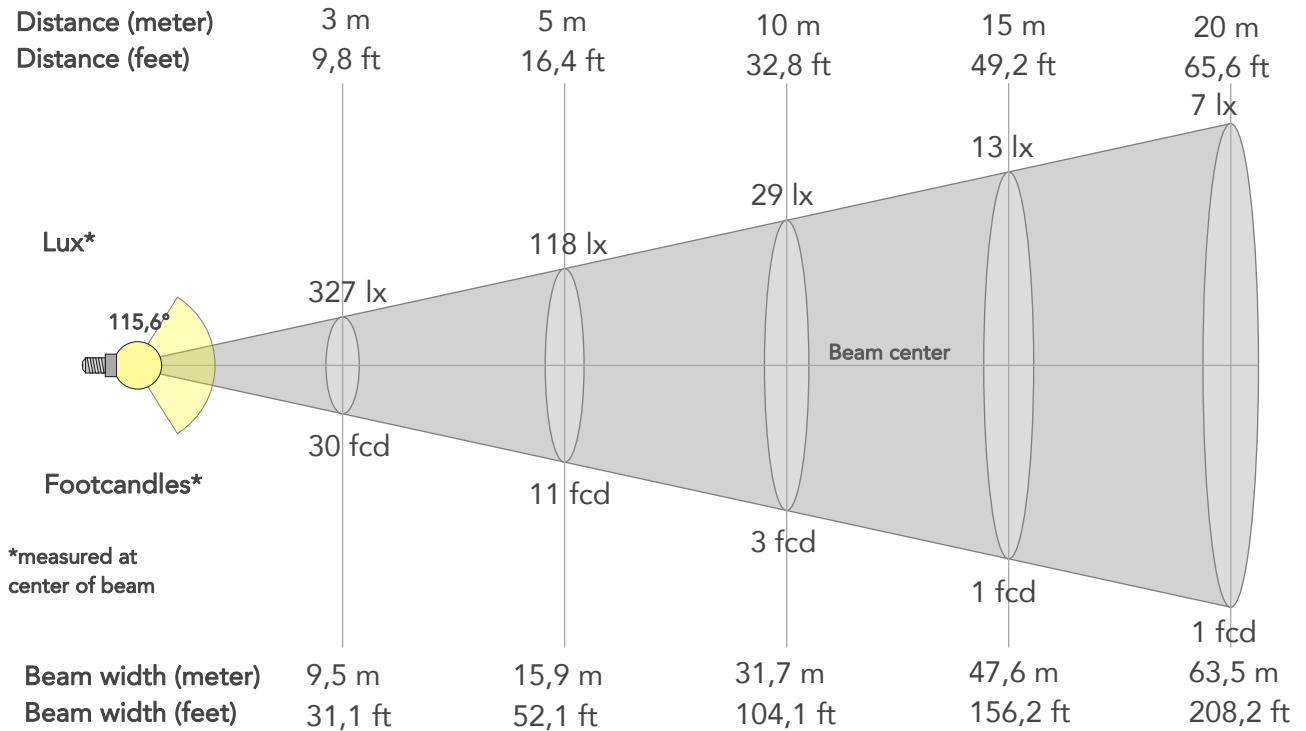
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	83	-10%	-1%
2	83	-7%	7%
3	79	-2%	11%
4	88	2%	7%
5	92	3%	4%
6	92	5%	-2%
7	88	-2%	-7%
8	94	-2%	-3%
9	91	-5%	2%
10	83	-5%	8%
11	82	-1%	13%
12	85	6%	5%
13	89	6%	-5%
14	82	6%	-13%
15	82	-1%	-12%
16	80	-6%	-15%



BEAM DETAILS



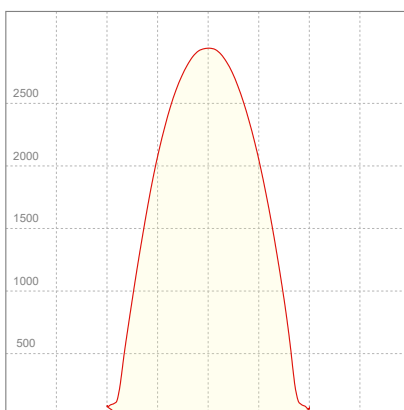
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
115,6°	154,1°	176,8°	80,8%	54,5%



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	2940lx	735lx	327lx	184lx	118lx	52lx	29lx	13lx	7lx	5lx	3lx	2lx	1lx
Footcand.	273fcd	68fcd	30fcd	17fcd	11fcd	5fcd	3fcd	1fcd	1fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	3,2m	6,3m	9,5m	12,7m	15,9m	23,8m	31,7m	47,6m	63,5m	79,4m	95,2m	127m	158,7m
Beam wid.	10,5ft	20,9ft	31,1ft	41,6ft	52,1ft	78,1ft	104,1ft	156,2ft	208,2ft	260,3ft	312,3ft	416,5ft	520,6ft

LINEAR DISTRIBUTION DIAGRAM

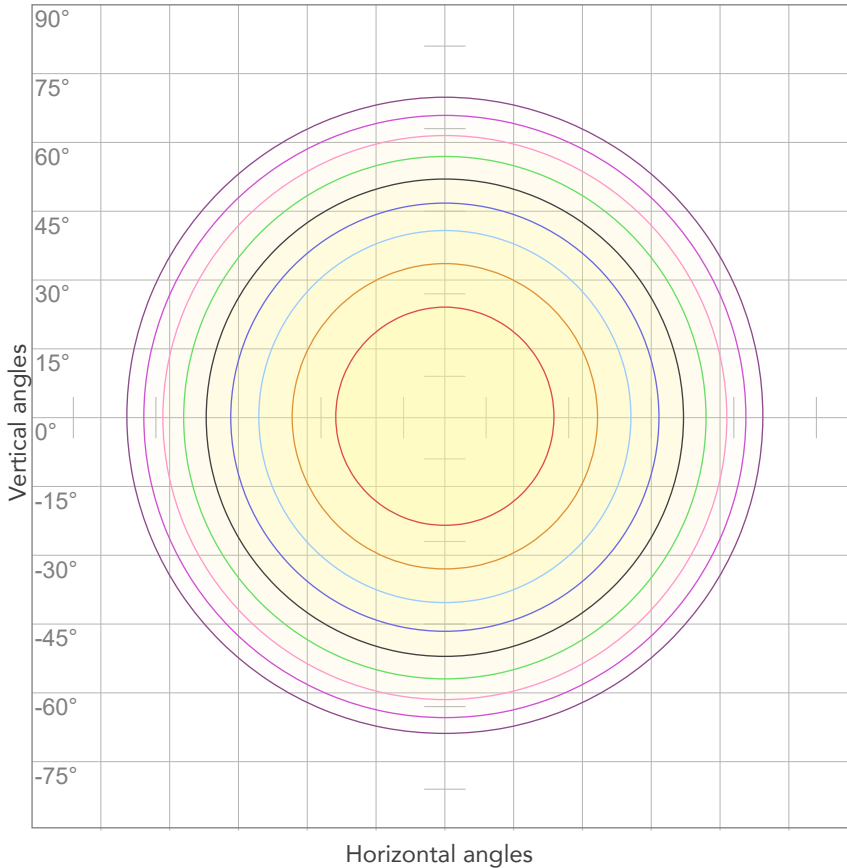


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Efficiency
225V	1,02A	220,1W	0,96	39lm/W

ISO DIAGRAMS

ISO CANDELA DIAGRAM



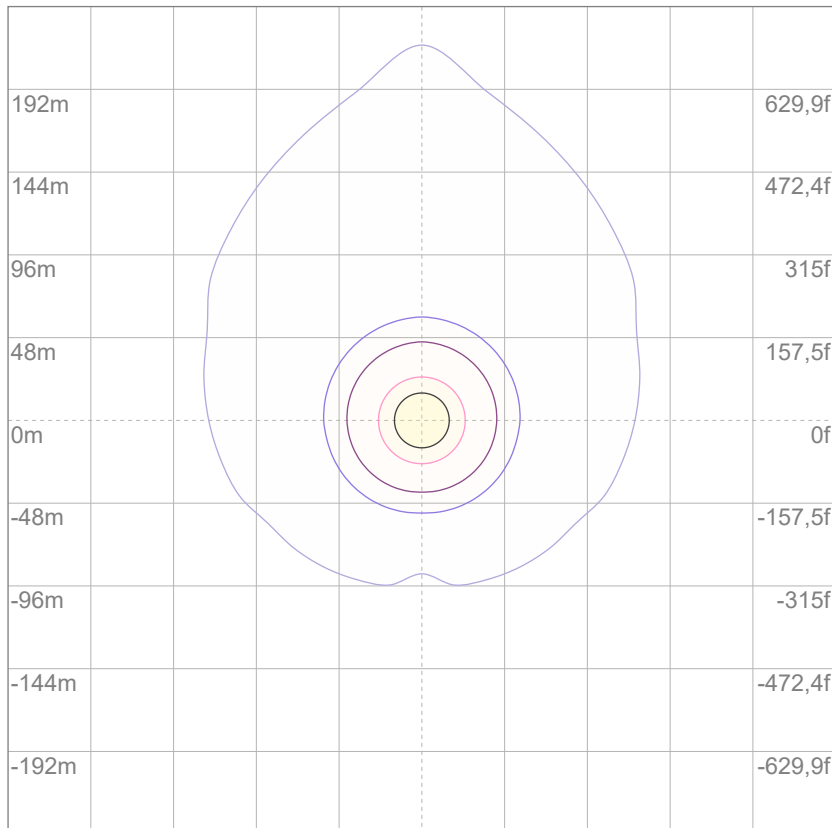
10%	294 cd
20%	588 cd
30%	882 cd
40%	1176 cd
50%	1470 cd
60%	1764 cd
70%	2058 cd
80%	2352 cd

Conditions:

Number of c-planes: 2

Candela at center: 2940 cd

ISO LUX DIAGRAM



3%	0,882 lx
5%	1,47 lx
10%	2,94 lx
30%	8,82 lx
50%	14,7 lx

Conditions:

Number of c-planes: 2

Lux at center: 29,4 lx

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



Total lumen output:

10251 lm

Peak candela output:

3539 cd

Light quality:

CRI: 94,4

Color temperature:

2823 K

PRODUCT NAME:

HALUPIXDUO

MEASUREMENT CONDITIONS:

Beam angle:

Pixel Layer

Target:

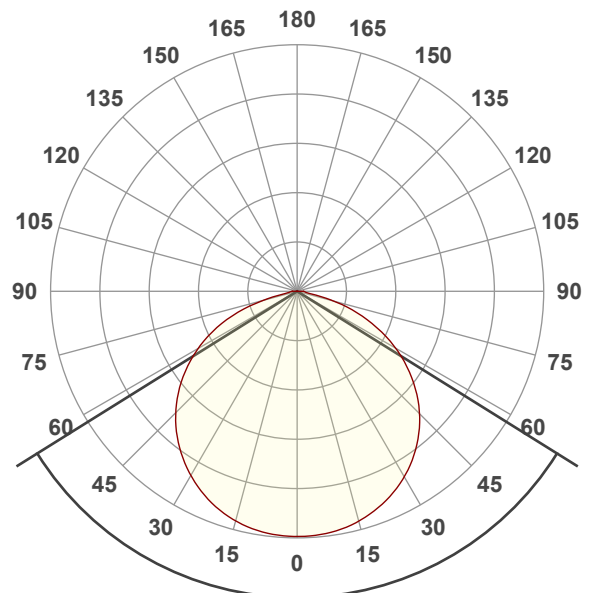
2800K

Operator:

Salvatore Giglio

Date and time:

28/08/2024 16:18:19

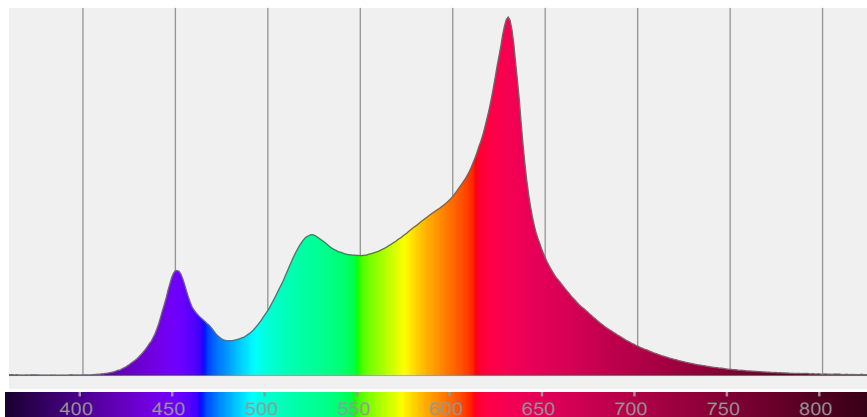


Beam angle 50%: 116,1°

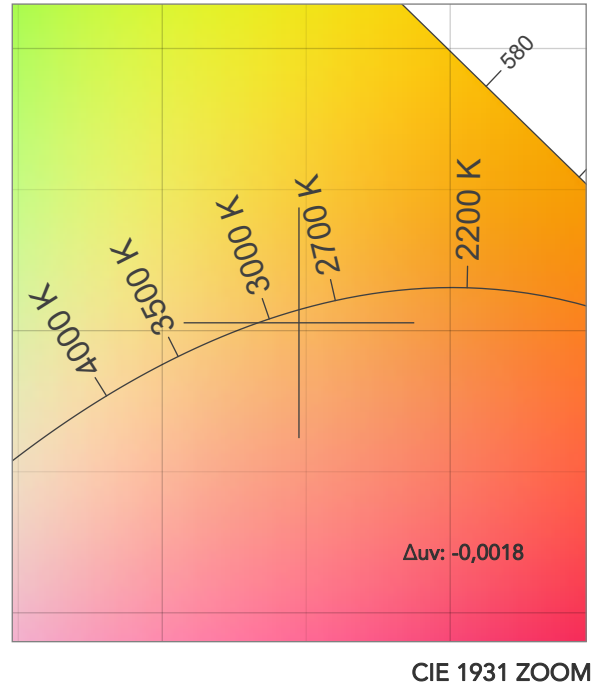
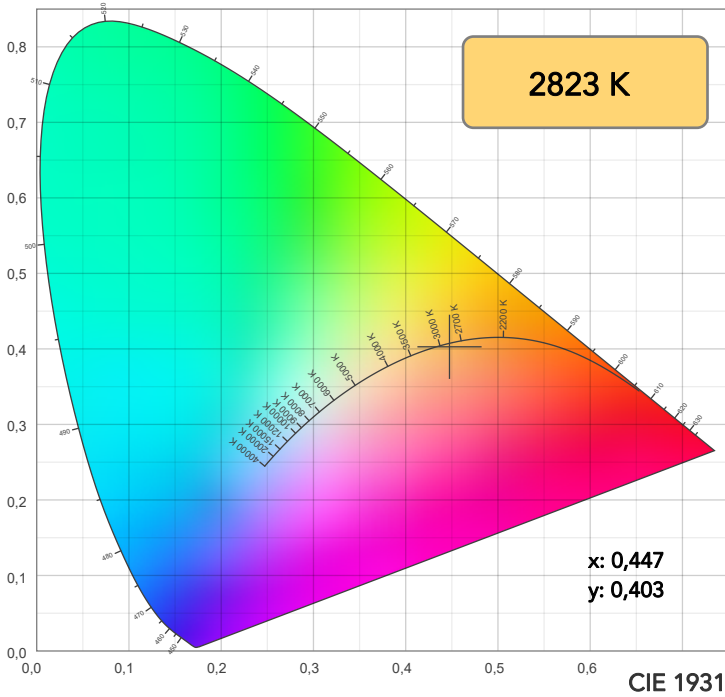
Field angle 10%: 154,6°

Cut off angle 2.5%: 176,5°

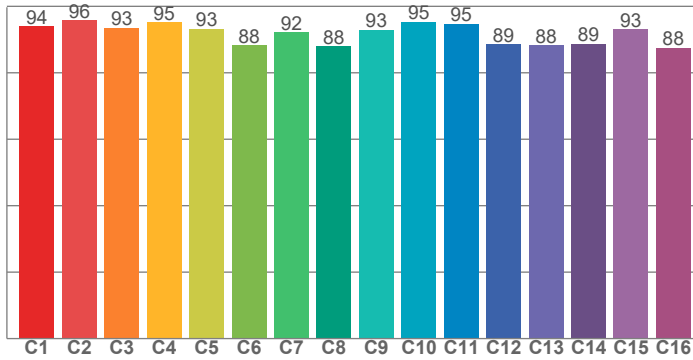
Spectra



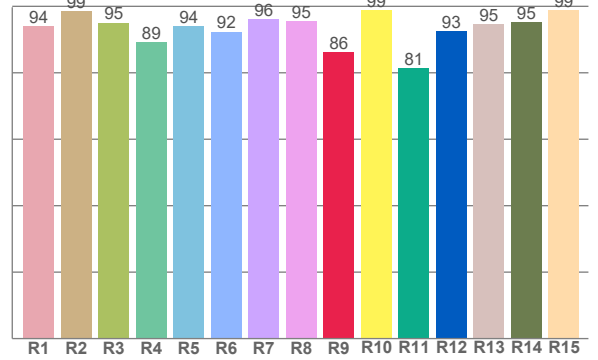
COLOR DETAILS



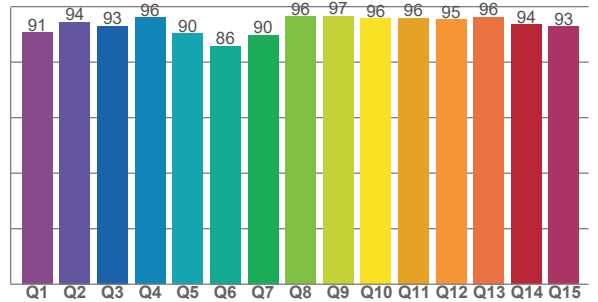
TM30: 92,4



CRI: 94,4 (R1-R8)



CQS: 92,6



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
94,0	98,5	95,1	89,2	94,0	92,3	96,3	95,5	86,2	98,8	81,5	92,6	94,7	95,2	98,7

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	95,8	93,5	95,2	93,2	88,3	92,3	87,9	93,0	95,3	94,8	88,6	88,3	88,8	93,2	87,6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
90,7	94,4	92,9	96,0	90,3	85,7	89,7	96,5	96,6	95,8	95,9	95,4	96,3	93,6	92,9

COLOR PARAMETERS

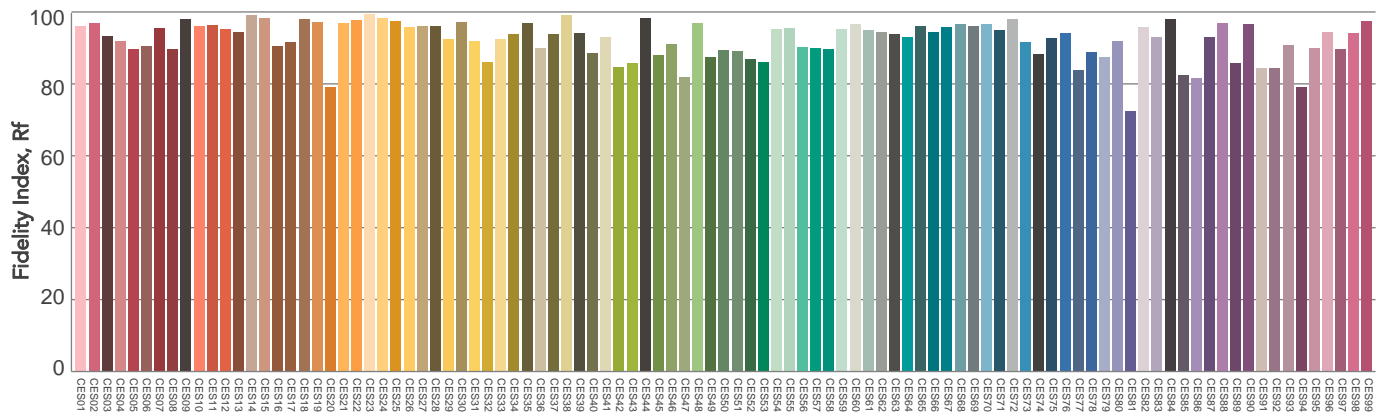
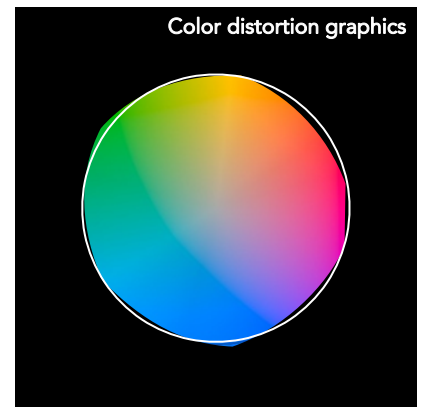
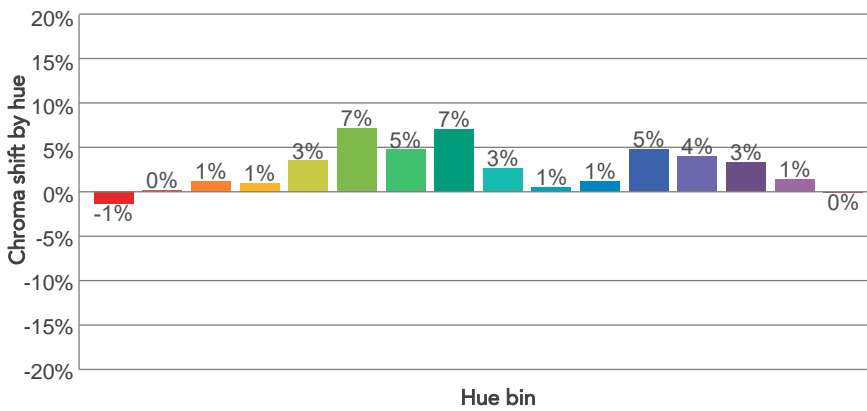
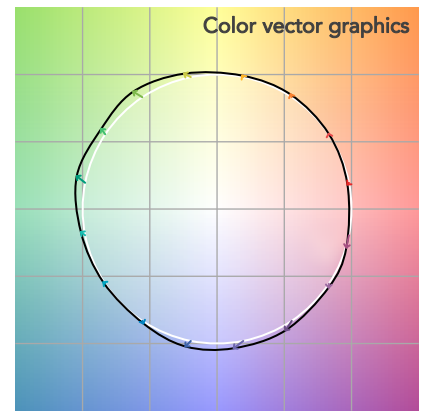
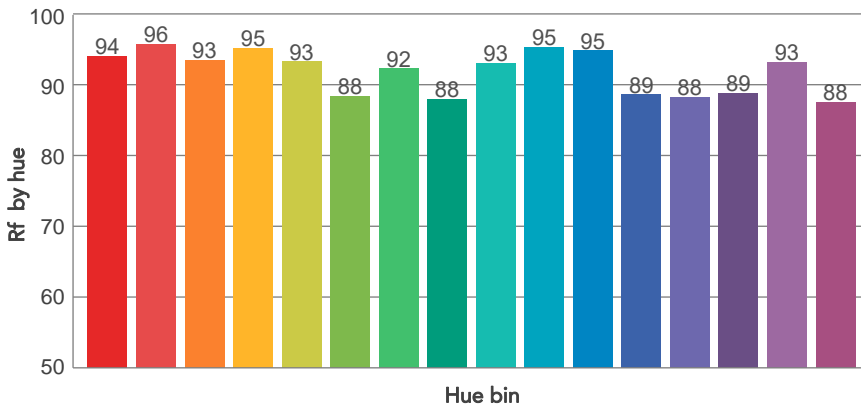
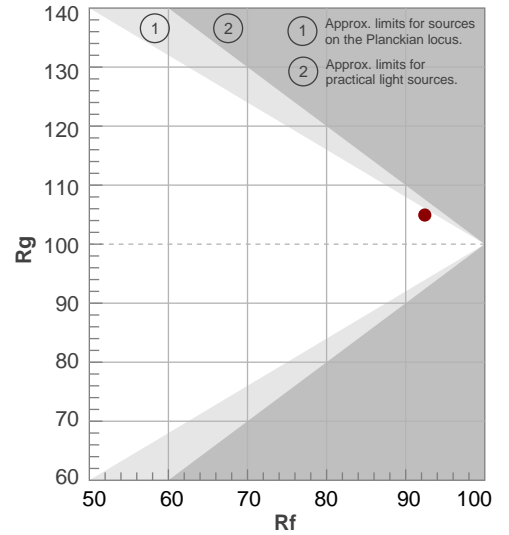
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
2823 K	94,4	86,2	92,4	104,9	92,6	83	0,447	0,403	-0,0018

TM30 DETAILS

Rf 92,4
Fidelity index Rf

Rg 104,9
Gammut index

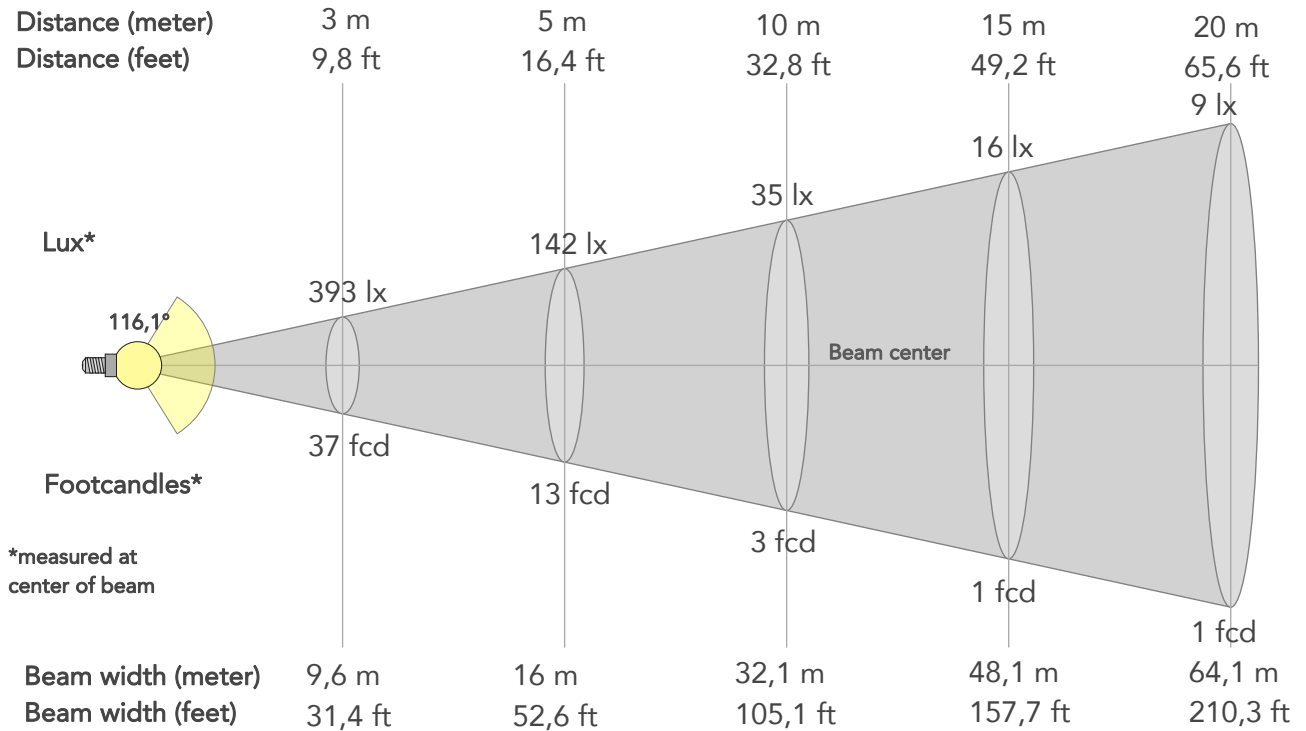
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	94	-1%	-1%
2	96	0%	0%
3	93	1%	2%
4	95	1%	1%
5	93	3%	4%
6	88	7%	3%
7	92	5%	-2%
8	88	7%	-4%
9	93	3%	-3%
10	95	1%	-2%
11	95	1%	2%
12	89	5%	-3%
13	88	4%	-8%
14	89	3%	-8%
15	93	1%	-2%
16	88	0%	-9%



BEAM DETAILS



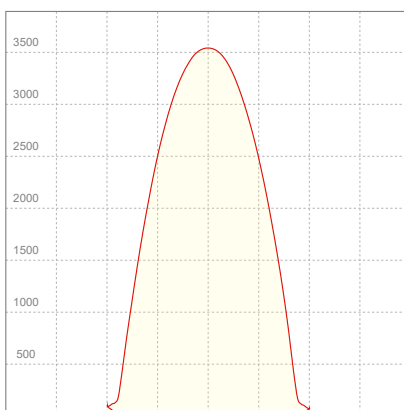
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
116,1°	154,6°	176,5°	80,8%	54,4%



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	3539lx	885lx	393lx	221lx	142lx	63lx	35lx	16lx	9lx	6lx	4lx	2lx	1lx
Footcand.	329fcd	82fcd	37fcd	21fcd	13fcd	6fcd	3fcd	1fcd	1fcd	1fcd	0fcd	0fcd	0fcd
Beam wid.	3,2m	6,4m	9,6m	12,8m	16m	24m	32,1m	48,1m	64,1m	80,1m	96,2m	128,2m	160,3m
Beam wid.	10,6ft	21,2ft	31,4ft	42ft	52,6ft	78,9ft	105,1ft	157,7ft	210,3ft	262,9ft	315,4ft	420,6ft	525,7ft

LINEAR DISTRIBUTION DIAGRAM

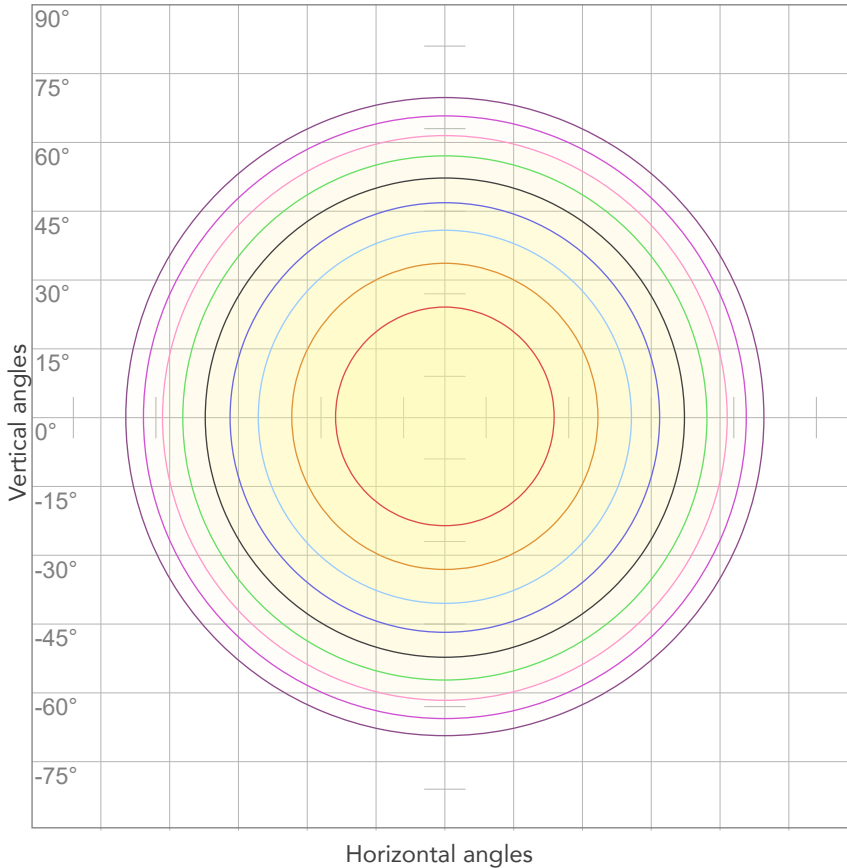


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Efficiency
223V	1,29A	286W	0,98	36lm/W

ISO DIAGRAMS

ISO CANDELA DIAGRAM



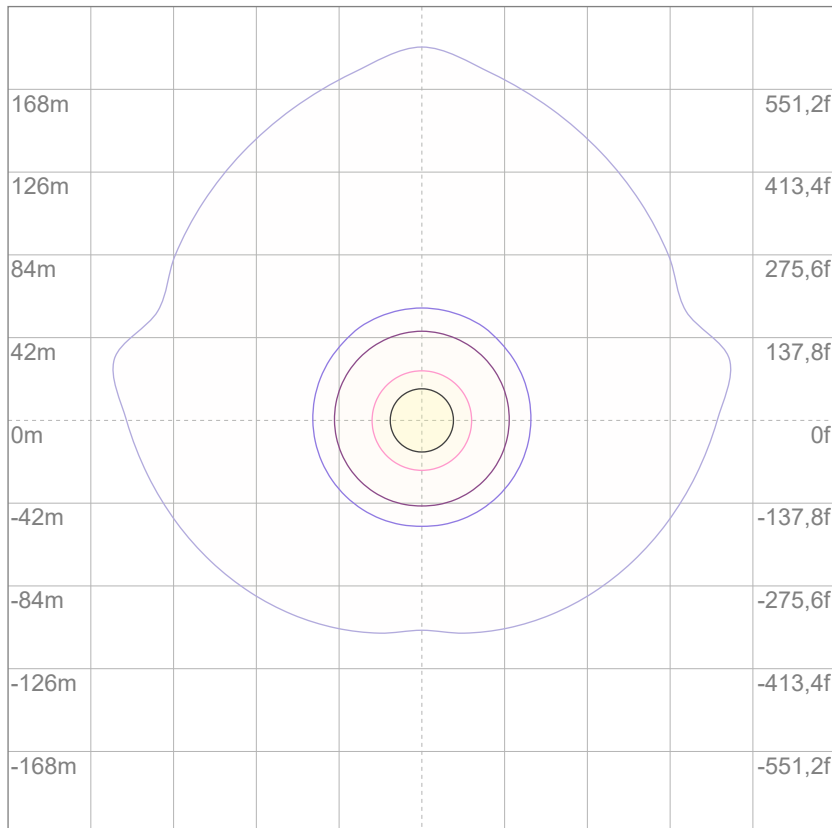
10%	354 cd
20%	708 cd
30%	1062 cd
40%	1416 cd
50%	1769 cd
60%	2123 cd
70%	2477 cd
80%	2831 cd

Conditions:

Number of c-planes: 2

Candela at center: 3539 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	1,06 lx
5%	1,77 lx
10%	3,54 lx
30%	10,6 lx
50%	17,7 lx

Conditions:

Number of c-planes: 2

Lux at center: 35,4 lx

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



Total lumen output:

10993 lm

Peak candela output:

3801 cd

Light quality:

CRI: 94,0

Color temperature:

3205 K

PRODUCT NAME:
HALUPIXDUO

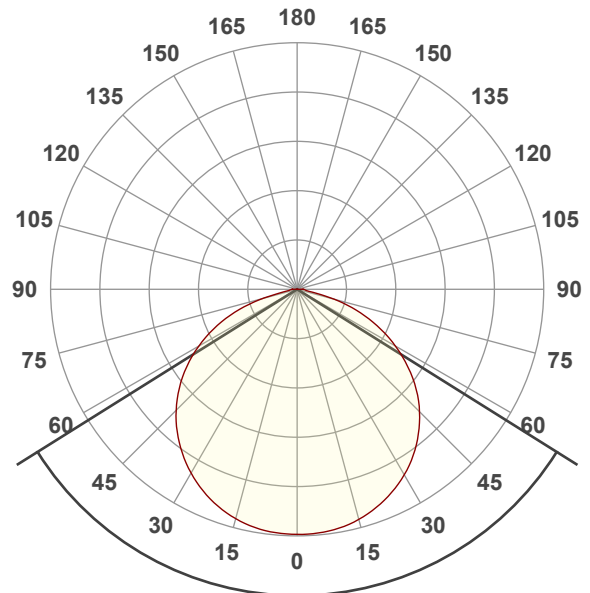
MEASURAMENT CONDITIONS:

Beam angle:
Pixel Layer

Target:
3200K

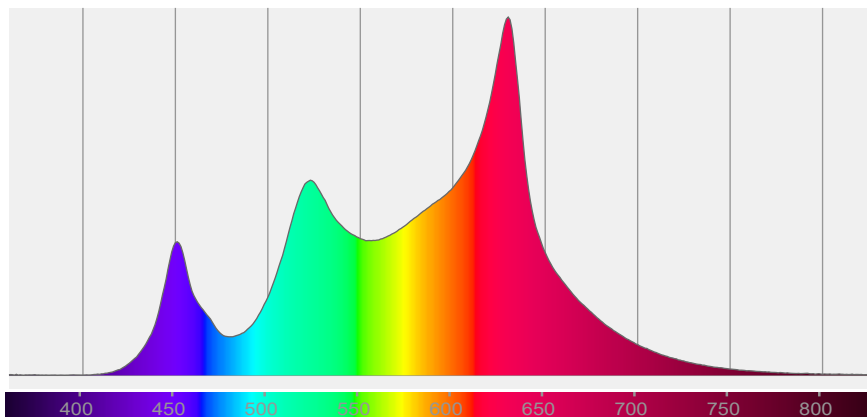
Operator:
Salvatore Giglio

Date and time:
28/08/2024 16:28:32

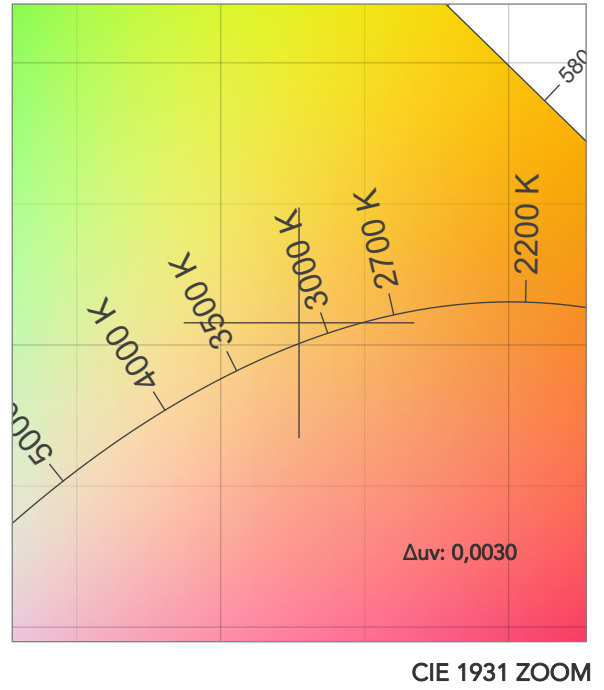
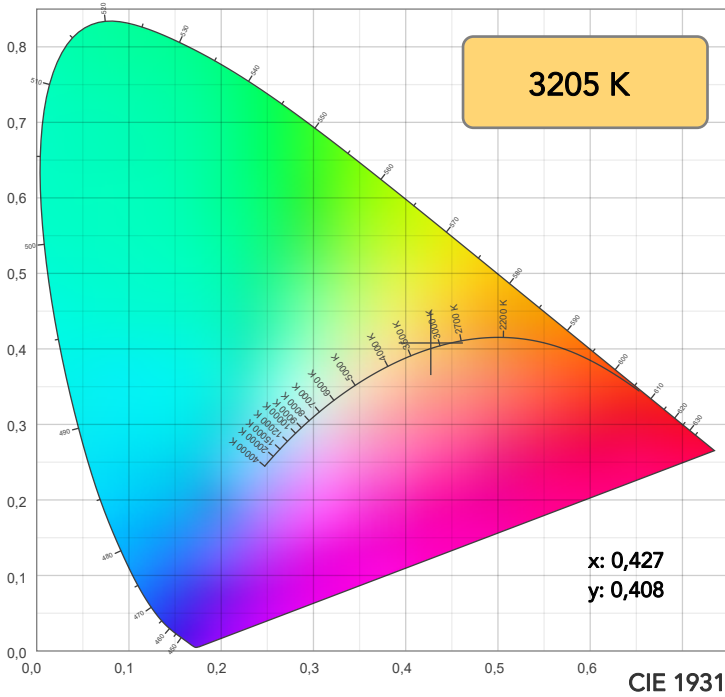


Beam angle 50%: 115,9°
Field angle 10%: 154,2°
Cut off angle 2.5%: 176,6°

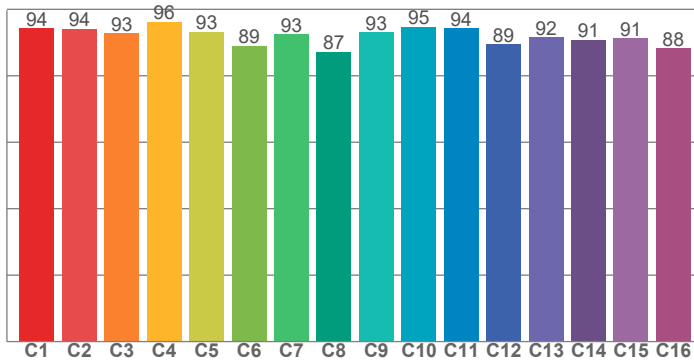
Spectra



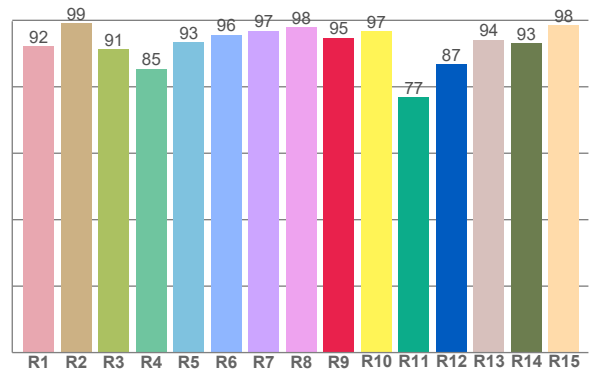
COLOR DETAILS



TM30: 92,6



CRI: 94,0 (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
92,3	99,2	91,3	85,5	93,3	95,7	96,9	98,0	94,8	96,6	76,8	86,9	94,2	93,2	98,4

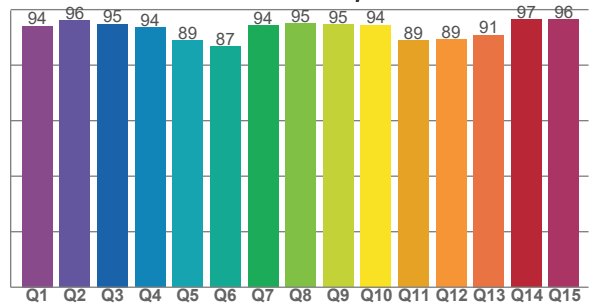
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
94,3	94,2	92,8	96,3	93,2	89,0	92,6	87,2	93,2	94,8	94,3	89,5	91,7	90,8	91,3	88,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
94,2	96,0	94,9	93,6	88,8	86,8	94,3	94,9	94,6	94,5	88,9	89,2	90,9	96,5	96,4

CQS: 92,2



COLOR PARAMETERS

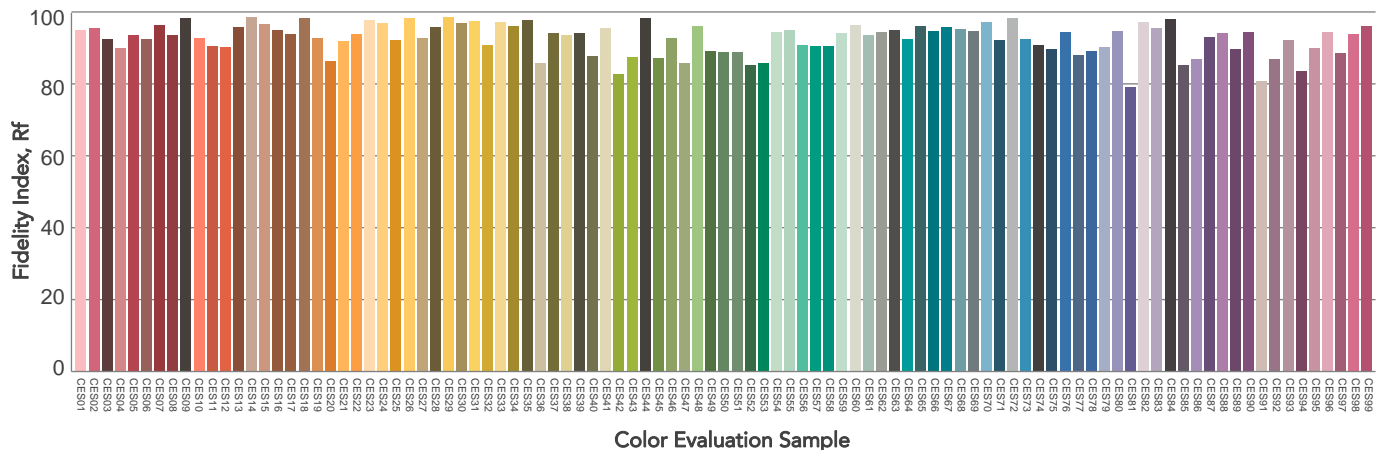
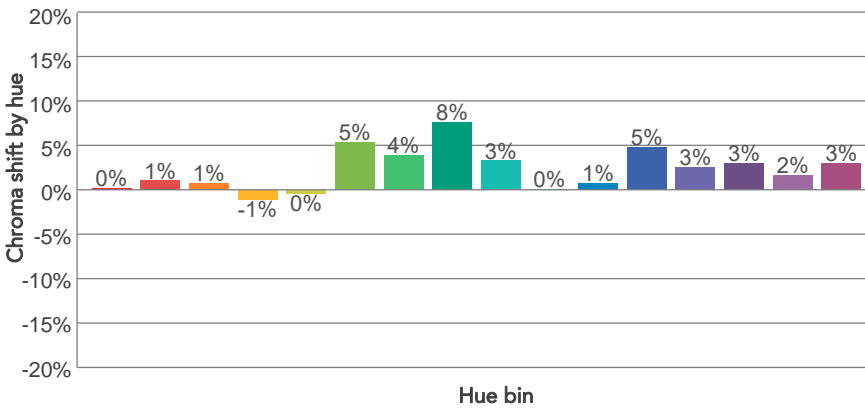
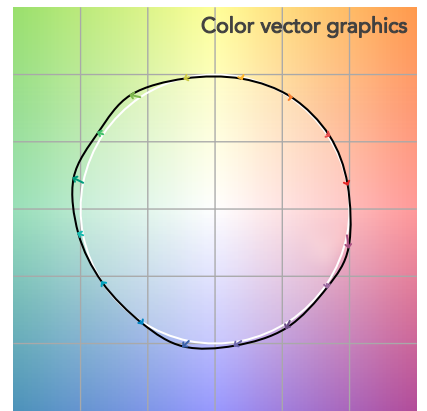
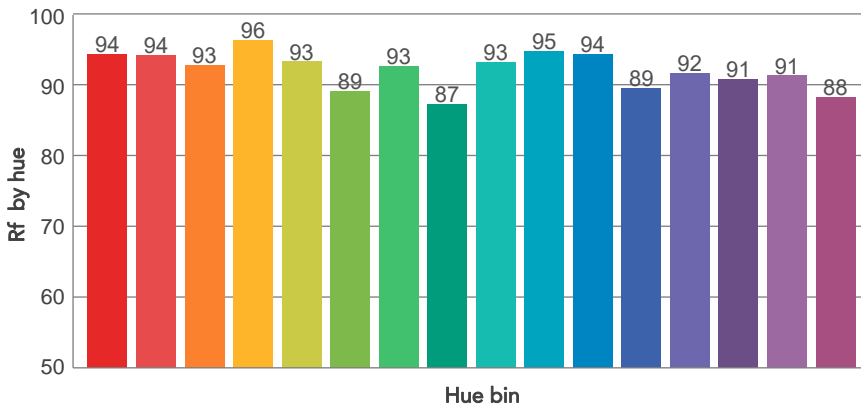
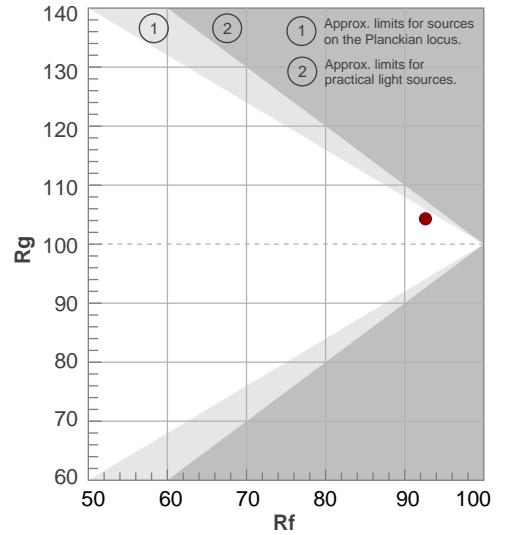
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
3205 K	94,0	94,8	92,6	104,3	92,2	85	0,427	0,408	0,0030

TM30 DETAILS

Rf 92,6
Fidelity index Rf

Rg 104,3
Gammut index

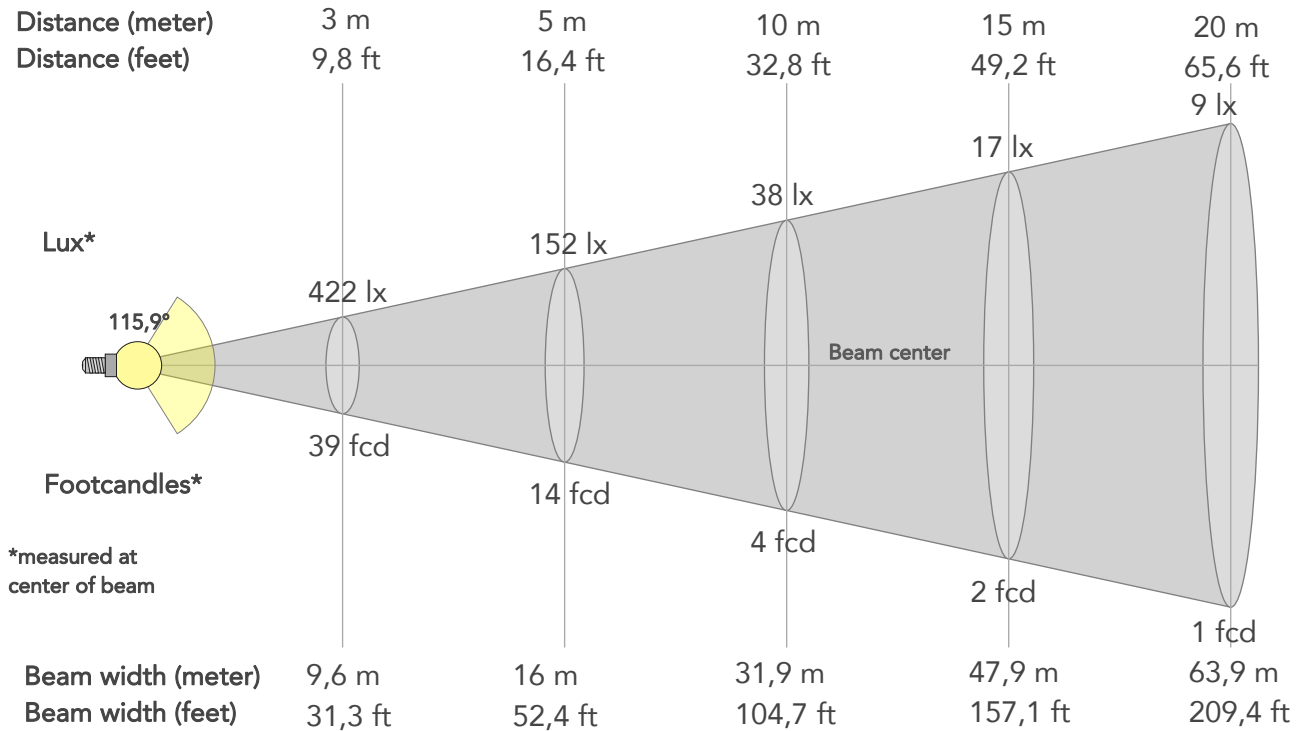
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	94	0%	-1%
2	94	1%	-2%
3	93	1%	-1%
4	96	-1%	-1%
5	93	0%	3%
6	89	5%	5%
7	93	4%	1%
8	87	8%	-2%
9	93	3%	-2%
10	95	0%	-1%
11	94	1%	2%
12	89	5%	-3%
13	92	3%	-5%
14	91	3%	-5%
15	91	2%	-2%
16	88	3%	-9%



BEAM DETAILS



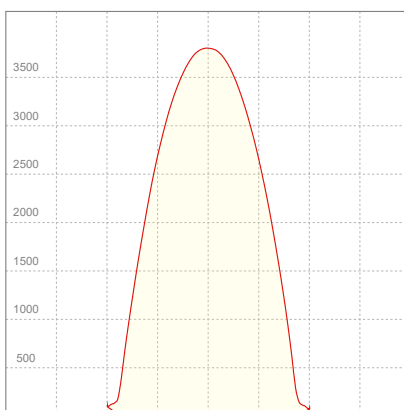
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
115,9°	154,2°	176,6°	80,8%	54,5%



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	3799lx	950lx	422lx	237lx	152lx	68lx	38lx	17lx	9lx	6lx	4lx	2lx	2lx
Footcand.	353fcd	88fcd	39fcd	22fcd	14fcd	6fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd
Beam wid.	3,2m	6,4m	9,6m	12,8m	16m	23,9m	31,9m	47,9m	63,9m	79,8m	95,8m	127,7m	159,6m
Beam wid.	10,5ft	21,1ft	31,3ft	41,8ft	52,4ft	78,5ft	104,7ft	157,1ft	209,4ft	261,8ft	314,2ft	418,9ft	523,6ft

LINEAR DISTRIBUTION DIAGRAM

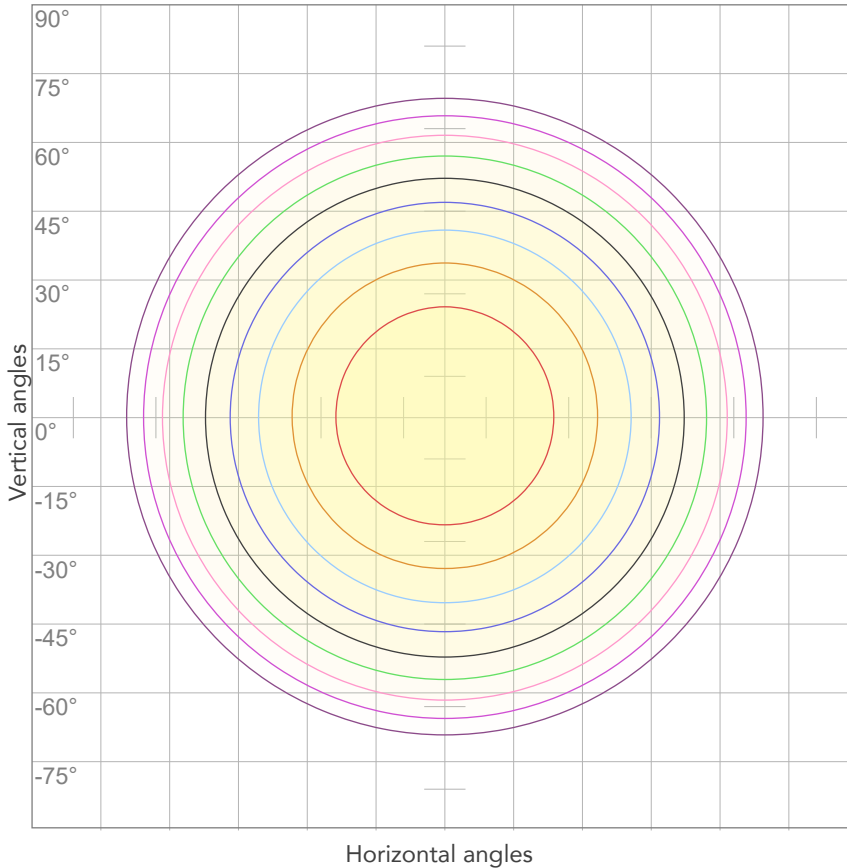


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Efficiency
222V	1,38A	307W	0,99	36lm/W

ISO DIAGRAMS

ISO CANDELA DIAGRAM



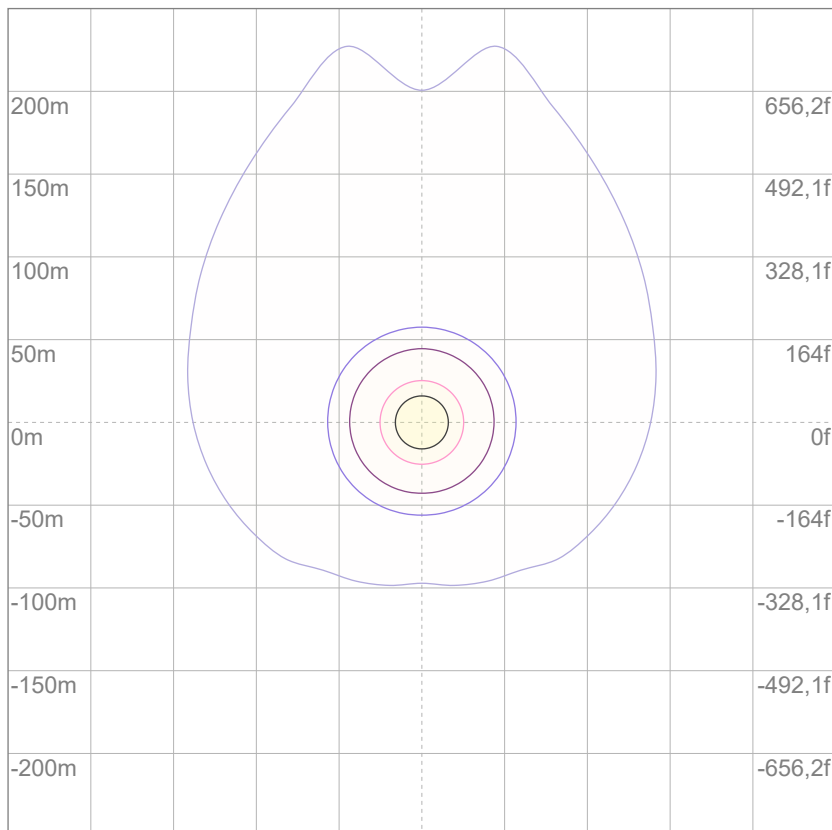
10%	380 cd
20%	760 cd
30%	1140 cd
40%	1520 cd
50%	1900 cd
60%	2279 cd
70%	2659 cd
80%	3039 cd

Conditions:

Number of c-planes: 2

Candela at center: 3799 cd

ISO LUX DIAGRAM



3%	1,14 lx
5%	1,90 lx
10%	3,80 lx
30%	11,4 lx
50%	19,0 lx

Conditions:

Number of c-planes: 2

Lux at center: 38,0 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:

11574 lm

Peak candela output:

4001 cd

Light quality:

CRI: 93,2

Color temperature:

3984 K

PRODUCT NAME:

HALUPIXDUO

MEASUREMENT CONDITIONS:

Beam angle:

Pixel Layer

Target:

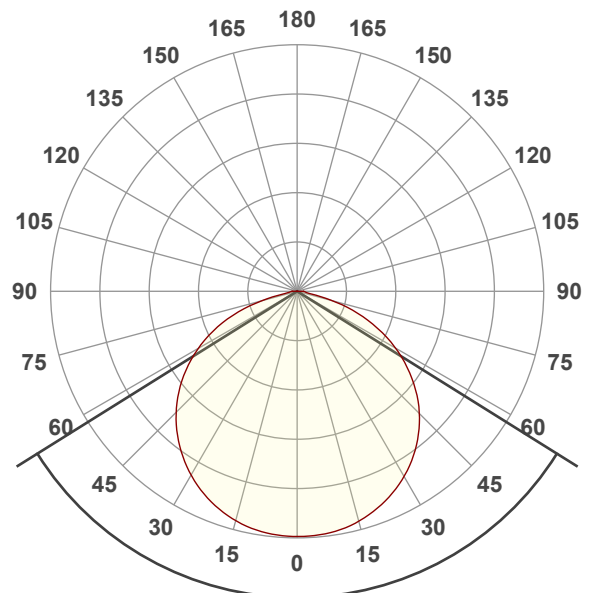
4000K

Operator:

Salvatore Giglio

Date and time:

28/08/2024 16:33:28

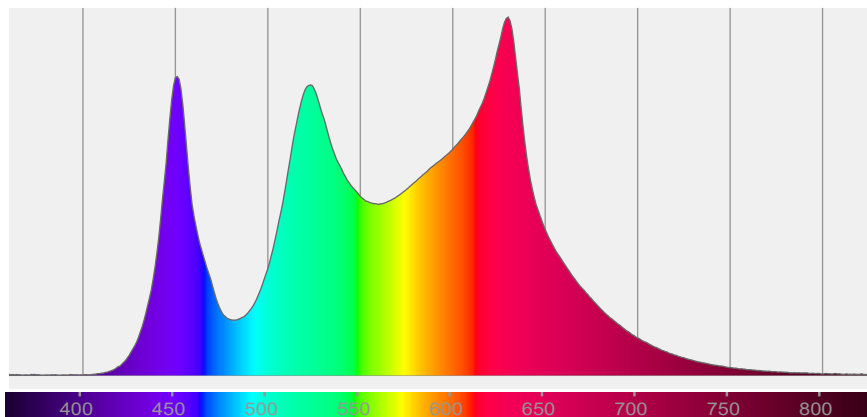


Beam angle 50%: 116°

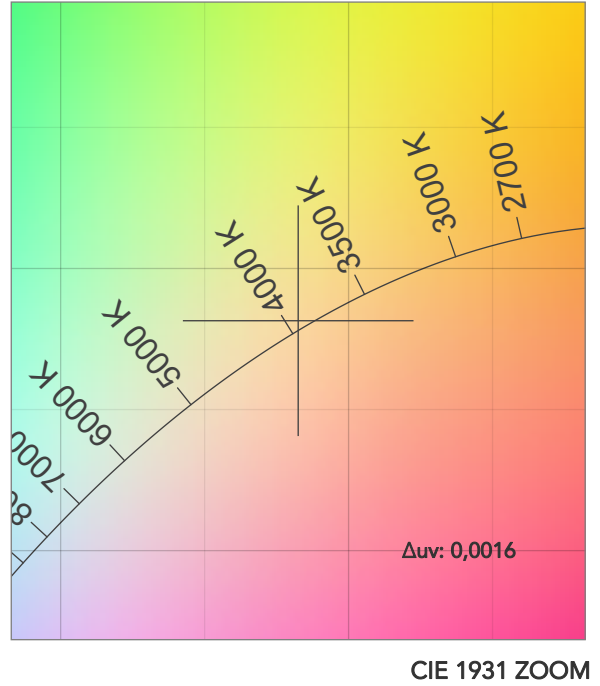
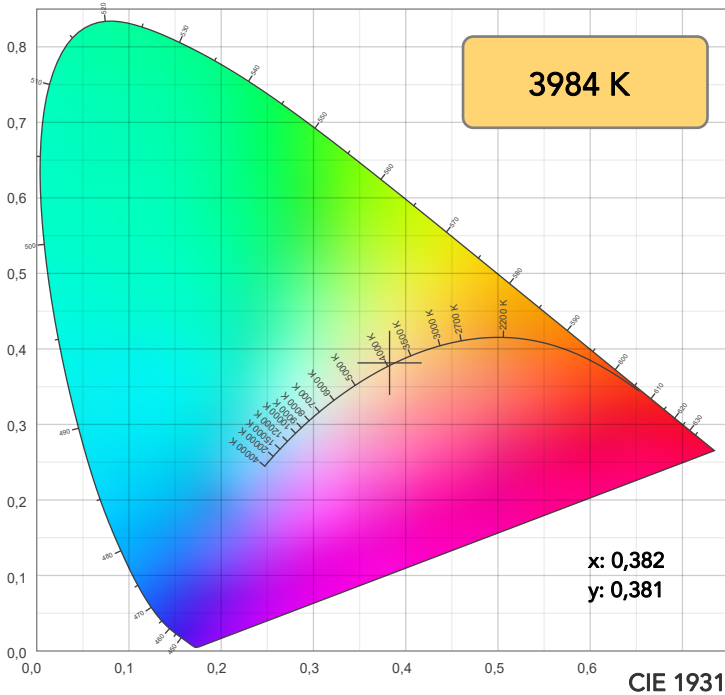
Field angle 10%: 154,6°

Cut off angle 2.5%: 176,5°

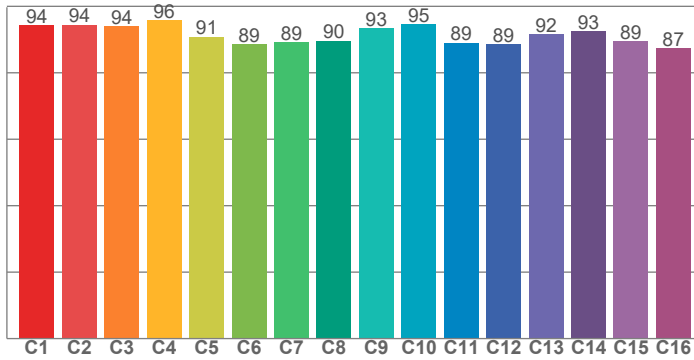
Spectra



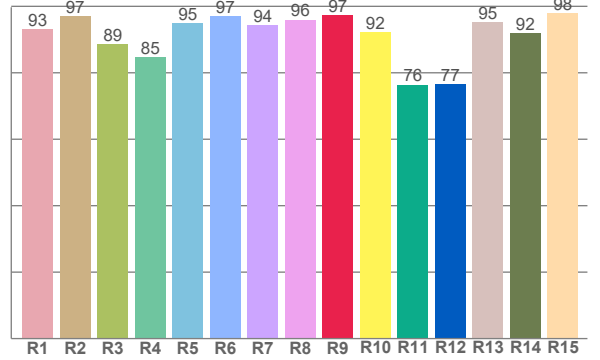
COLOR DETAILS



TM30: 91,7



CRI: 93,2 (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
93,0	97,1	88,6	84,8	94,9	97,1	94,4	96,0	97,4	92,3	76,4	76,6	95,3	92,0	97,9

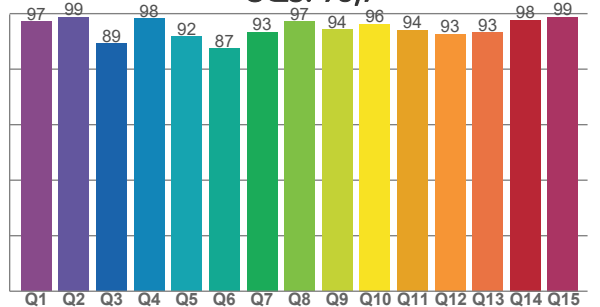
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
94,3	94,4	93,9	95,8	90,8	88,6	89,1	89,6	93,4	94,6	89,0	88,5	91,5	92,5	89,4	87,3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
97,1	98,8	89,3	98,2	91,8	87,4	93,3	97,1	94,3	96,2	94,2	92,7	93,2	97,7	98,8

CQS: 93,7



COLOR PARAMETERS

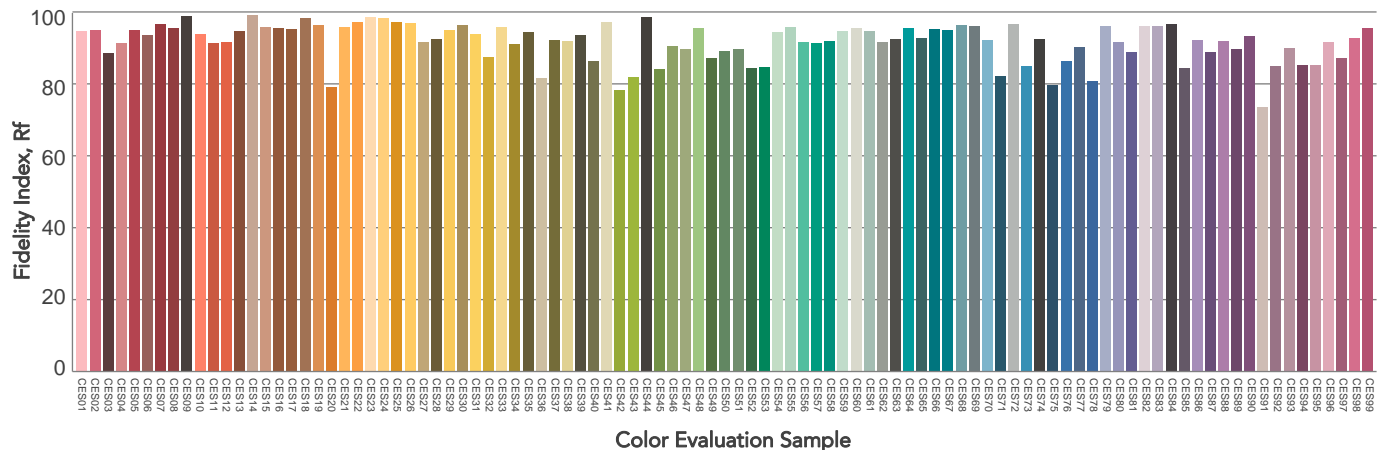
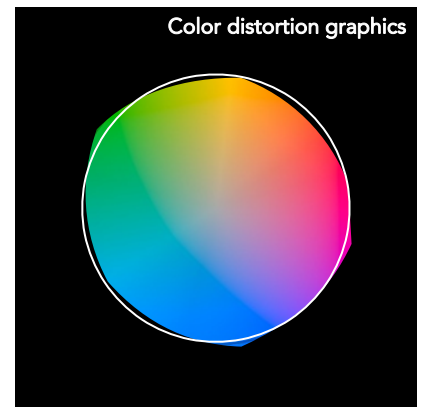
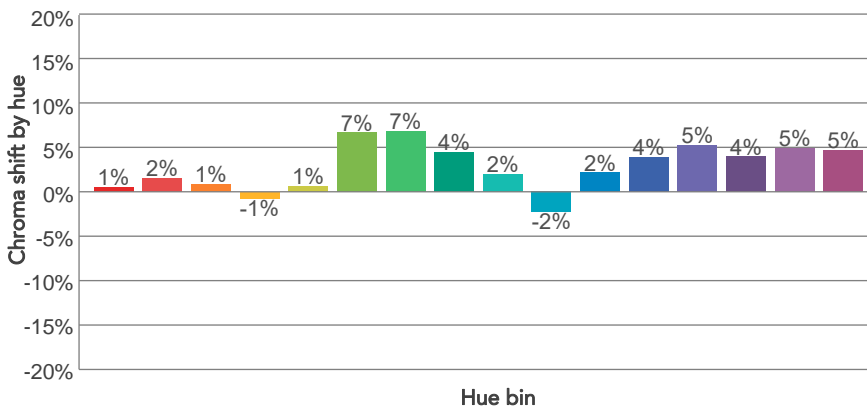
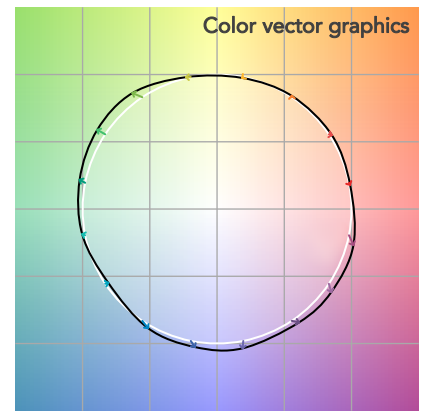
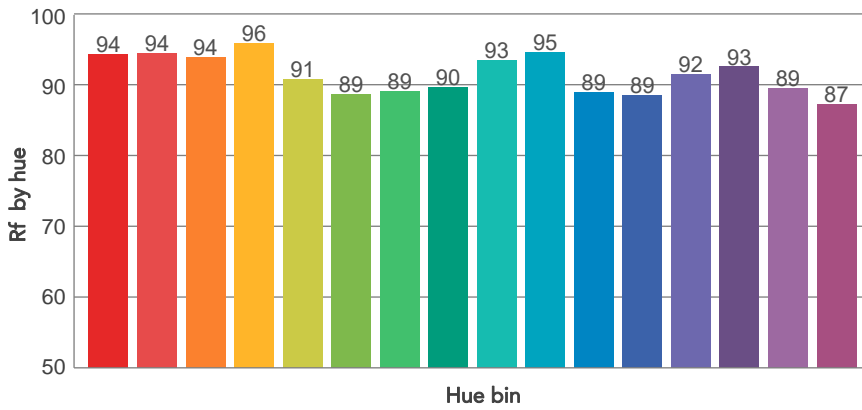
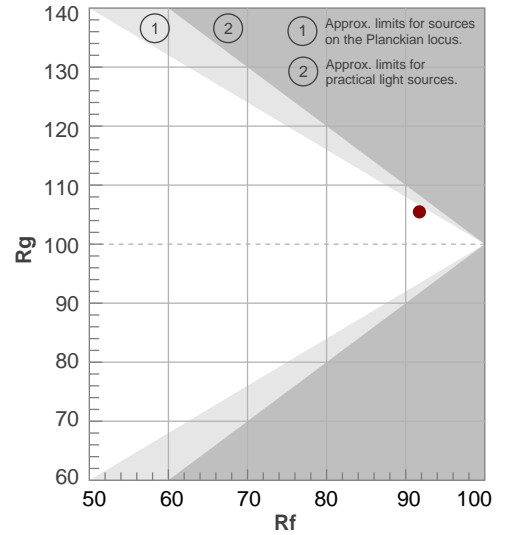
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
3984 K	93,2	97,4	91,7	105,5	93,7	84	0,382	0,381	0,0016

TM30 DETAILS

Rf 91,7
Fidelity index Rf

Rg 105,5
Gammut index

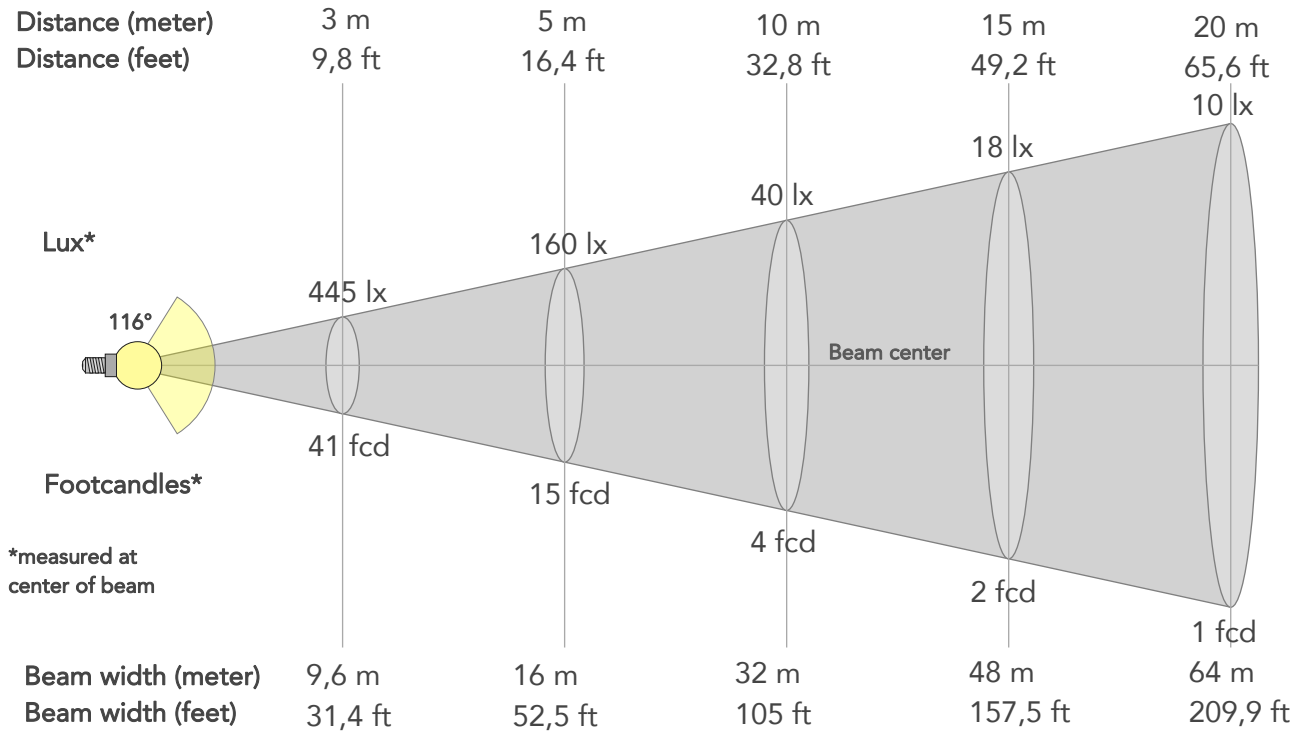
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	94	1%	-2%
2	94	2%	-2%
3	94	1%	1%
4	96	-1%	1%
5	91	1%	4%
6	89	7%	4%
7	89	7%	1%
8	90	4%	-1%
9	93	2%	-1%
10	95	-2%	1%
11	89	2%	7%
12	89	4%	4%
13	92	5%	-2%
14	93	4%	4%
15	89	5%	-4%
16	87	5%	-6%



BEAM DETAILS



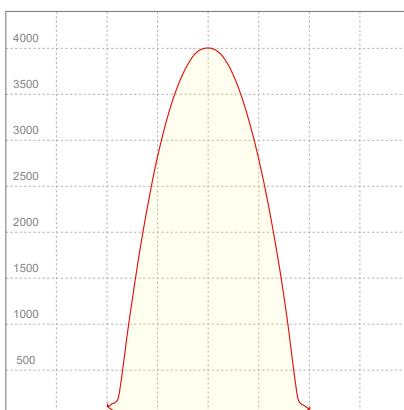
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
116°	154,6°	176,5°	80,8%	54,4%



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	4001lx	1000lx	445lx	250lx	160lx	71lx	40lx	18lx	10lx	6lx	4lx	3lx	2lx
Footcand.	372fcd	93fcd	41fcd	23fcd	15fcd	7fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd
Beam wid.	3,2m	6,4m	9,6m	12,8m	16m	24m	32m	48m	64m	80m	96m	128m	160m
Beam wid.	10,6ft	21,1ft	31,4ft	41,9ft	52,5ft	78,7ft	105ft	157,5ft	209,9ft	262,4ft	314,9ft	419,9ft	524,9ft

LINEAR DISTRIBUTION DIAGRAM

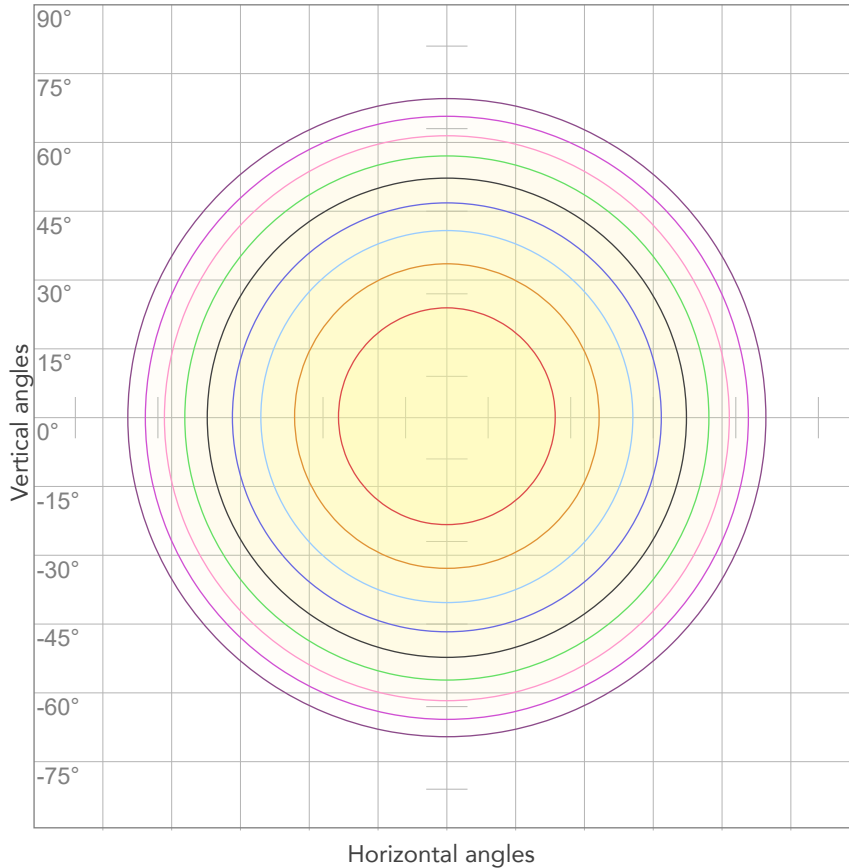


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Efficiency
222V	1,49A	330W	0,99	35lm/W

ISO DIAGRAMS

ISO CANDELA DIAGRAM



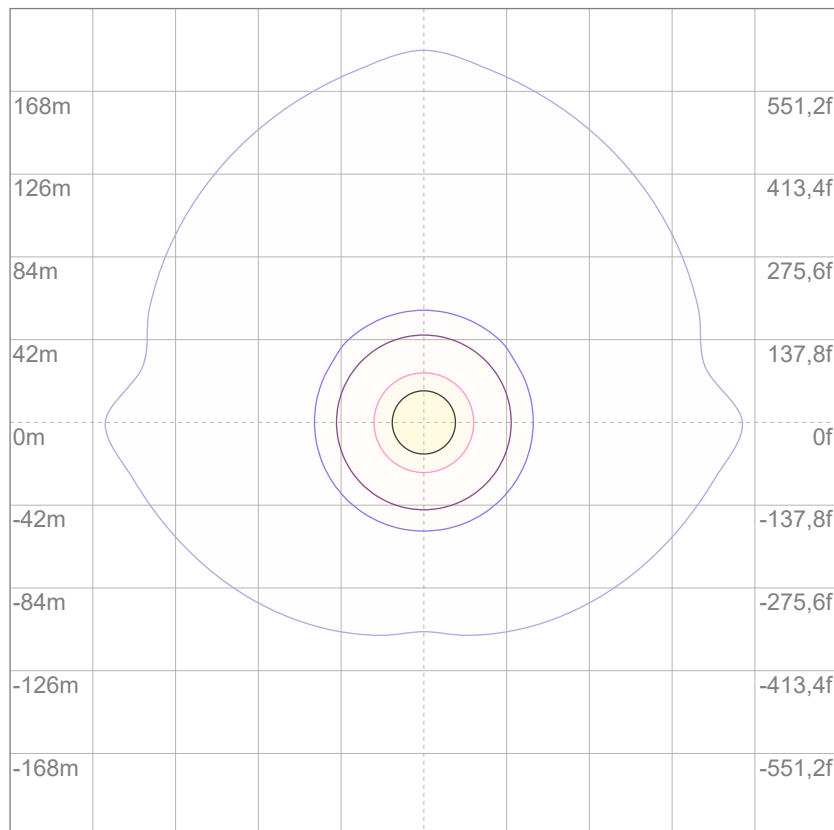
10%	400 cd
20%	800 cd
30%	1200 cd
40%	1600 cd
50%	2001 cd
60%	2401 cd
70%	2801 cd
80%	3201 cd

Conditions:

Number of c-planes: 2

Candela at center: 4001 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	1,20 lx
5%	2,00 lx
10%	4,00 lx
30%	12,0 lx
50%	20,0 lx

Conditions:

Number of c-planes: 2

Lux at center: 40,0 lx

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



Total lumen output:

12095 lm

Peak candela output:

4188 cd

Light quality:

CRI: 91,5

Color temperature:

5598 K

PRODUCT NAME:

HALUPIXDUO

MEASURAMENT CONDITIONS:

Beam angle:

Pixel Layer

Target:

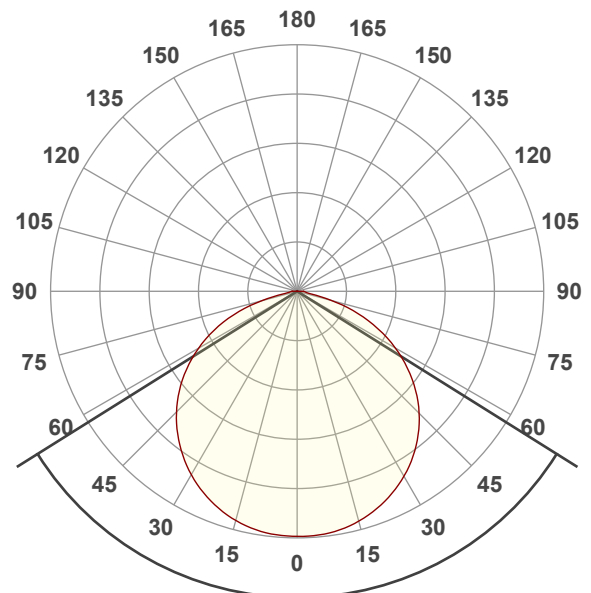
5600K

Operator:

Salvatore Giglio

Date and time:

28/08/2024 16:42:55

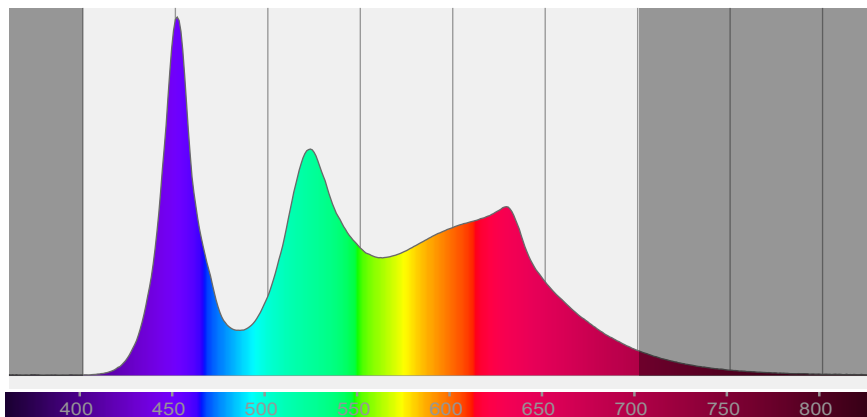


Beam angle 50%: 115,9°

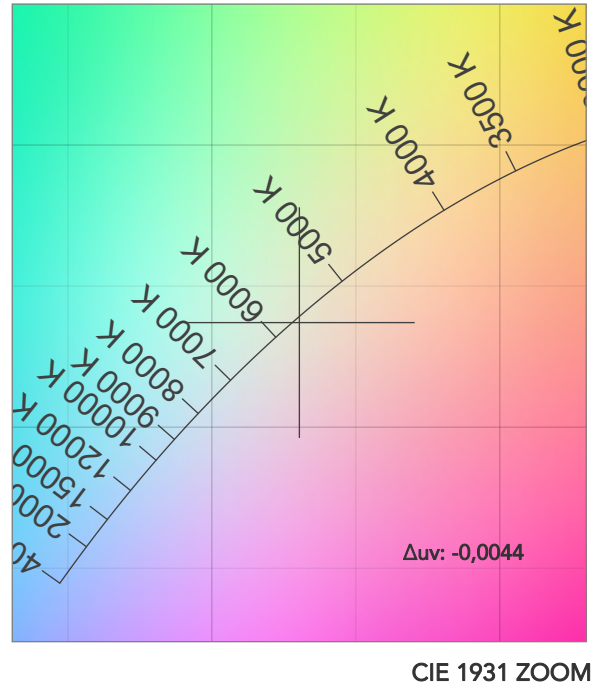
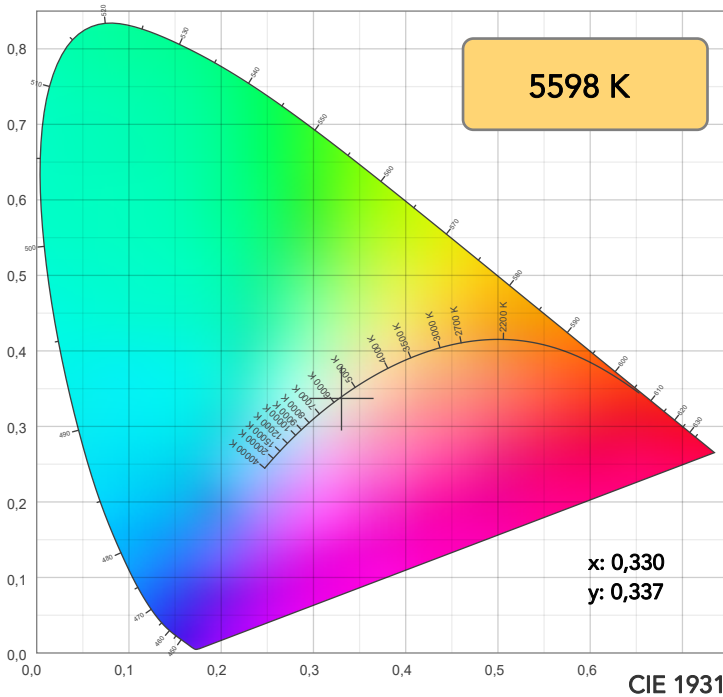
Field angle 10%: 154,6°

Cut off angle 2.5%: 176,5°

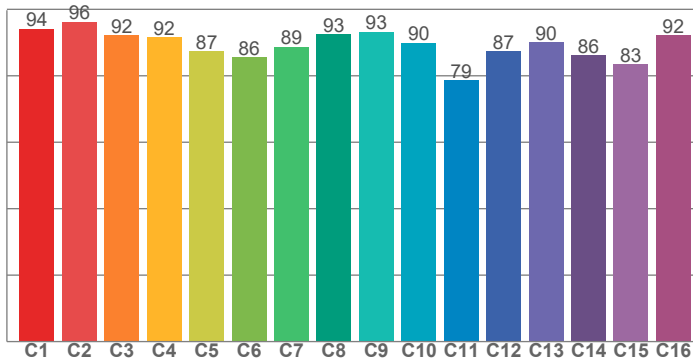
Spectra



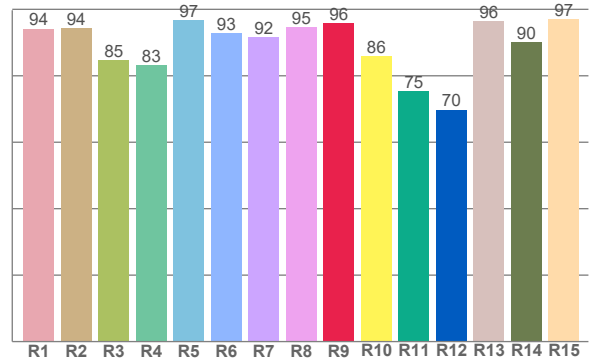
COLOR DETAILS



TM30: 89,2



CRI: 91,5 (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
94,2	94,3	84,6	83,1	96,6	92,8	91,6	94,7	95,8	85,9	75,3	69,8	96,3	90,2	97,0

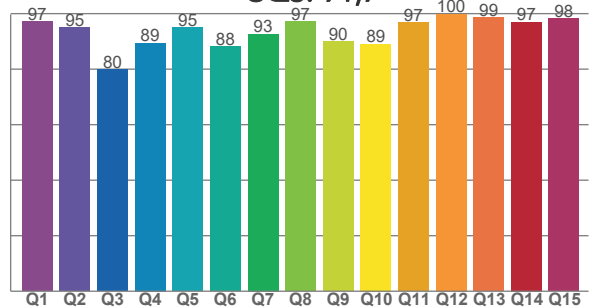
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
94,2	96,2	92,2	91,6	87,3	85,6	88,7	92,5	93,3	90,0	78,6	87,4	90,1	86,1	83,4	92,1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
97,2	95,1	79,9	89,4	94,9	88,1	92,7	97,2	89,9	89,0	96,9	99,8	98,6	97,1	98,3

CQS: 91,7



COLOR PARAMETERS

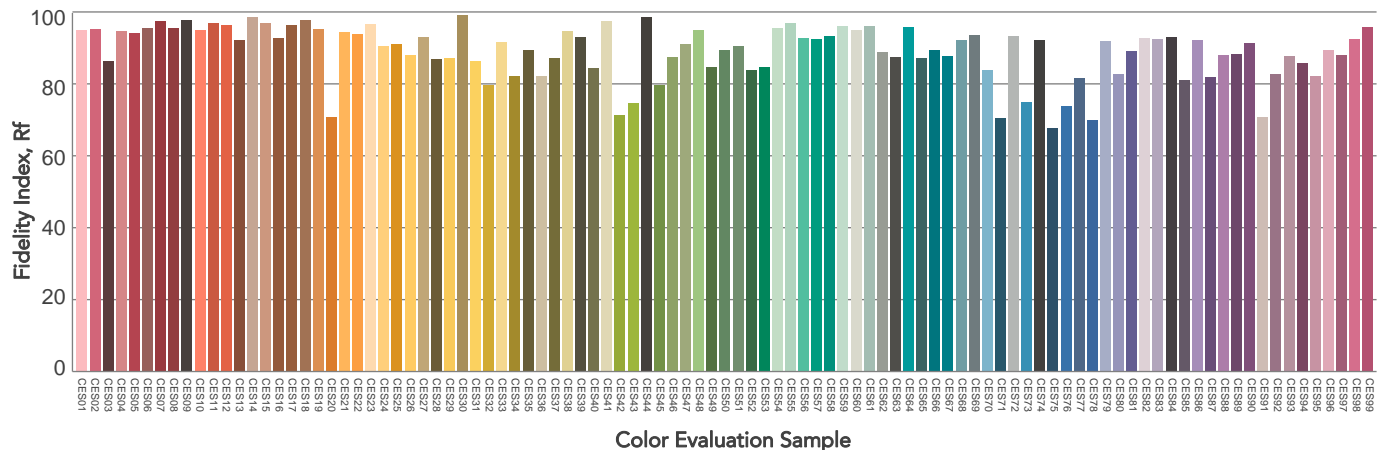
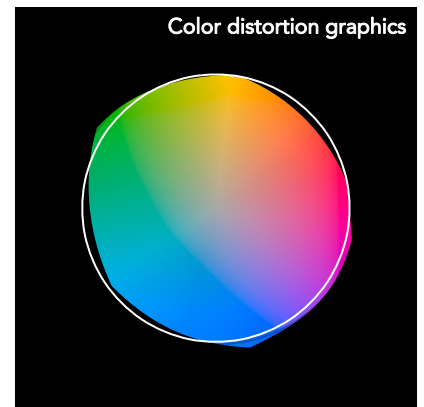
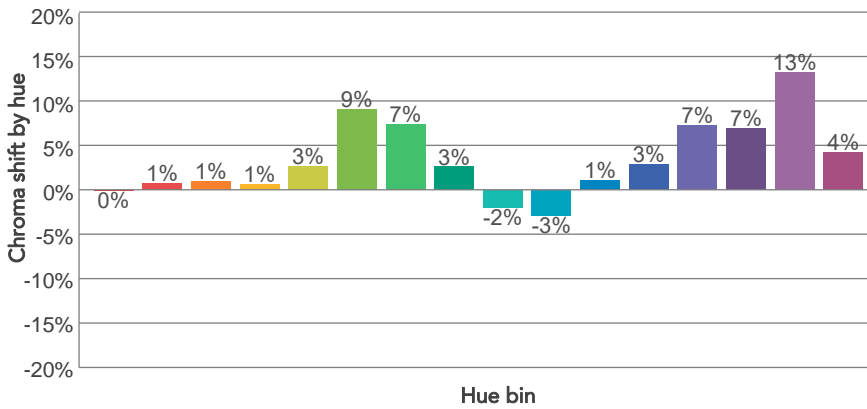
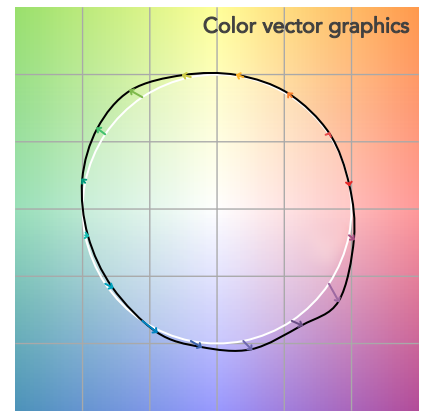
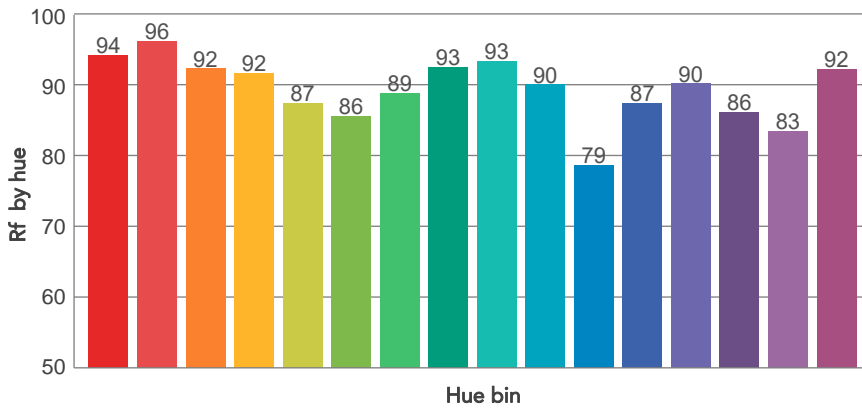
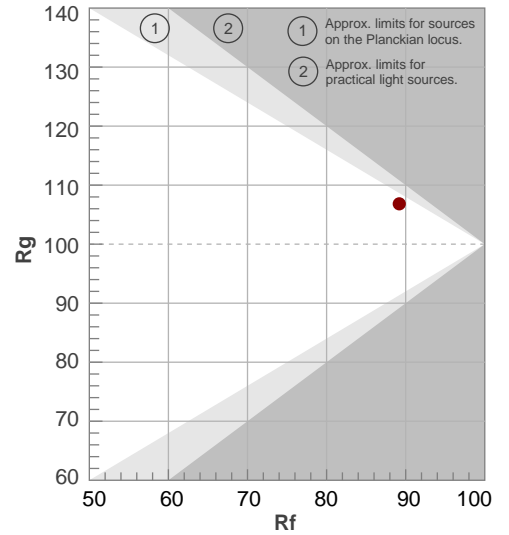
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5598 K	91,5	95,8	89,2	106,8	91,7	87	0,330	0,337	-0,0044

TM30 DETAILS

Rf 89,2
Fidelity index Rf

Rg 106,8
Gammut index

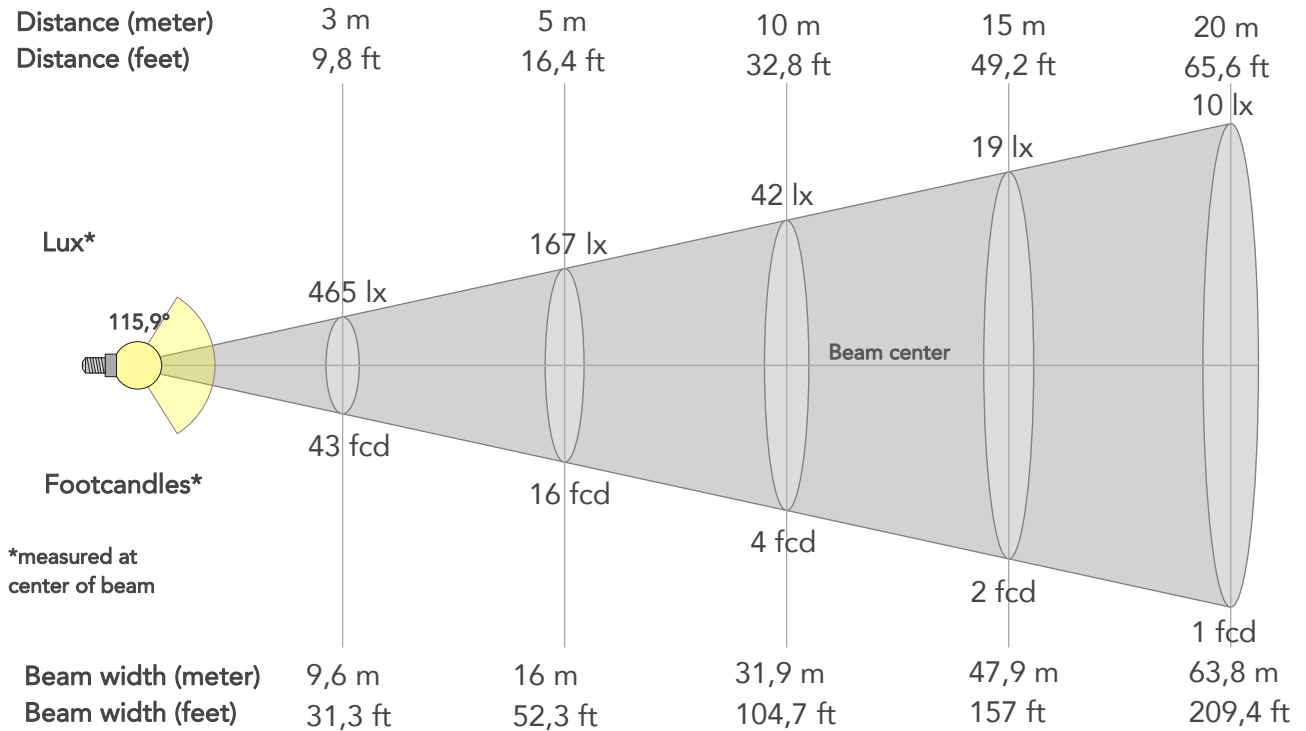
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	94	0%	-2%
2	96	1%	0%
3	92	1%	4%
4	92	1%	5%
5	87	3%	5%
6	86	9%	5%
7	89	7%	0%
8	93	3%	-2%
9	93	-2%	1%
10	90	-3%	5%
11	79	1%	13%
12	87	3%	8%
13	90	7%	5%
14	86	7%	4%
15	83	13%	-7%
16	92	4%	-2%



BEAM DETAILS



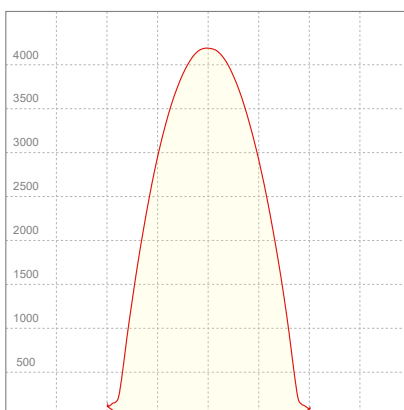
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
115,9°	154,6°	176,5°	80,8%	54,5%



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	4186lx	1047lx	465lx	262lx	167lx	74lx	42lx	19lx	10lx	7lx	5lx	3lx	2lx
Footcand.	389fcd	97fcd	43fcd	24fcd	16fcd	7fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd
Beam wid.	3,2m	6,4m	9,6m	12,8m	16m	23,9m	31,9m	47,9m	63,8m	79,8m	95,7m	127,7m	159,6m
Beam wid.	10,5ft	21,1ft	31,3ft	41,8ft	52,3ft	78,5ft	104,7ft	157ft	209,4ft	261,7ft	314,1ft	418,7ft	523,4ft

LINEAR DISTRIBUTION DIAGRAM

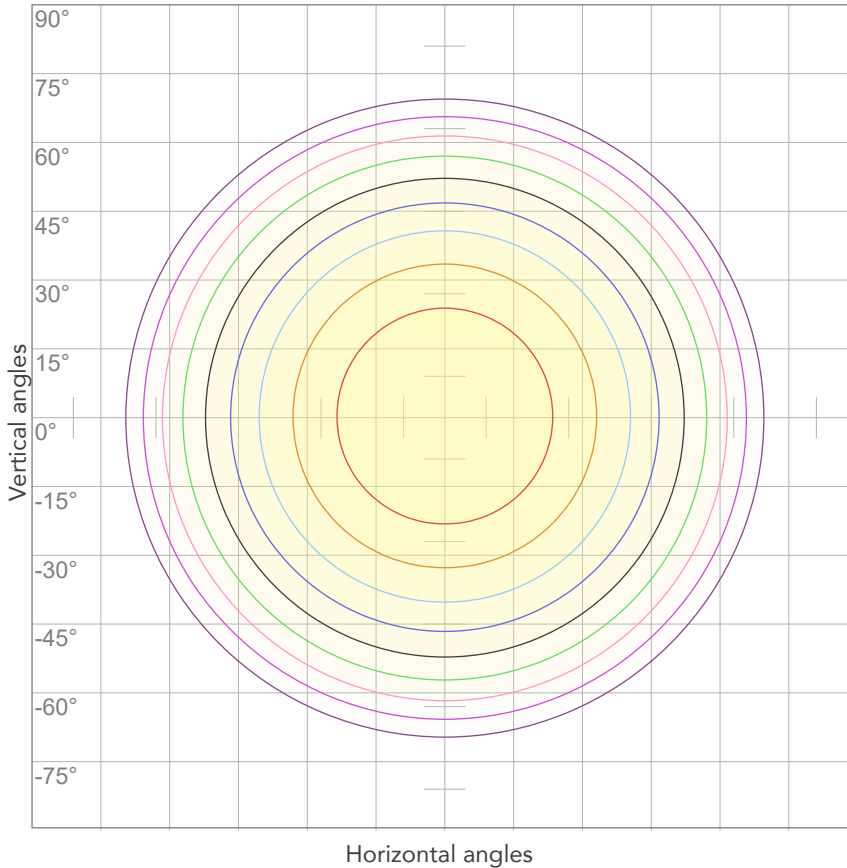


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Efficiency
222V	1,67A	370W	0,99	33lm/W

ISO DIAGRAMS

ISO CANDELA DIAGRAM



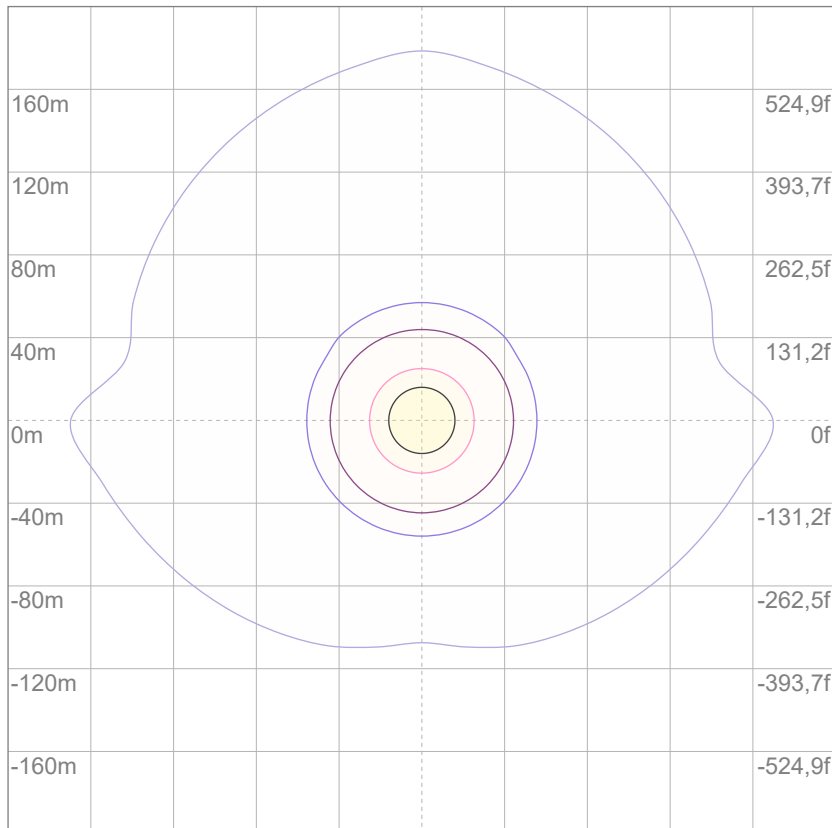
10%	419 cd
20%	837 cd
30%	1256 cd
40%	1674 cd
50%	2093 cd
60%	2512 cd
70%	2930 cd
80%	3349 cd

Conditions:

Number of c-planes: 2

Candela at center: 4186 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	1,26 lx
5%	2,09 lx
10%	4,19 lx
30%	12,6 lx
50%	20,9 lx

Conditions:

Number of c-planes: 2

Lux at center: 41,9 lx

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



Total lumen output:

12706 lm

Peak candela output:

4414 cd

Light quality:

CRI: 90,8

Color temperature:

6639 K

PRODUCT NAME:

HALUPIXDUO

MEASUREMENT CONDITIONS:

Beam angle:

Pixel Layer

Target:

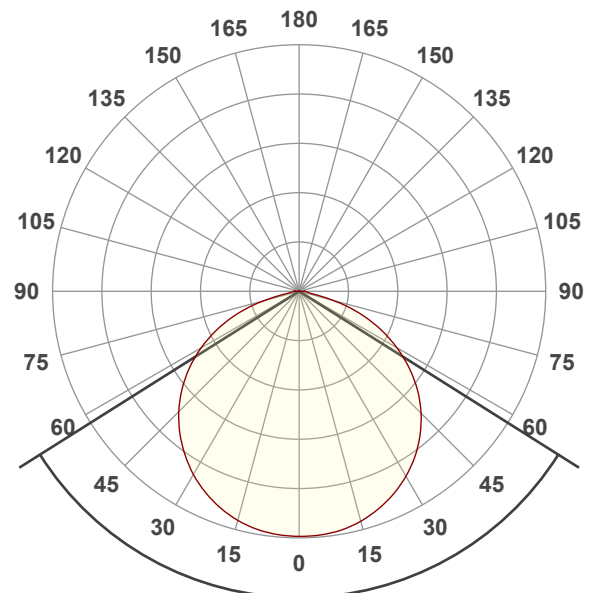
6500K

Operator:

Salvatore Giglio

Date and time:

28/08/2024 16:53:36

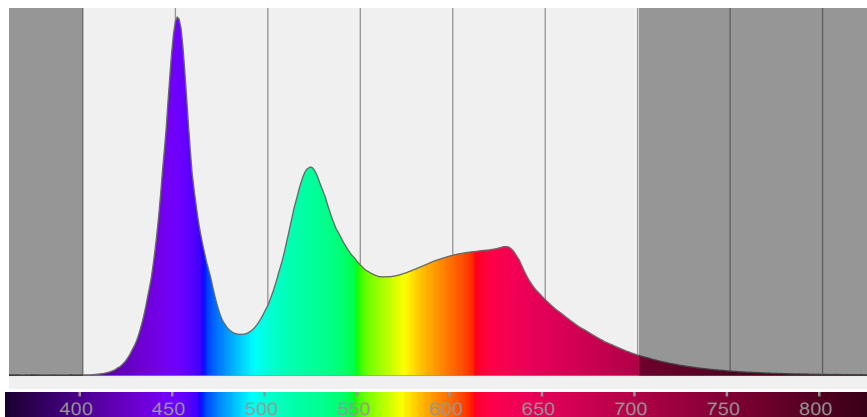


Beam angle 50%: 115,6°

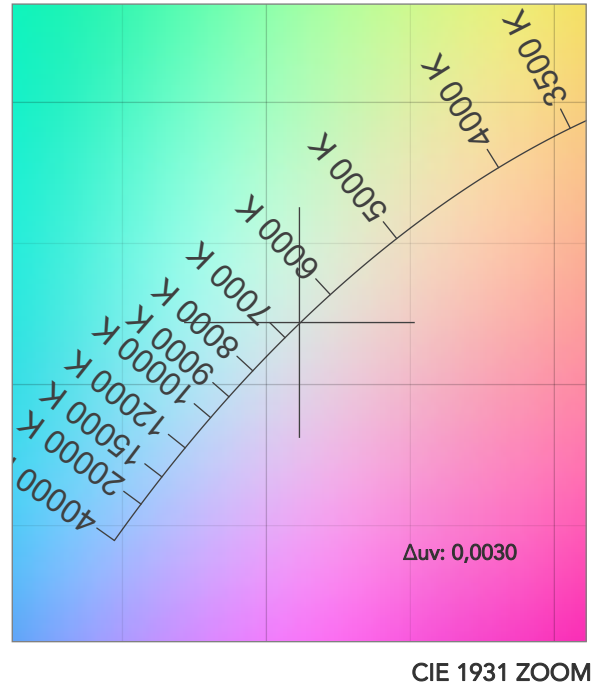
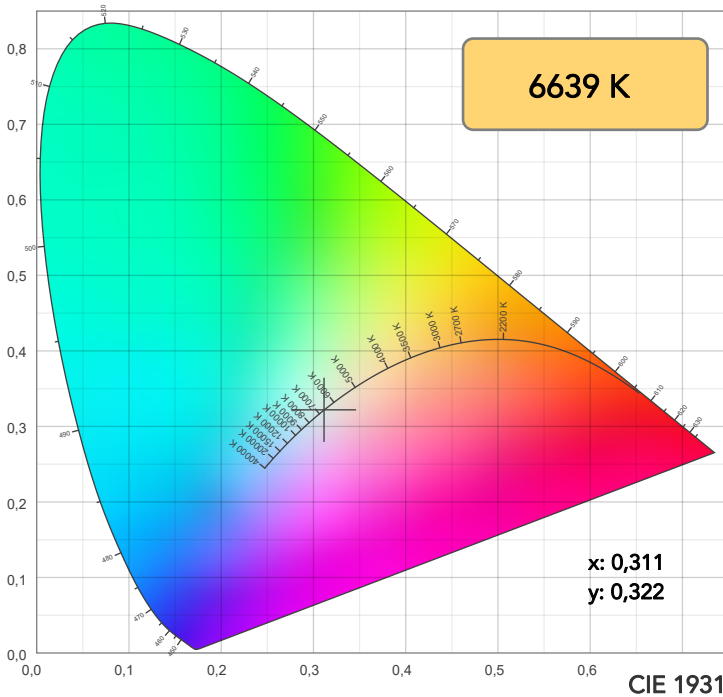
Field angle 10%: 154,2°

Cut off angle 2.5%: 175,1°

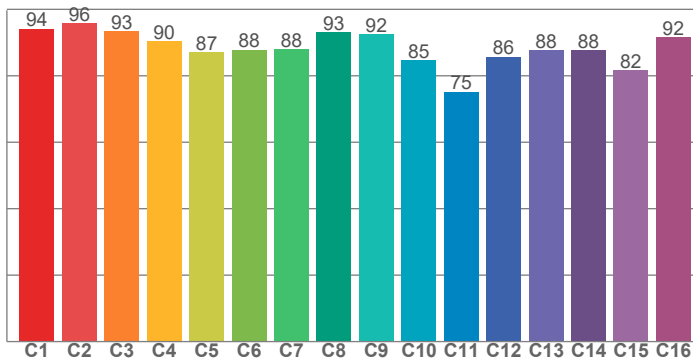
Spectra



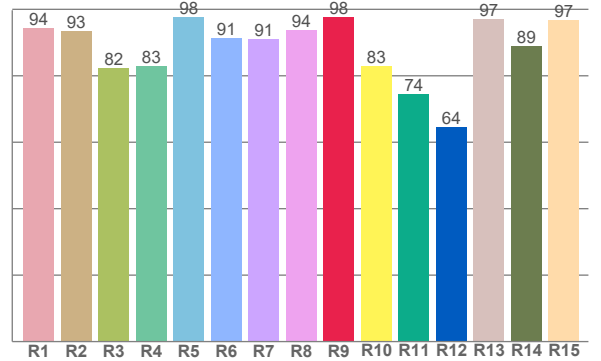
COLOR DETAILS



TM30: 88,5



CRI: 90,8 (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
94,4	93,3	82,2	82,8	97,6	91,2	91,1	93,7	97,5	82,8	74,4	64,5	96,9	89,0	96,8

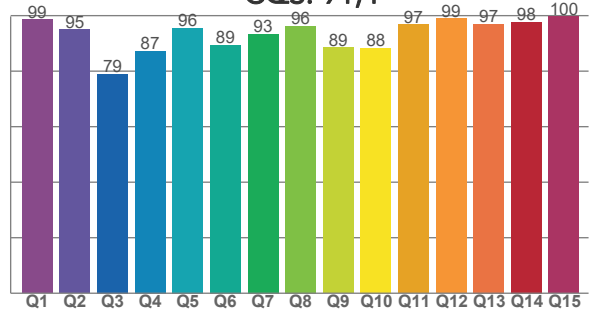
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
94,1	95,7	93,4	90,4	87,1	87,8	87,9	93,0	92,5	84,7	75,2	85,8	87,7	87,6	81,7	91,6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
98,6	94,9	79,1	87,3	95,6	89,4	93,4	96,2	88,5	88,3	96,8	98,9	97,0	97,8	99,6

CQS: 91,4



COLOR PARAMETERS

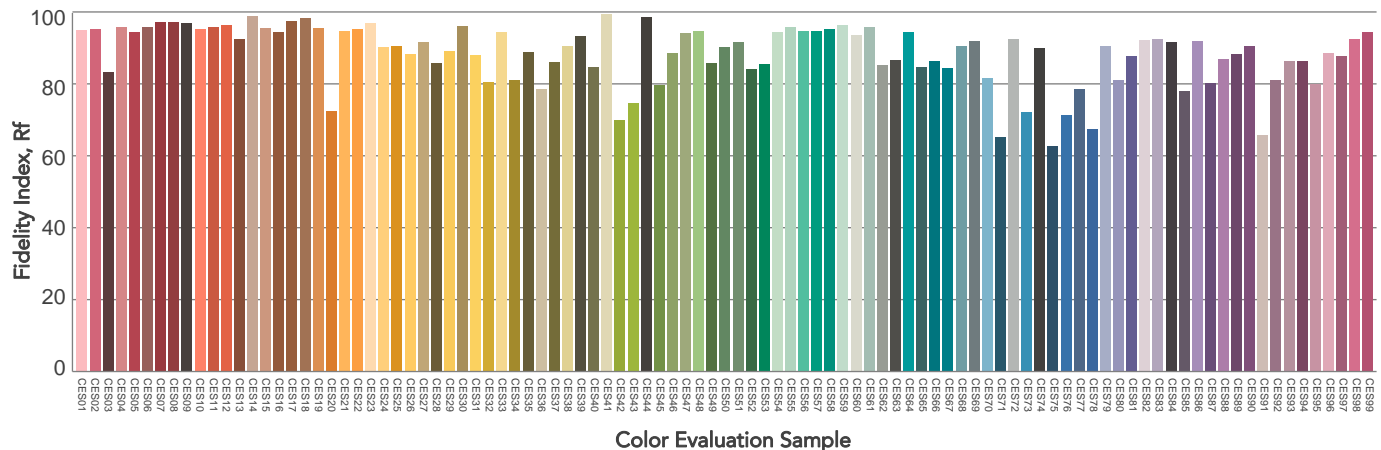
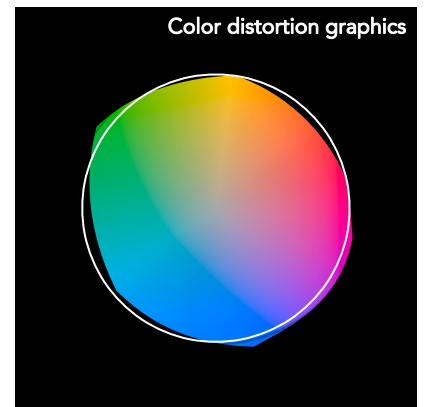
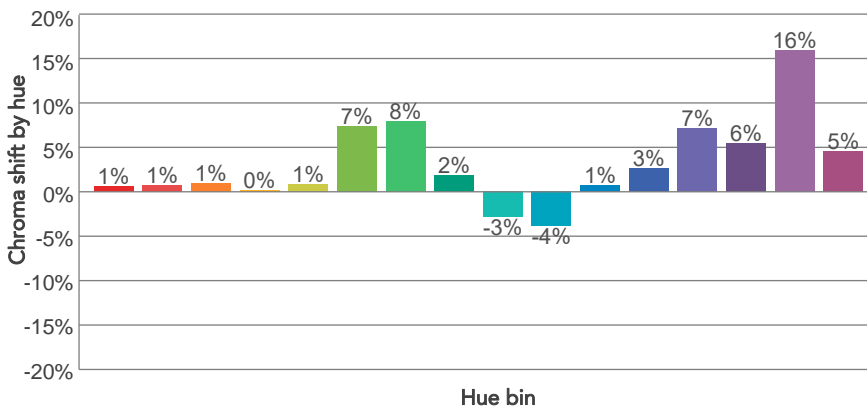
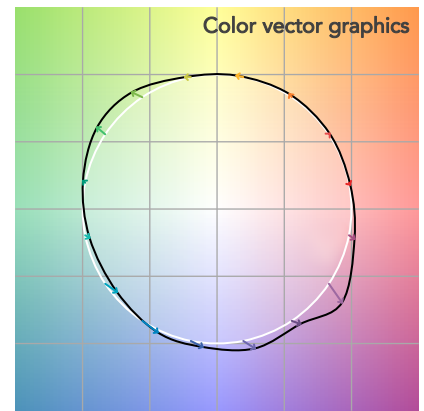
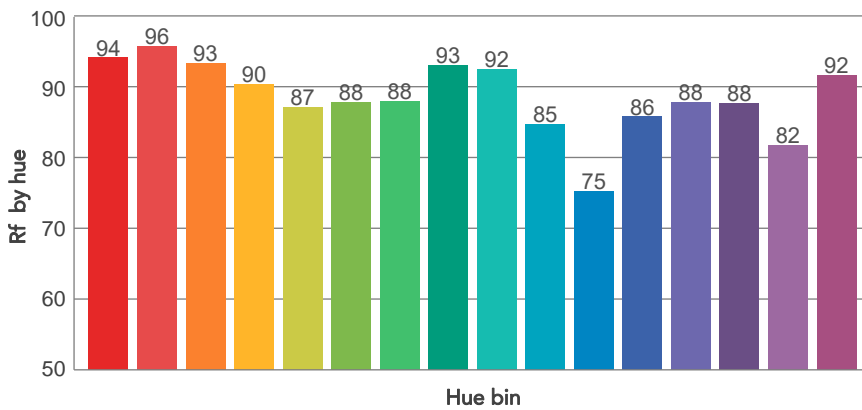
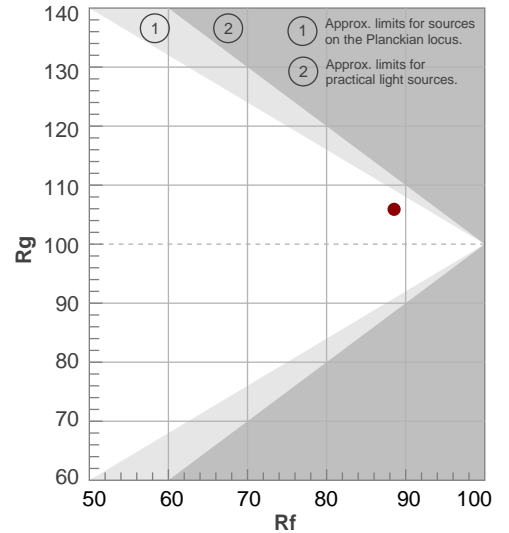
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
6639 K	90,8	97,5	88,5	105,9	91,4	88	0,311	0,322	0,0030

TM30 DETAILS

Rf 88,5
Fidelity index Rf

Rg 105,9
Gammut index

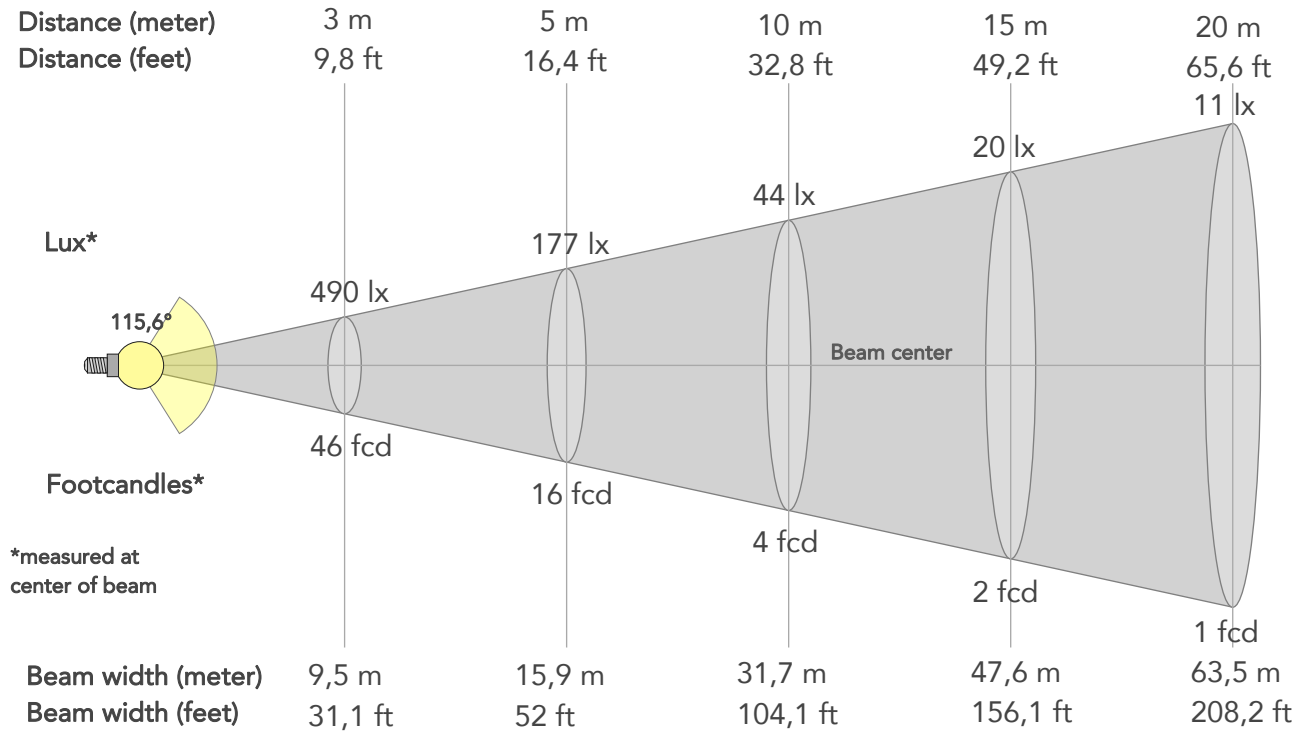
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	94	1%	-2%
2	96	1%	0%
3	93	1%	3%
4	90	0%	5%
5	87	1%	4%
6	88	7%	4%
7	88	8%	-1%
8	93	2%	-1%
9	92	-3%	2%
10	85	-4%	10%
11	75	1%	14%
12	86	3%	9%
13	88	7%	7%
14	88	6%	4%
15	82	16%	-6%
16	92	5%	-2%



BEAM DETAILS



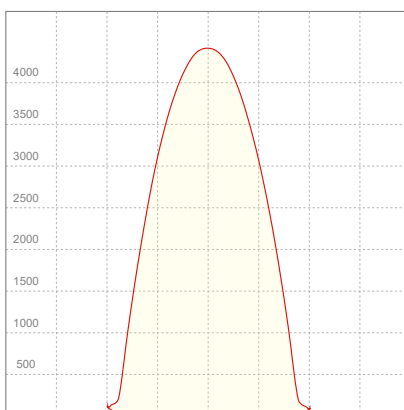
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
115,6°	154,2°	175,1°	80,8%	54,5%



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	4414lx	1103lx	490lx	276lx	177lx	78lx	44lx	20lx	11lx	7lx	5lx	3lx	2lx
Footcand.	410fcd	103fcd	46fcd	26fcd	16fcd	7fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd
Beam wid.	3,2m	6,3m	9,5m	12,7m	15,9m	23,8m	31,7m	47,6m	63,5m	79,3m	95,2m	126,9m	158,7m
Beam wid.	10,5ft	20,9ft	31,1ft	41,6ft	52ft	78,1ft	104,1ft	156,1ft	208,2ft	260,2ft	312,3ft	416,4ft	520,5ft

LINEAR DISTRIBUTION DIAGRAM

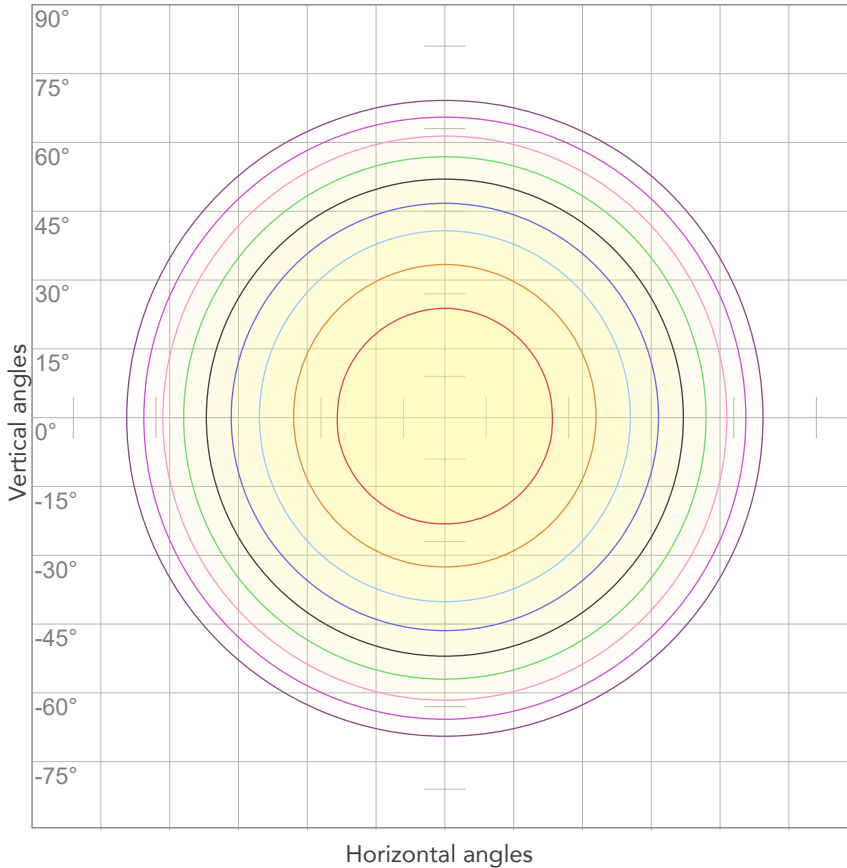


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Efficiency
221V	1,83A	404W	0,99	31lm/W

ISO DIAGRAMS

ISO CANDELA DIAGRAM



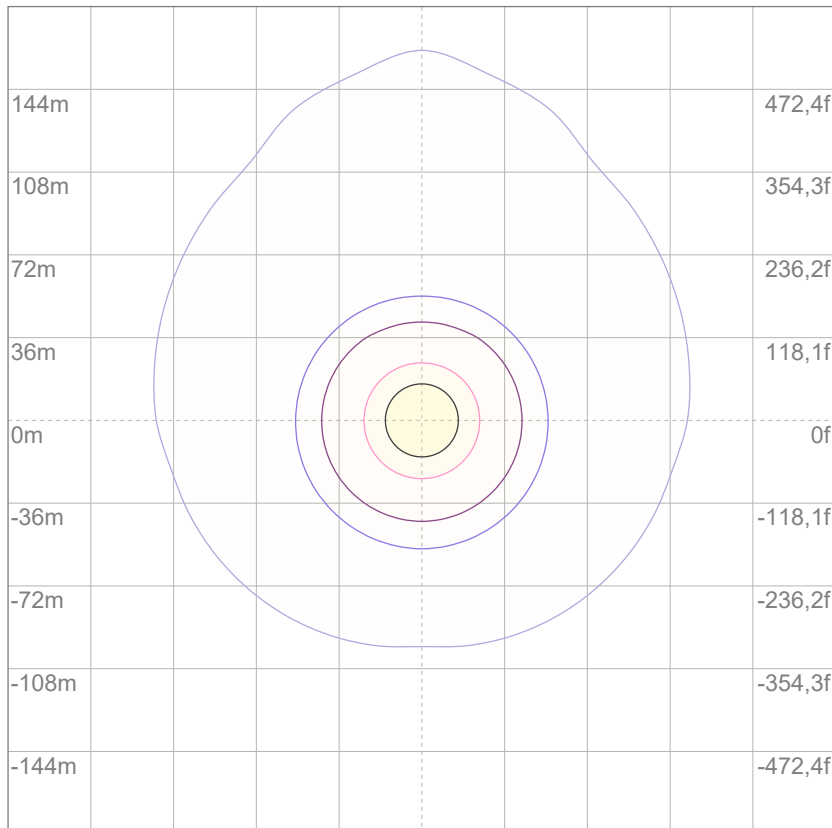
10%	441 cd
20%	883 cd
30%	1324 cd
40%	1765 cd
50%	2207 cd
60%	2648 cd
70%	3089 cd
80%	3531 cd

Conditions:

Number of c-planes: 2

Candela at center: 4414 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	1,32 lx
5%	2,21 lx
10%	4,41 lx
30%	13,2 lx
50%	22,1 lx

Conditions:

Number of c-planes: 2

Lux at center: 44,1 lx

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