

Photometric Test Report



MINI ECL DY

Mini LED profile with knob-dimming

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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:

731 lm

Peak candela output:

9934 cd

Light quality:

CRI: 80,3

Color temperature:

5716 K

PRODUCT NAME:

MINIECL DY

MEASURAMENT CONDITIONS:

Beam angle:

19°

Target:

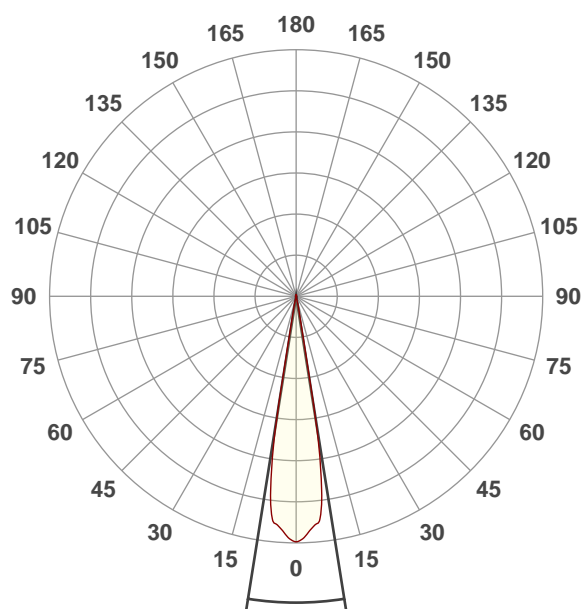
Cold White

Operator:

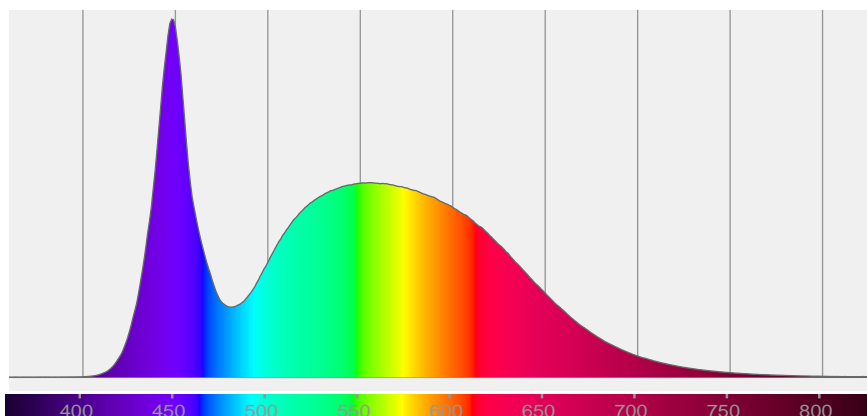
Paolo Carvone

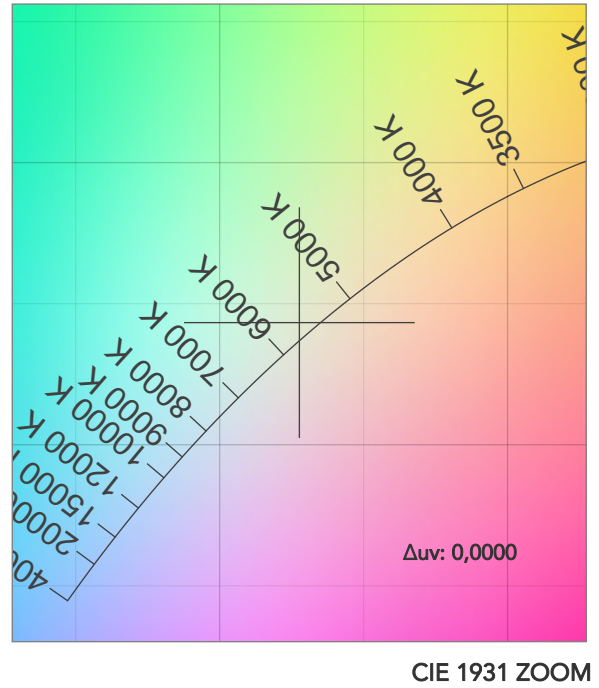
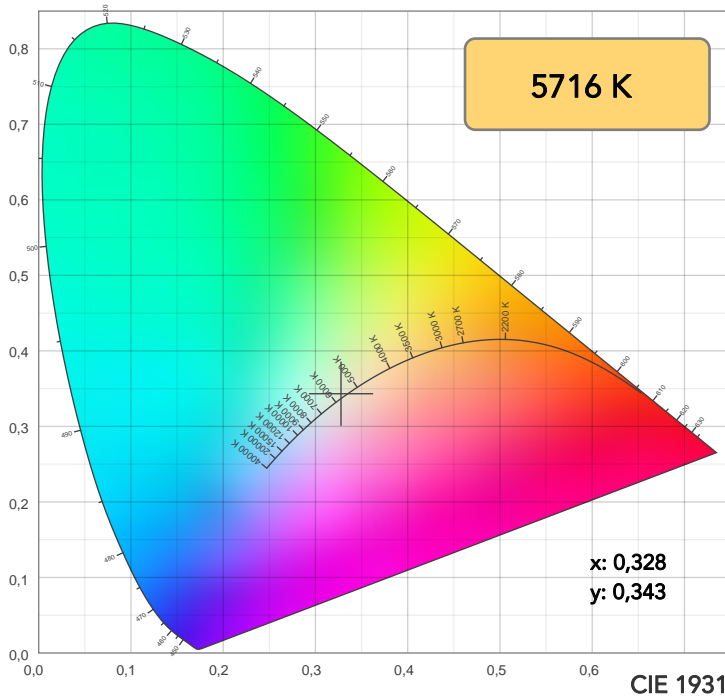
Date and time:

06/05/2020 09:15:37



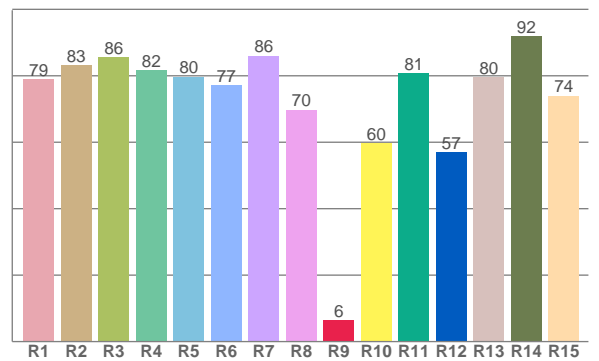
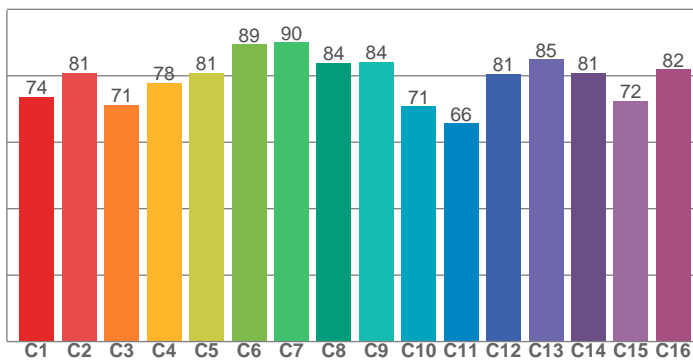
Spectra





TM30: 78,8

CRI: 80,3 (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
79,0	83,2	85,6	81,7	79,7	77,2	86,0	69,8	6,4	59,7	80,8	57,1	79,6	92,0	73,9

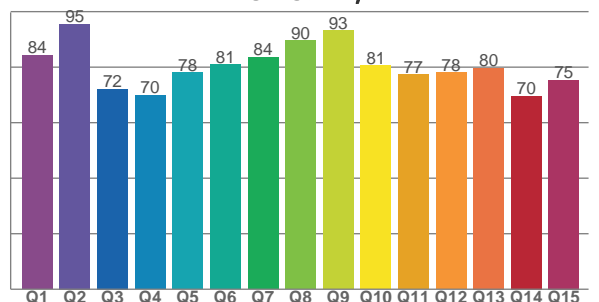
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
73,6	80,9	71,2	77,8	80,8	89,4	90,1	83,9	84,1	70,8	65,7	80,6	84,9	81,0	72,5	81,9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
84,3	95,5	72,1	69,9	78,1	80,9	83,6	89,5	93,2	80,6	77,3	78,1	79,7	69,6	75,3

CQS: 79,1



COLOR PARAMETERS

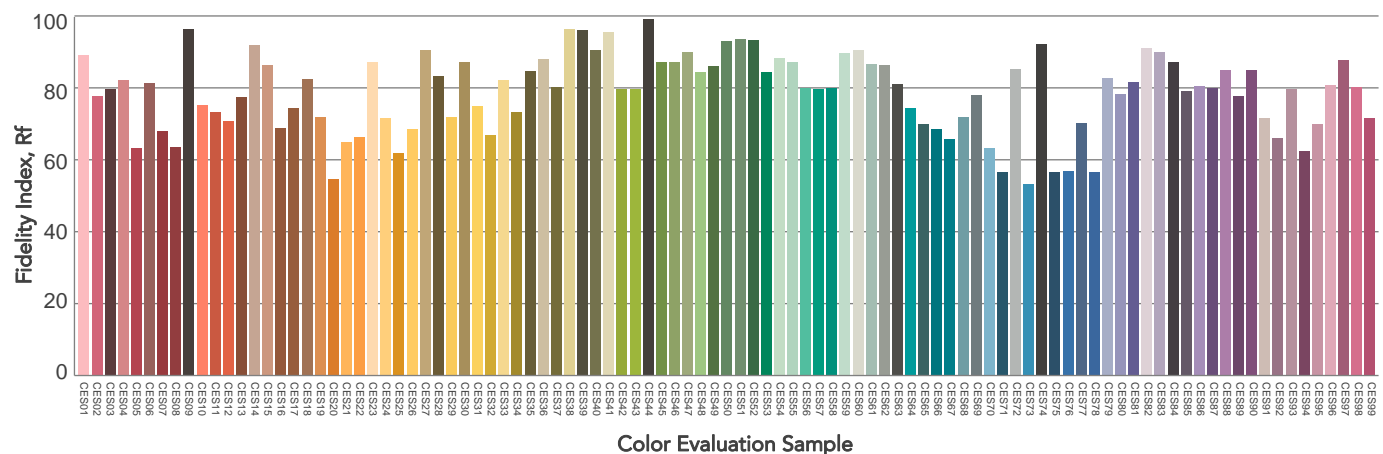
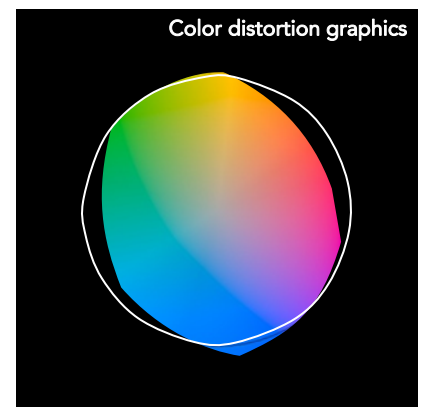
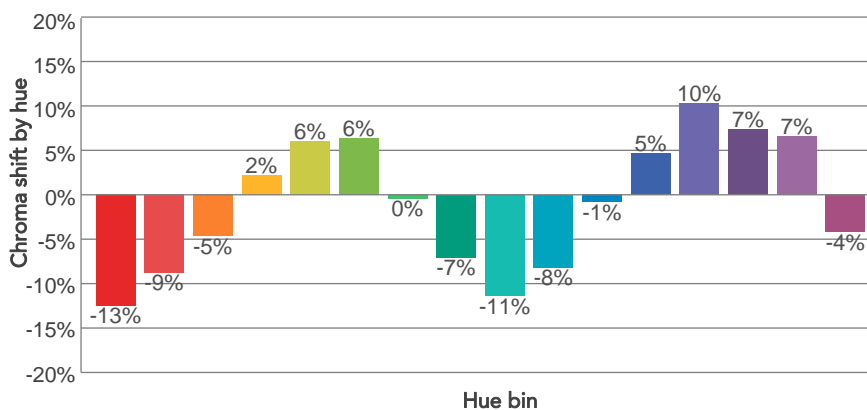
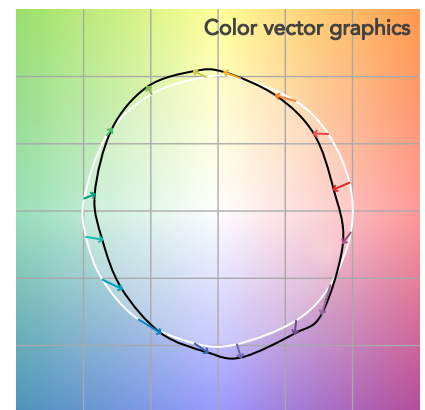
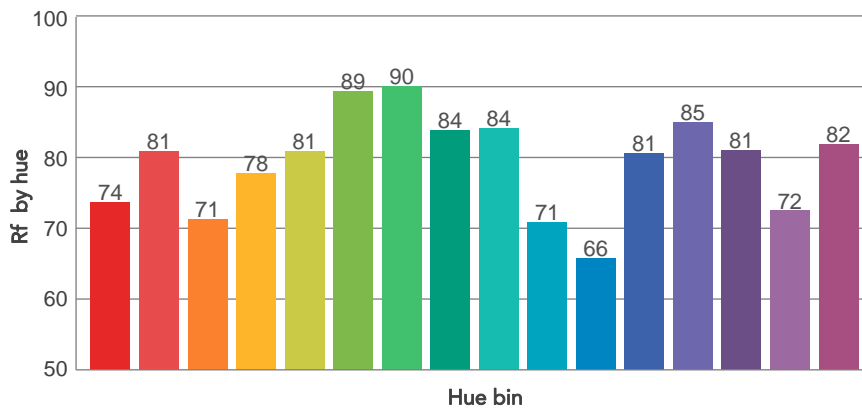
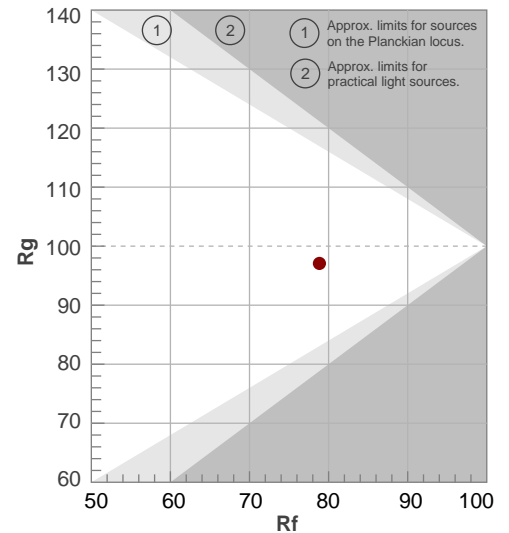
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5716 K	80,3	6,4	78,8	97,1	79,1	68	0,328	0,343	0,0000

TM30 DETAILS

Rf 78,8
Fidelity index Rf

Rg 97,1
Gammut index

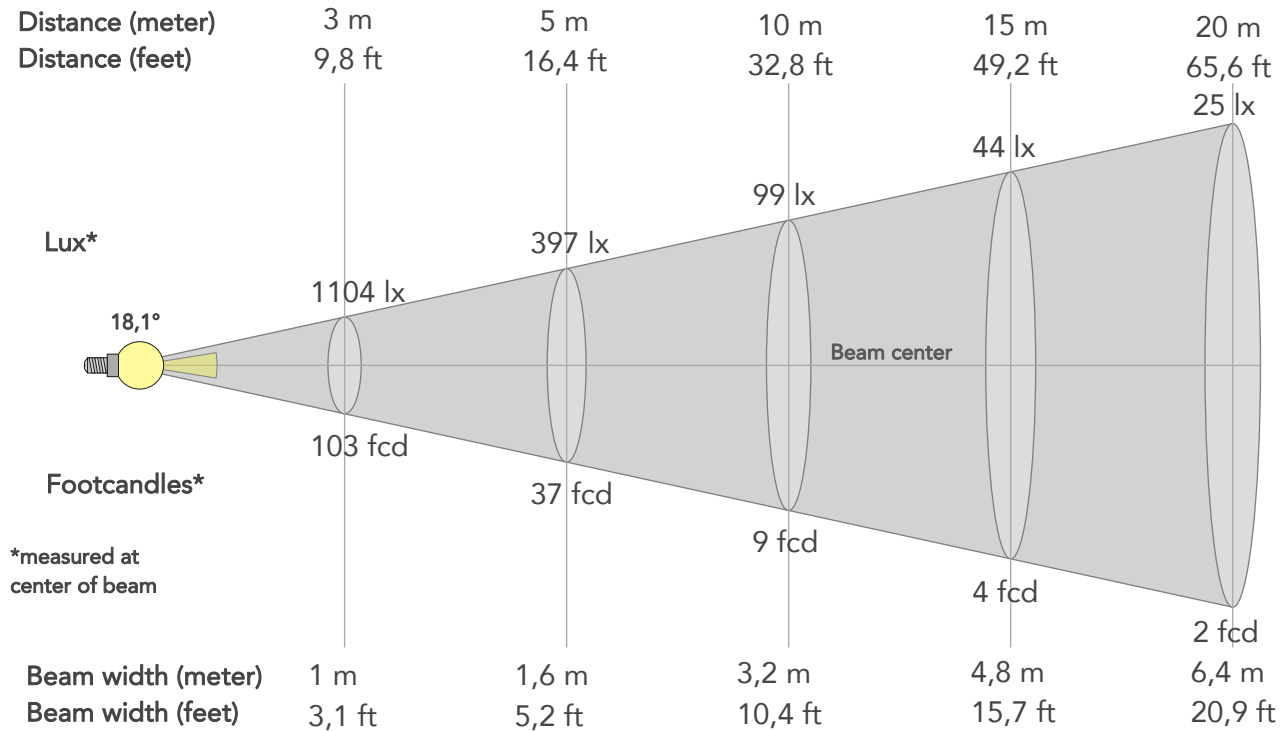
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	74	-13%	-3%
2	81	-9%	6%
3	71	-5%	14%
4	78	2%	12%
5	81	6%	8%
6	89	6%	0%
7	90	0%	-6%
8	84	-7%	-5%
9	84	-11%	4%
10	71	-8%	14%
11	66	-1%	19%
12	81	5%	11%
13	85	10%	1%
14	81	7%	-6%
15	72	7%	-21%
16	82	-4%	-9%



BEAM DETAILS



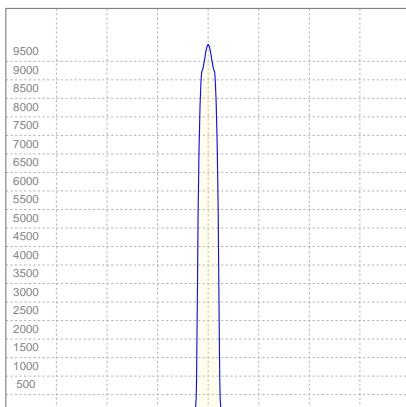
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
18,1°	20,5°	22,7°	99,6%	99,5%



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	9934lx	2483lx	1104lx	621lx	397lx	177lx	99lx	44lx	25lx	16lx	11lx	6lx	4lx
Footcand.	923fcd	231fcd	103fcd	58fcd	37fcd	16fcd	9fcd	4fcd	2fcd	1fcd	1fcd	1fcd	0fcd
Beam wid.	0,3m	0,6m	1m	1,3m	1,6m	2,4m	3,2m	4,8m	6,4m	8m	9,5m	12,7m	15,9m
Beam wid.	1,1ft	2,1ft	3,1ft	4,2ft	5,2ft	7,8ft	10,4ft	15,7ft	20,9ft	26,1ft	31,3ft	41,8ft	52,2ft

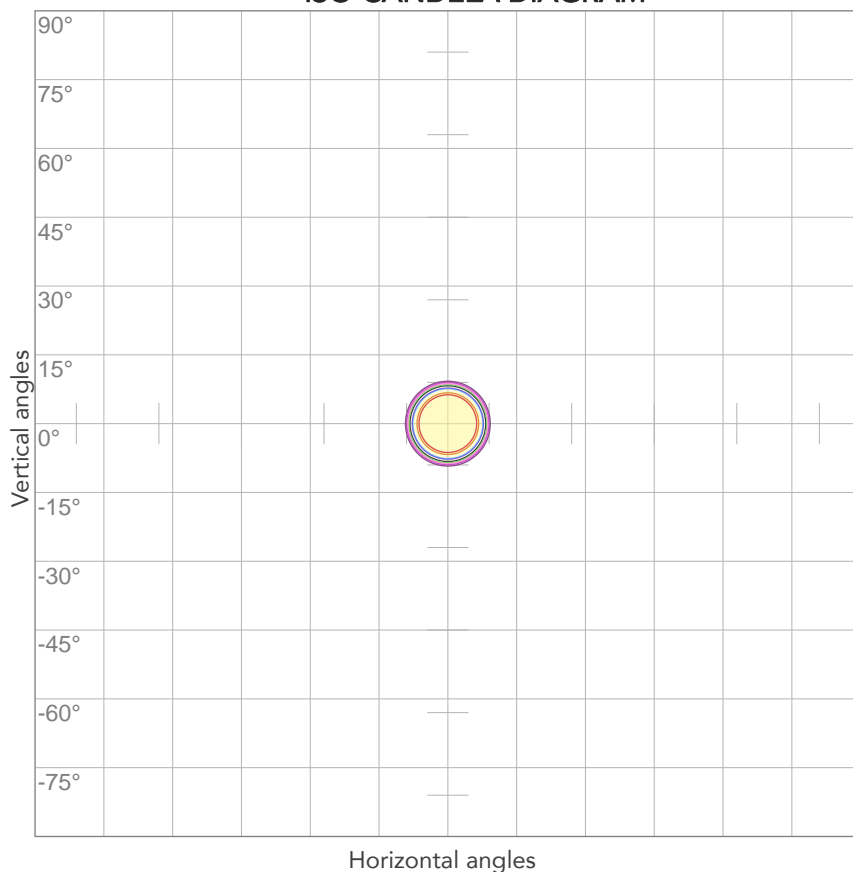
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
227V	0,211A	21,3W	34lm/W
Power FC			
0.47			

ISO CANDELA DIAGRAM



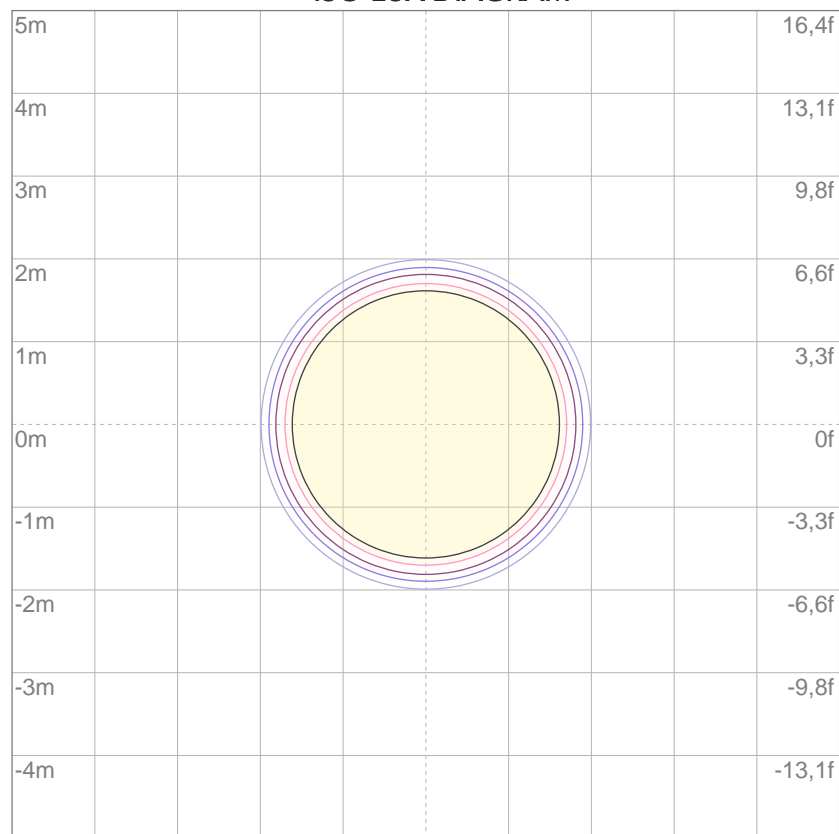
10%	993 cd
20%	1987 cd
30%	2980 cd
40%	3974 cd
50%	4967 cd
60%	5960 cd
70%	6954 cd
80%	7947 cd

Conditions:

Number of c-planes: 2

Candela at center: 9934 cd

ISO LUX DIAGRAM



3%	2,98 lx
5%	4,97 lx
10%	9,93 lx
30%	29,8 lx
50%	49,7 lx

Conditions:

Number of c-planes: 2

Lux at center: 99,3 lx

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



Total lumen output:

729 lm

Peak candela output:

5305 cd

Light quality:

CRI: 80,2

Color temperature:

5696 K

PRODUCT NAME:

MINIECL DY

MEASURAMENT CONDITIONS:

Beam angle:

26°

Target:

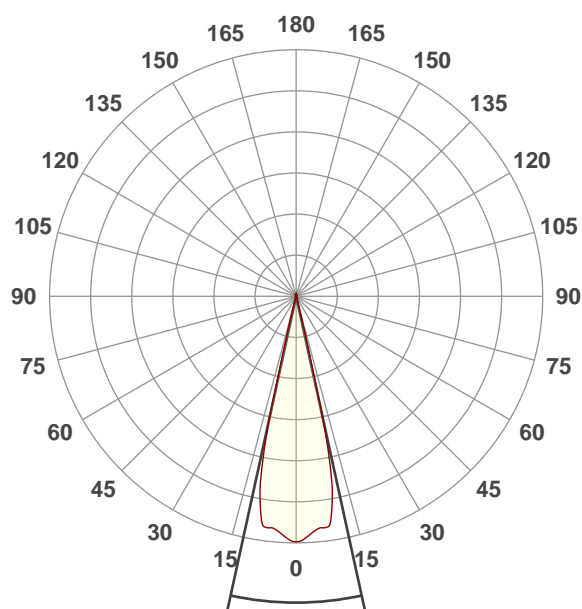
Cold White

Operator:

Paolo Carvone

Date and time:

06/05/2020 09:19:35

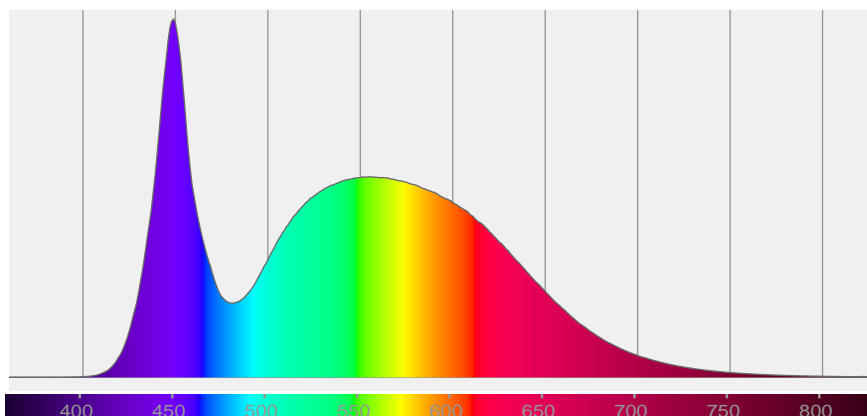


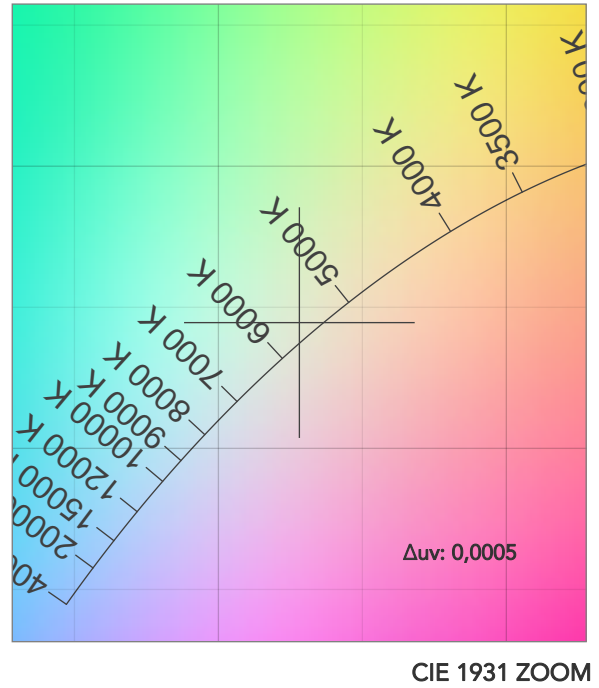
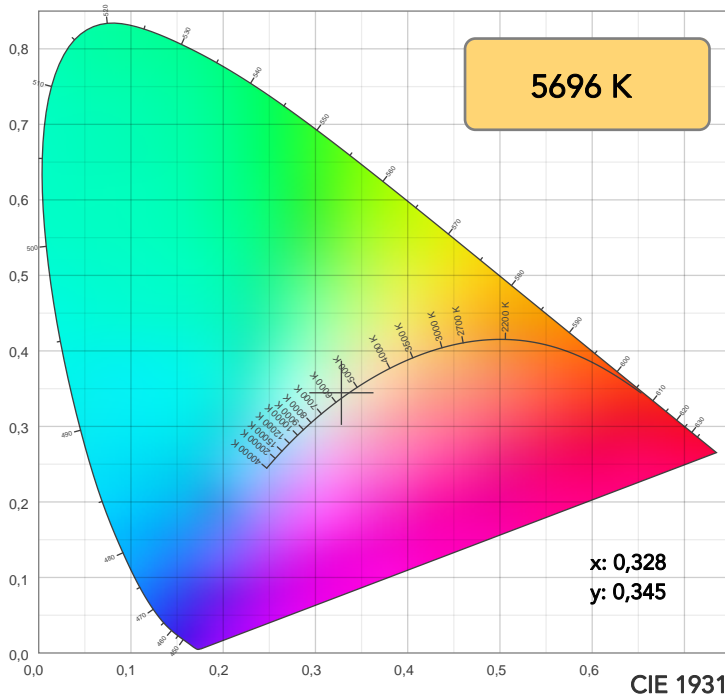
Beam angle 50%: 24,7°

Field angle 10%: 27,8°

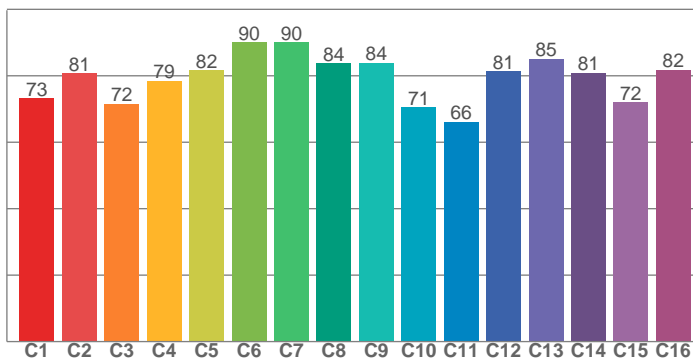
Cut off angle 2.5%: 29,1°

Spectra

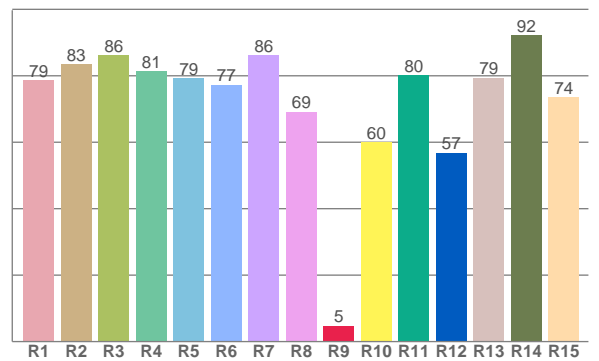




TM30: 79,0



CRI: 80,2 (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
78,7	83,4	86,1	81,4	79,4	77,3	86,3	69,2	4,8	60,0	80,2	56,8	79,4	92,2	73,5

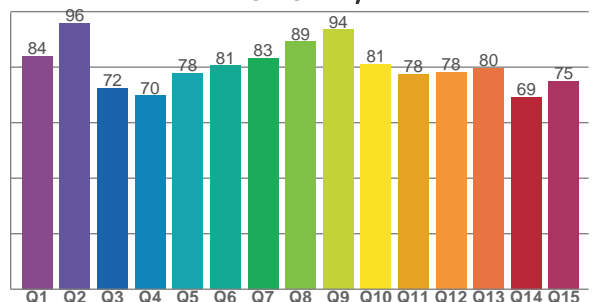
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
73,2	80,7	71,6	78,6	81,6	90,1	90,1	83,8	83,8	70,5	66,1	81,3	85,1	81,0	72,0	81,8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
84,1	95,9	72,5	69,8	77,8	80,6	83,4	89,2	93,5	81,0	77,6	78,2	79,6	69,2	74,9

CQS: 79,1



COLOR PARAMETERS

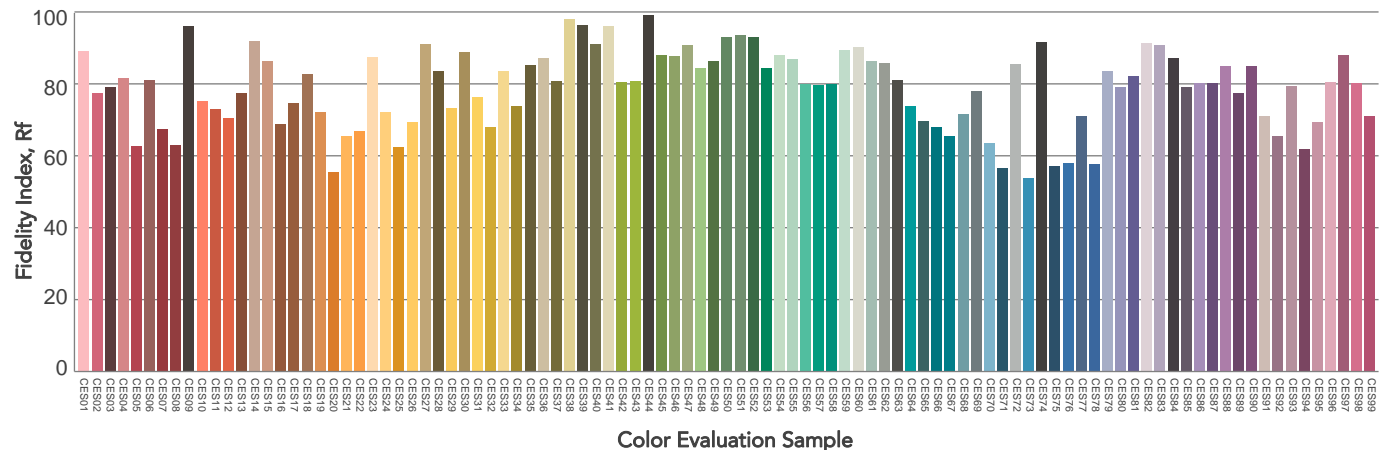
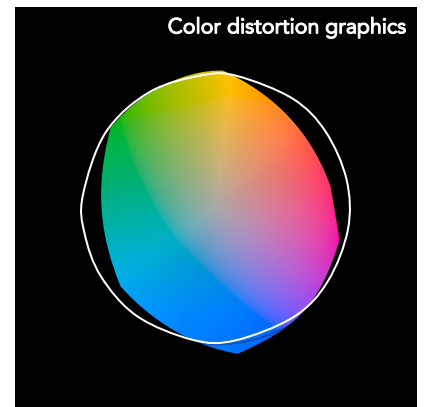
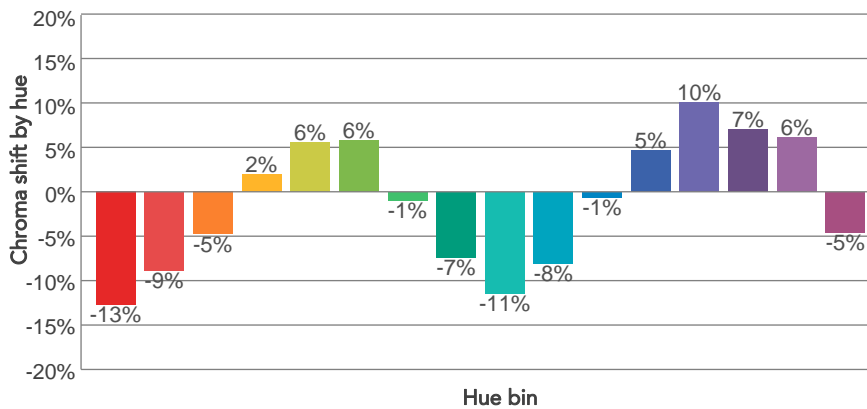
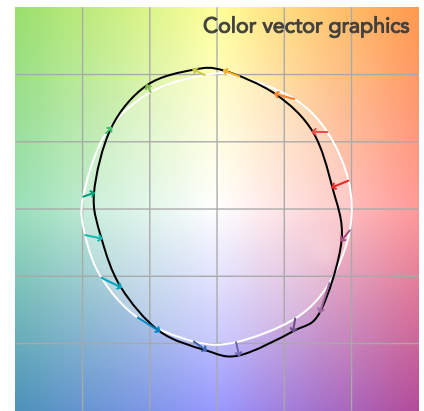
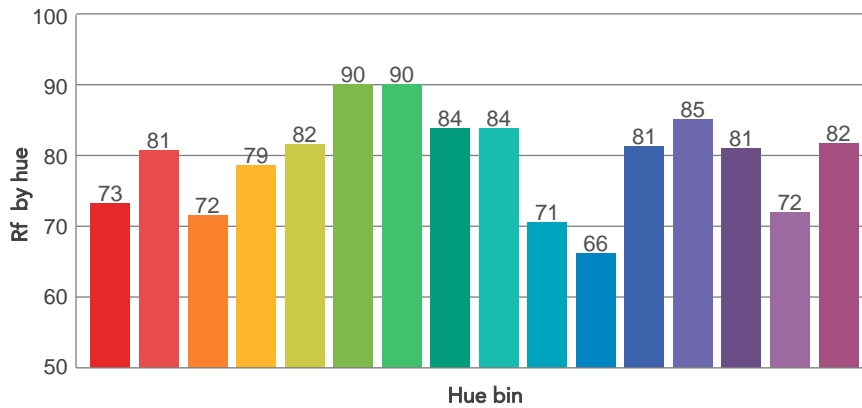
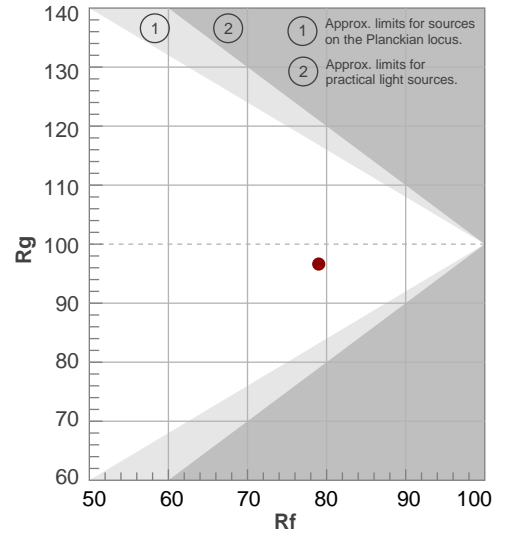
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5696 K	80,2	4,8	79,0	96,6	79,1	68	0,328	0,345	0,0005

TM30 DETAILS

Rf 79,0
Fidelity index Rf

Rg 96,6
Gammut index

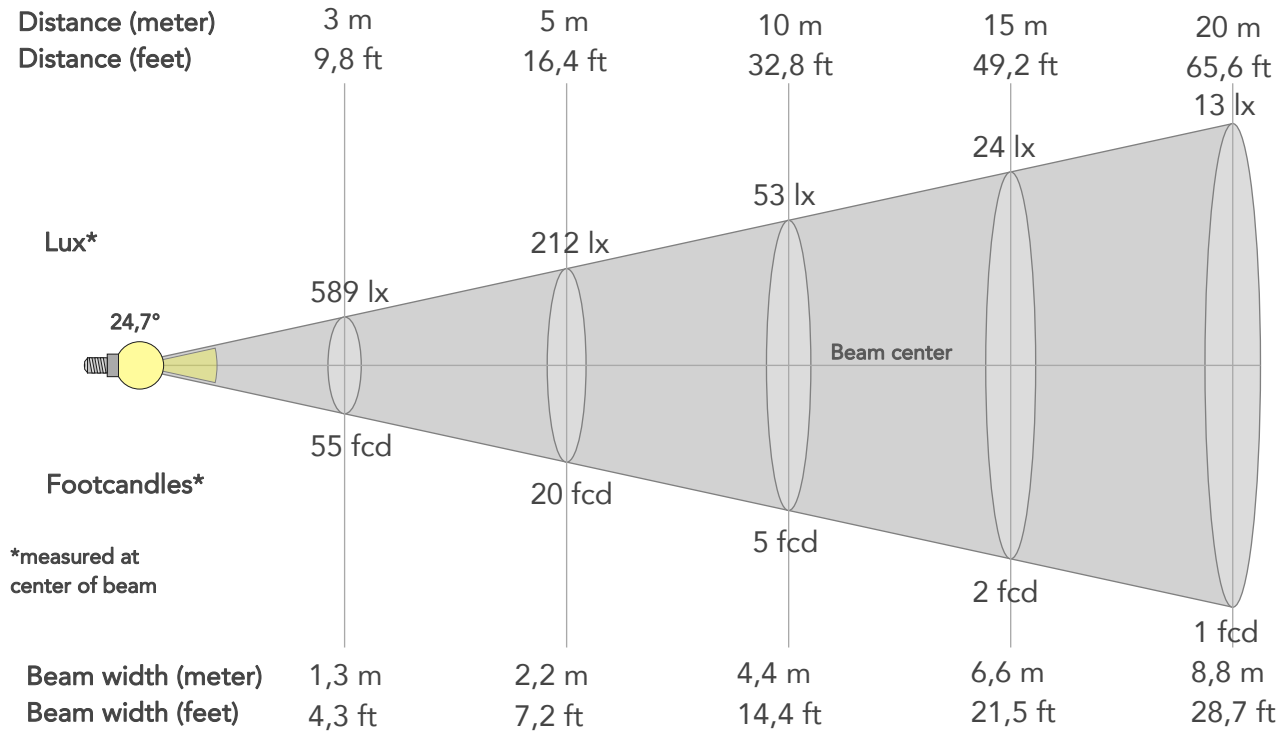
		Graphic shifts (%)	
Hue Bin	R _f	Chroma	Hue
1	73	-13%	-3%
2	81	-9%	6%
3	72	-5%	14%
4	79	2%	12%
5	82	6%	7%
6	90	6%	0%
7	90	-1%	-6%
8	84	-7%	-4%
9	84	-11%	5%
10	71	-8%	14%
11	66	-1%	19%
12	81	5%	10%
13	85	10%	0%
14	81	7%	-7%
15	72	6%	-22%
16	82	-5%	-9%



BEAM DETAILS



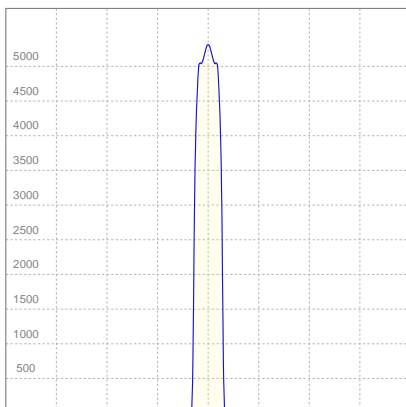
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
24,7°	27,8°	29,1°	99,4%	99,3%



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	5305lx	1326lx	589lx	332lx	212lx	94lx	53lx	24lx	13lx	8lx	6lx	3lx	2lx
Footcand.	493fcd	123fcd	55fcd	31fcd	20fcd	9fcd	5fcd	2fcd	1fcd	1fcd	1fcd	0fcd	0fcd
Beam wid.	0,4m	0,9m	1,3m	1,8m	2,2m	3,3m	4,4m	6,6m	8,8m	10,9m	13,1m	17,5m	21,9m
Beam wid.	1,4ft	2,9ft	4,3ft	5,7ft	7,2ft	10,8ft	14,4ft	21,5ft	28,7ft	35,9ft	43,1ft	57,5ft	71,8ft

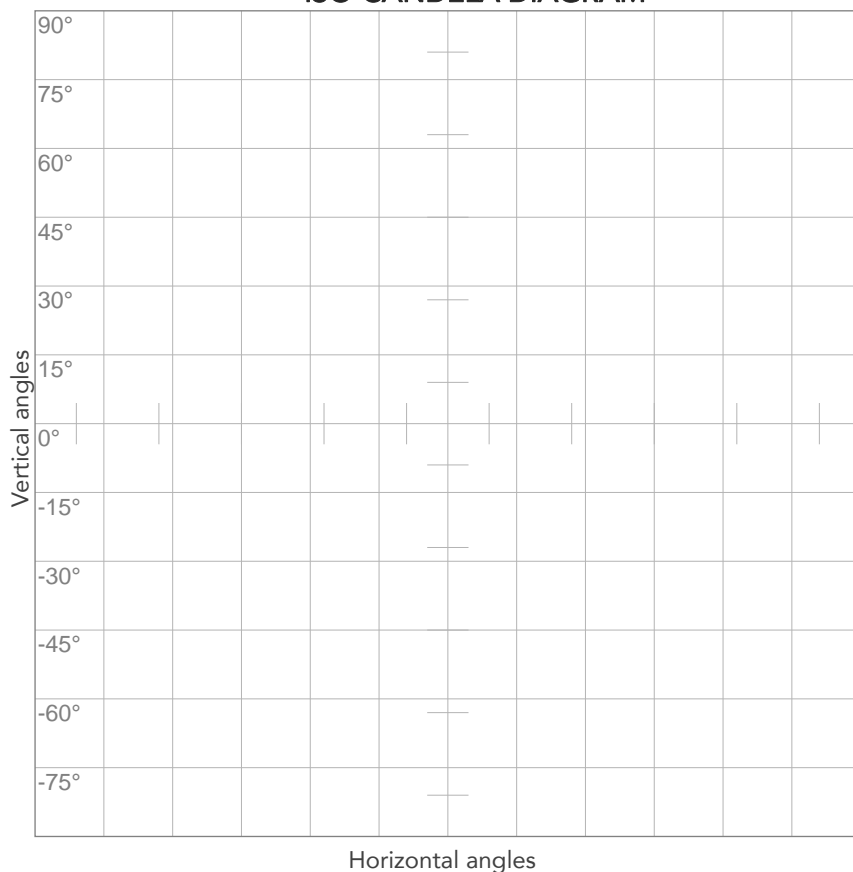
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
227V	0,204A	21,0W	35lm/W
Power FC			
0.47			

ISO CANDELA DIAGRAM



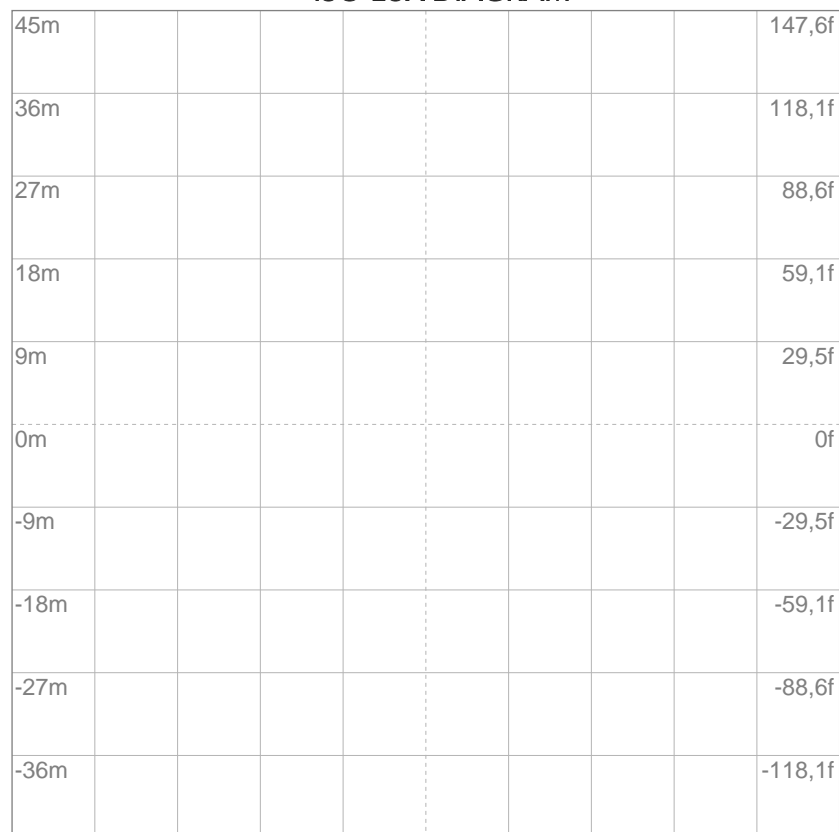
10%	530 cd
20%	1061 cd
30%	1591 cd
40%	2122 cd
50%	2652 cd
60%	3183 cd
70%	3713 cd
80%	4244 cd

Conditions:

Number of c-planes: 2

Candela at center: 5305 cd

ISO LUX DIAGRAM



3%	1,59 lx
5%	2,65 lx
10%	5,30 lx
30%	15,9 lx
50%	26,5 lx

Conditions:

Number of c-planes: 2

Lux at center: 53,0 lx

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



Total lumen output:

743 lm

Peak candela output:

2679 cd

Light quality:

CRI: 80,5

Color temperature:

5534 K

PRODUCT NAME:

MINIECL DY

MEASURAMENT CONDITIONS:

Beam angle:

36°

Target:

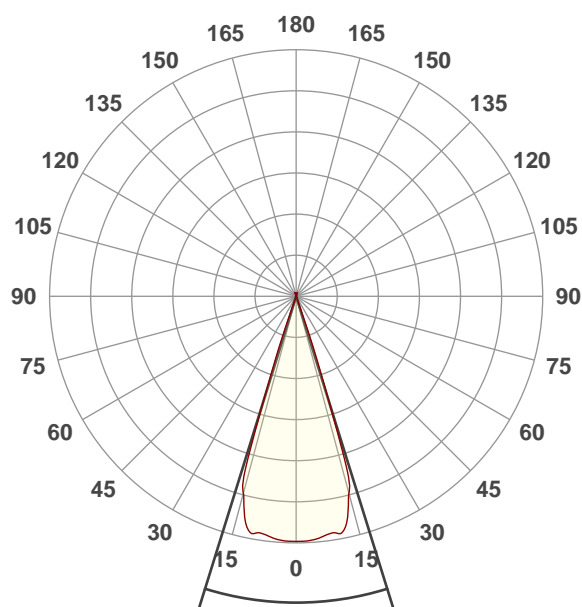
Cold White

Operator:

Paolo Carvone

Date and time:

06/05/2020 09:23:42

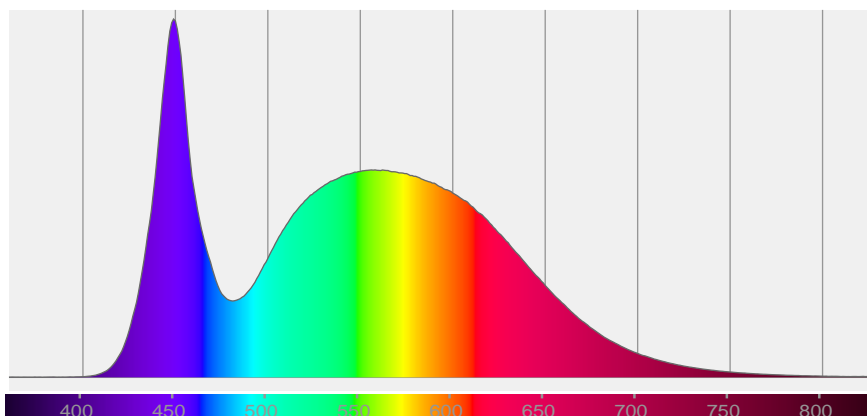


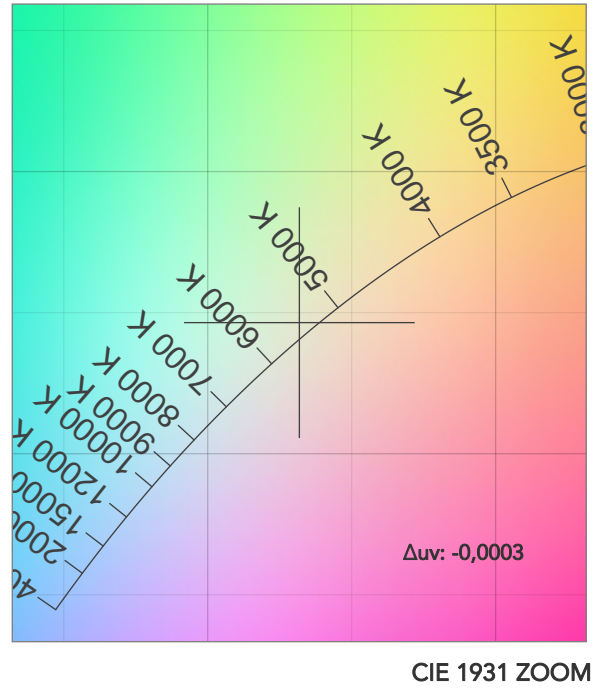
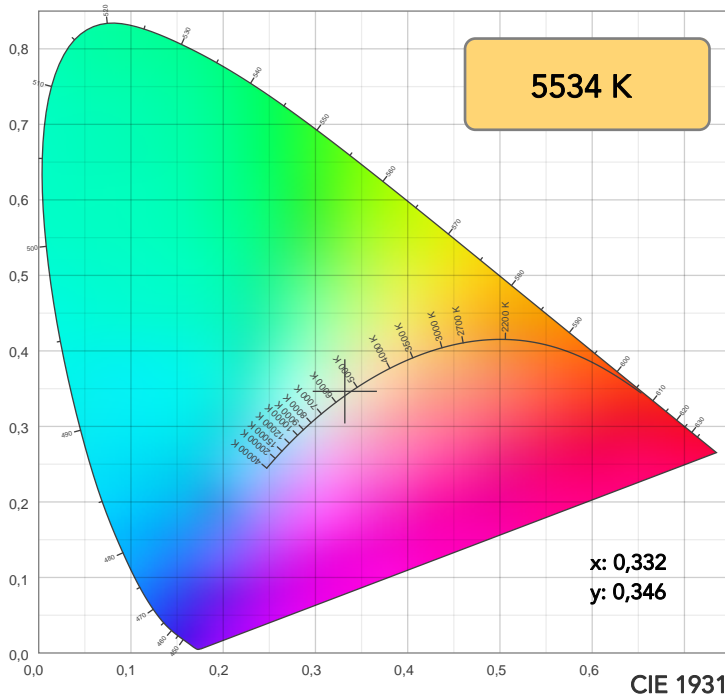
Beam angle 50%: 34,6°

Field angle 10%: 38,8°

Cut off angle 2.5%: 39,9°

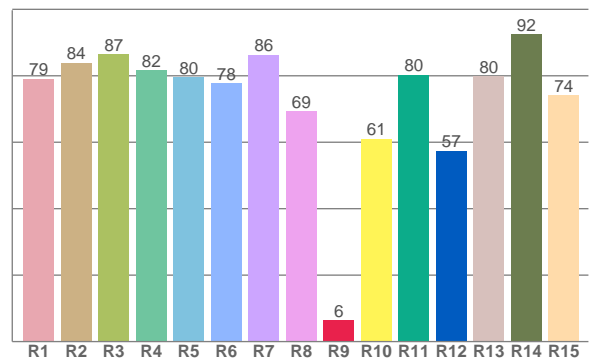
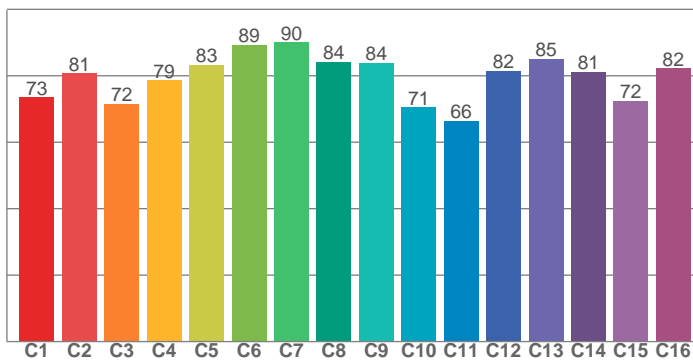
Spectra





TM30: 79,2

CRI: 80,5 (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
79,1	83,9	86,5	81,6	79,7	77,8	86,4	69,3	6,4	61,0	80,3	57,5	79,9	92,5	74,1

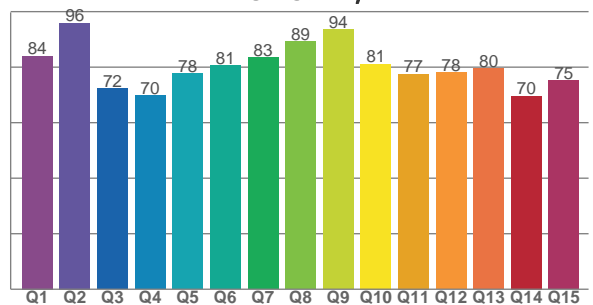
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
73,5	80,8	71,6	78,6	83,3	89,4	90,1	84,1	83,9	70,5	66,5	81,5	85,2	81,2	72,4	82,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
84,0	95,9	72,4	69,7	77,7	80,6	83,4	89,2	93,6	81,1	77,5	78,1	79,5	69,6	75,1

CQS: 79,1



COLOR PARAMETERS

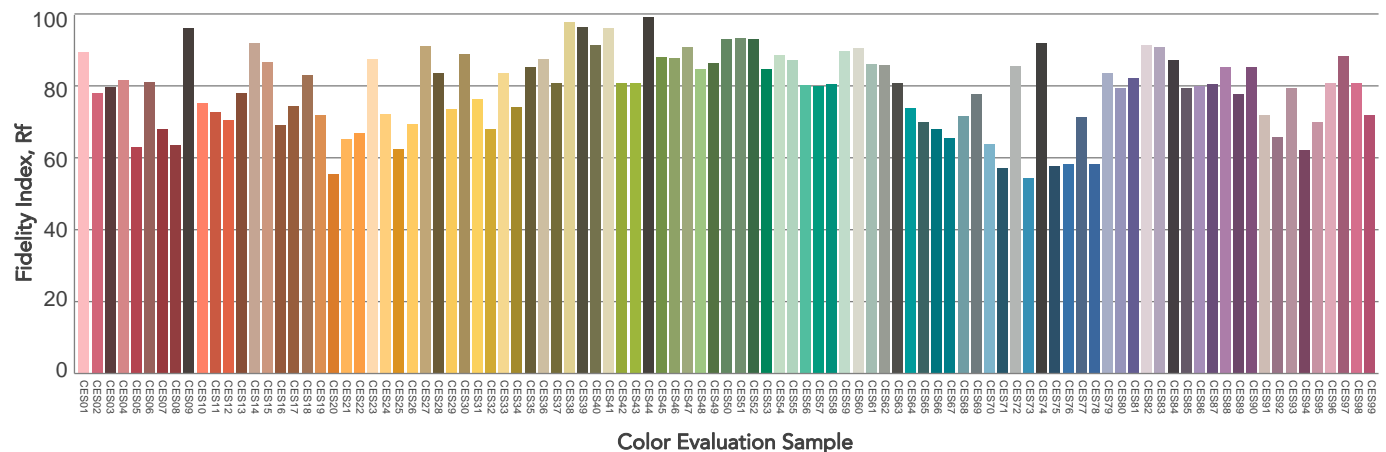
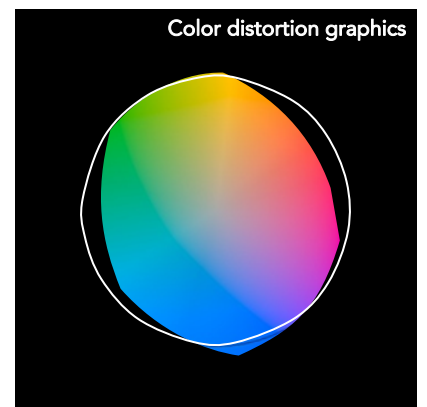
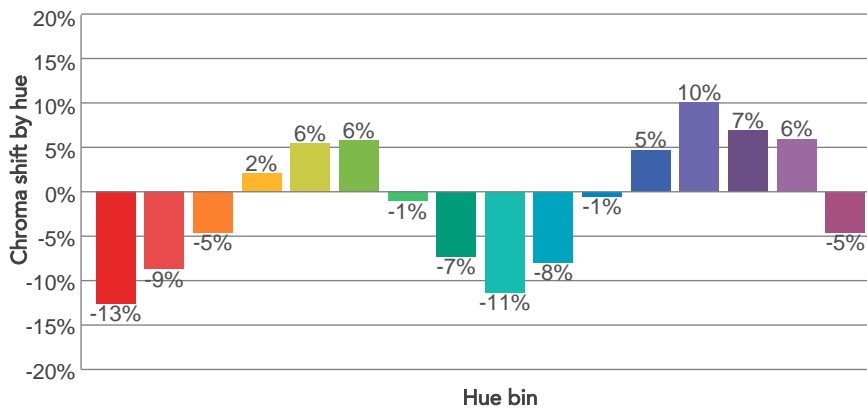
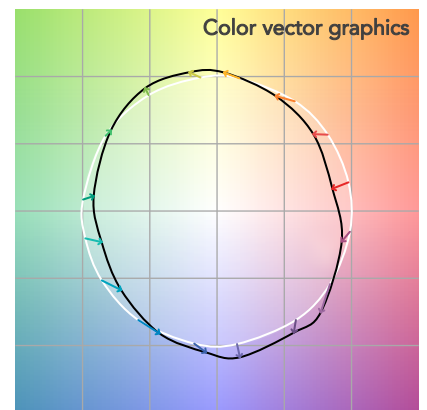
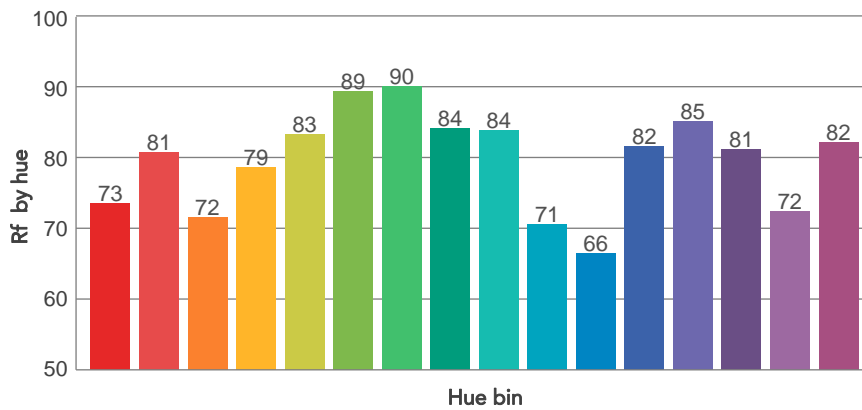
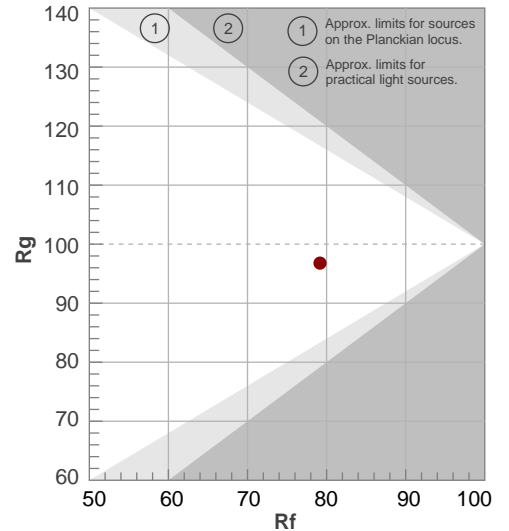
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5534 K	80,5	6,4	79,2	96,8	79,1	68	0,332	0,346	-0,0003

TM30 DETAILS

Rf 79,2
Fidelity index Rf

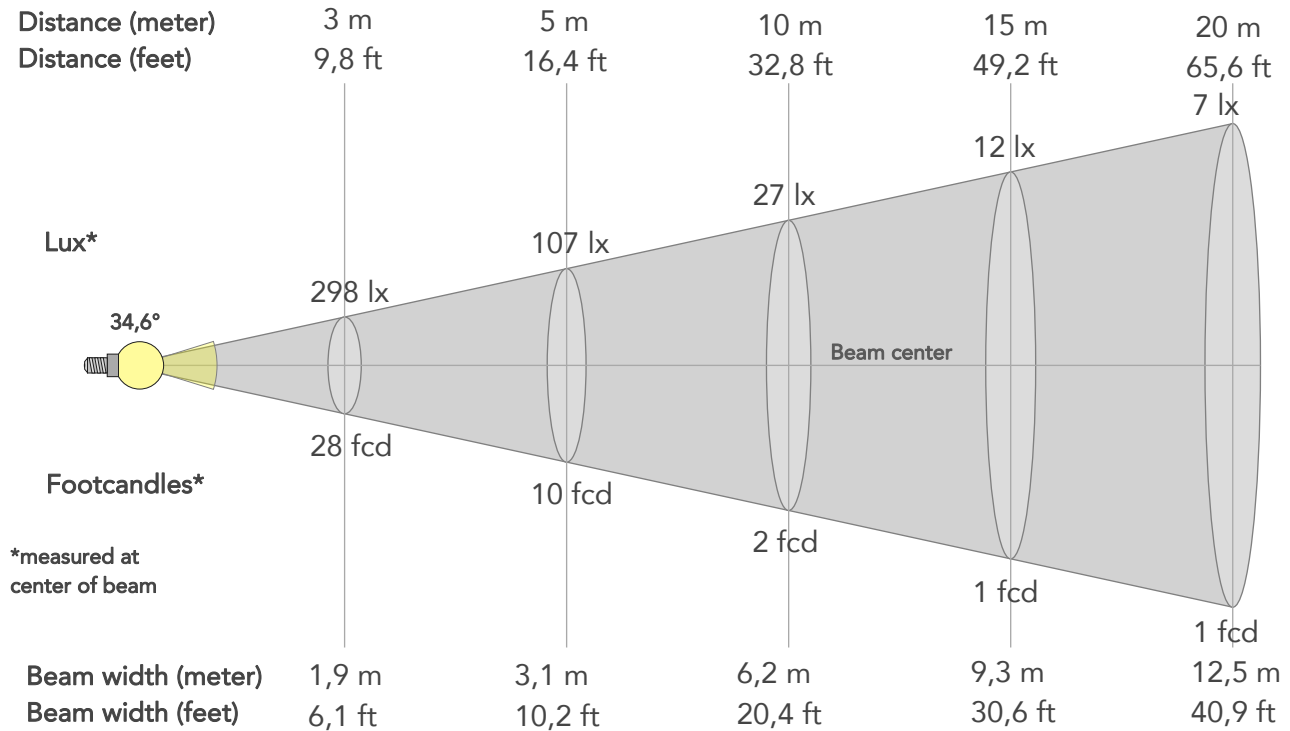
Rg 96,8
Gammut index

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	73	-13%	-2%
2	81	-9%	6%
3	72	-5%	14%
4	79	2%	12%
5	83	6%	7%
6	89	6%	-1%
7	90	-1%	-6%
8	84	-7%	-4%
9	84	-11%	5%
10	71	-8%	14%
11	66	-1%	19%
12	82	5%	10%
13	85	10%	0%
14	81	7%	-6%
15	72	6%	-21%
16	82	-5%	-8%



BEAM DETAILS

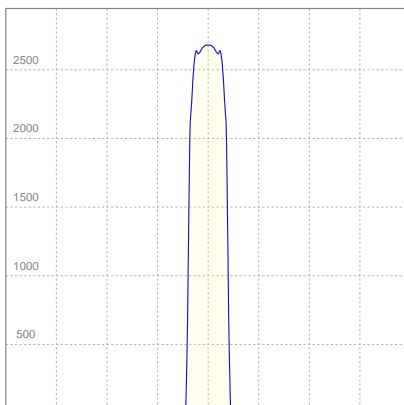
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
34,6°	38,8°	39,9°	99,3%	99,1%



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	2679lx	670lx	298lx	167lx	107lx	48lx	27lx	12lx	7lx	4lx	3lx	2lx	1lx
Footcand.	249fcd	62fcd	28fcd	16fcd	10fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	0,6m	1,2m	1,9m	2,5m	3,1m	4,7m	6,2m	9,3m	12,5m	15,6m	18,7m	24,9m	31,1m
Beam wid.	2,1ft	4,1ft	6,1ft	8,2ft	10,2ft	15,3ft	20,4ft	30,6ft	40,9ft	51,1ft	61,3ft	81,7ft	102,2ft

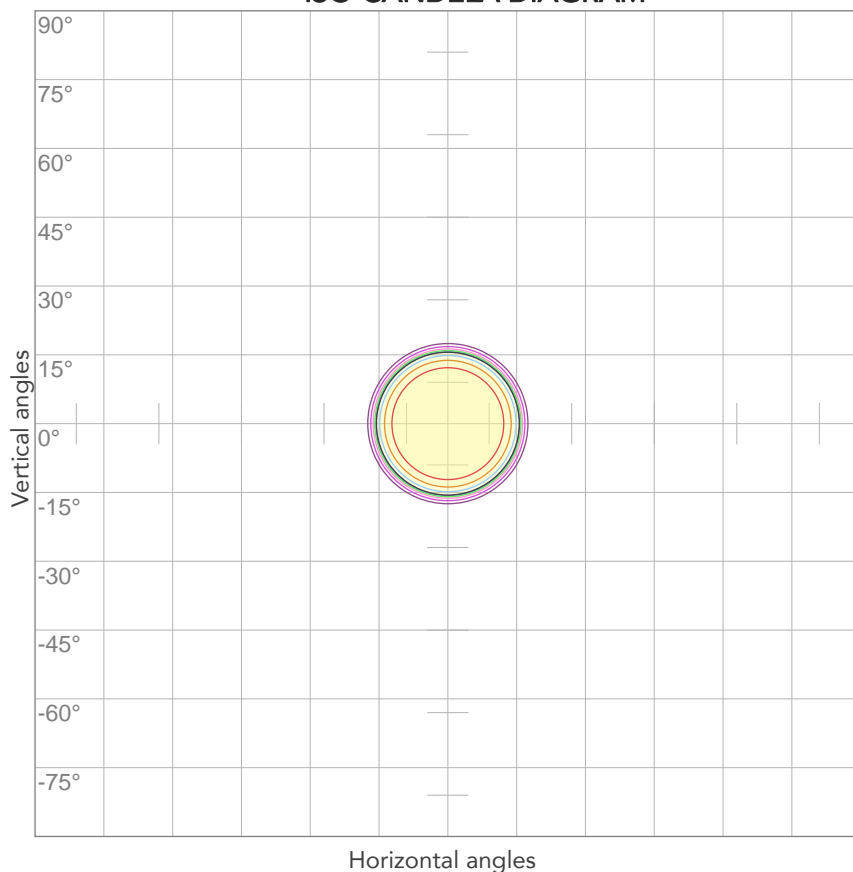
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,195A	20,9W	36lm/W
Power FC			
0.47			

ISO CANDELA DIAGRAM



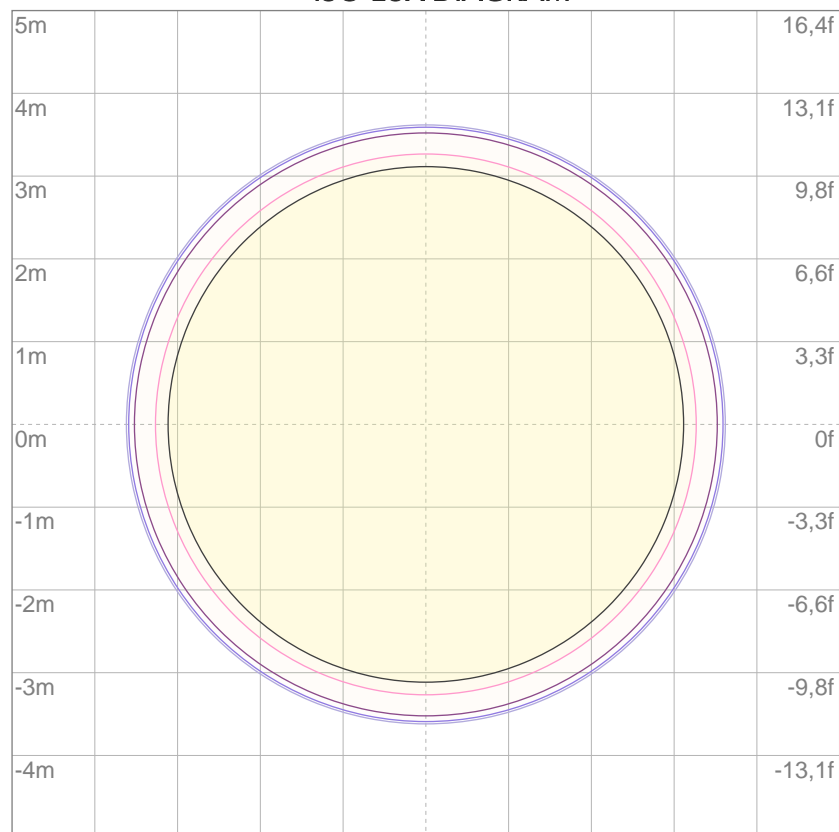
10%	268 cd
20%	536 cd
30%	804 cd
40%	1071 cd
50%	1339 cd
60%	1607 cd
70%	1875 cd
80%	2143 cd

Conditions:

Number of c-planes: 2

Candela at center: 2679 cd

ISO LUX DIAGRAM



3%	0,804 lx
5%	1,34 lx
10%	2,68 lx
30%	8,04 lx
50%	13,4 lx

Conditions:

Number of c-planes: 2

Lux at center: 26,8 lx

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



Total lumen output:

693 lm

Peak candela output:

1311 cd

Light quality:

CRI: 81,1

Color temperature:

5711 K

PRODUCT NAME:

MINIECL DY

MEASURAMENT CONDITIONS:

Beam angle:

50°

Target:

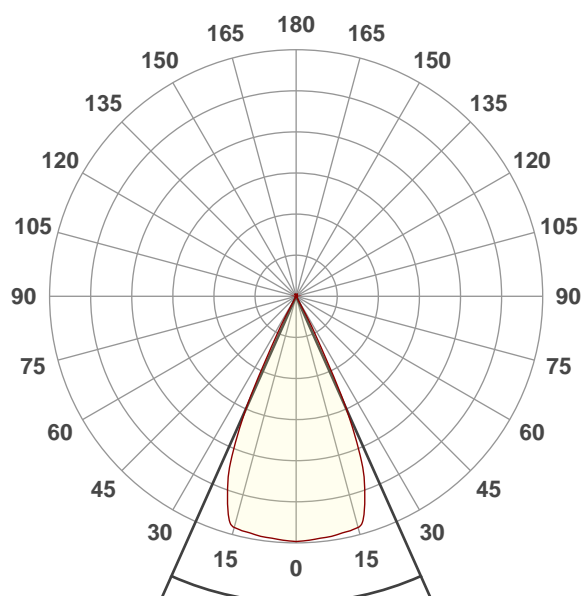
Cold White

Operator:

Paolo Carvone

Date and time:

06/05/2020 09:27:04

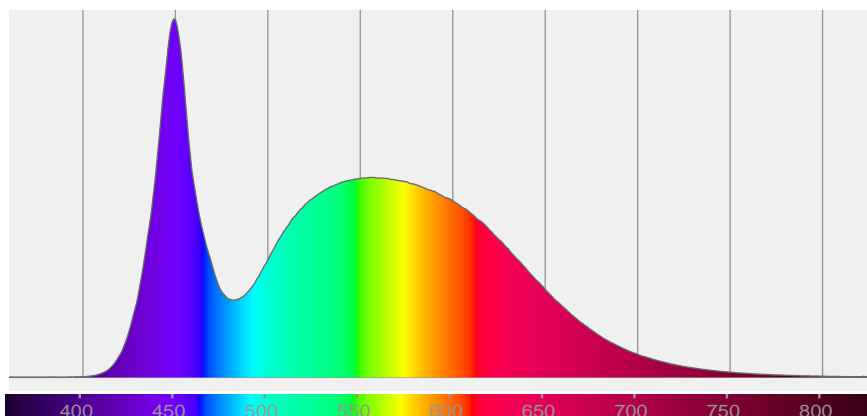


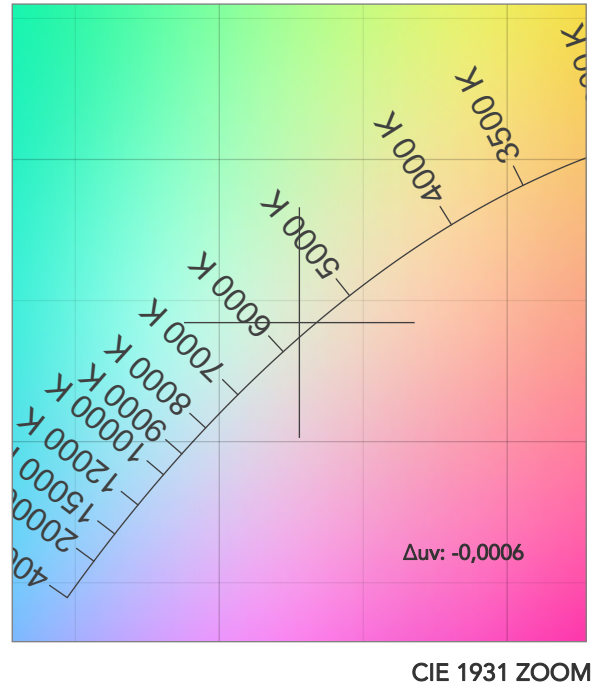
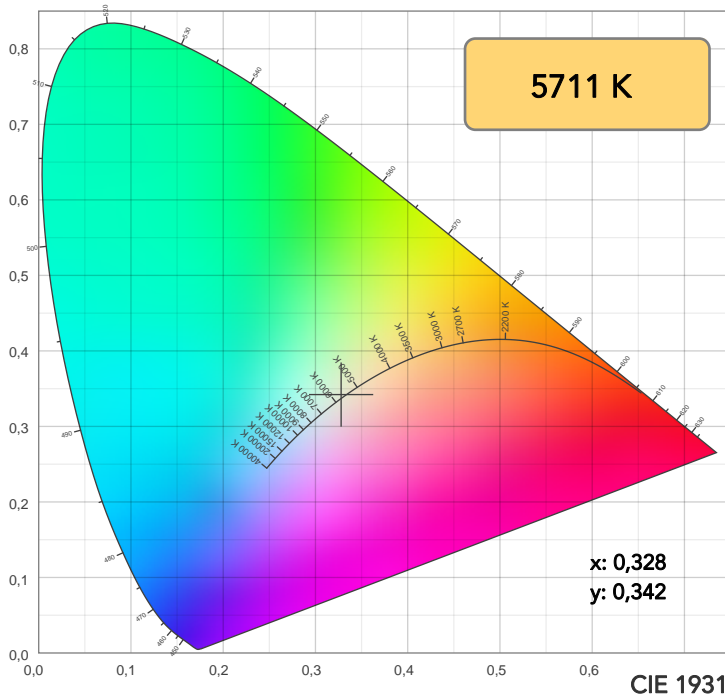
Beam angle 50%: 48°

Field angle 10%: 55,8°

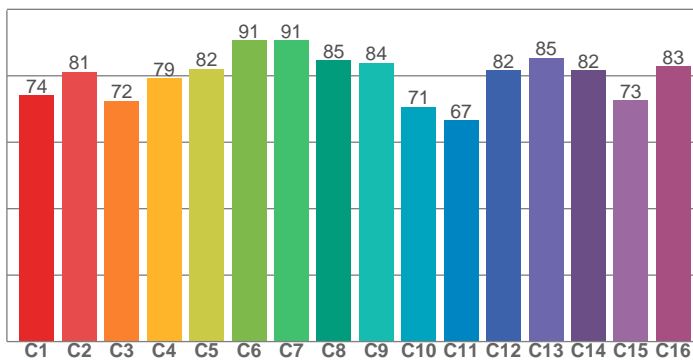
Cut off angle 2.5%: 58,2°

Spectra

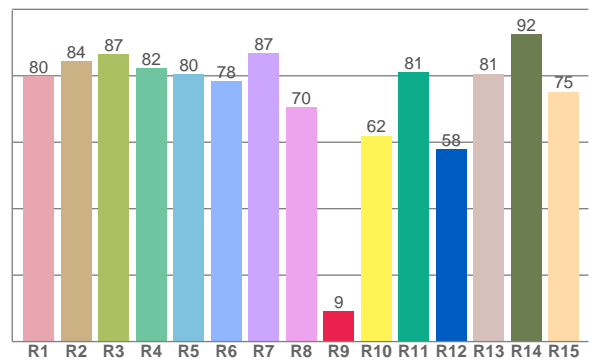




TM30: 79,6



CRI: 81,1 (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
79,9	84,4	86,5	82,3	80,4	78,3	86,8	70,4	9,2	61,9	81,0	57,8	80,7	92,5	75,2

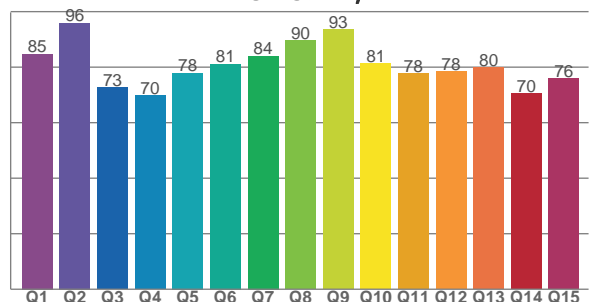
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
74,1	81,2	72,4	79,2	82,1	90,6	90,6	84,6	83,9	70,6	66,5	81,7	85,3	81,7	72,6	82,8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
84,8	96,0	72,6	69,7	77,9	81,1	84,0	89,6	93,5	81,3	77,7	78,3	79,9	70,5	75,9

CQS: 79,4



COLOR PARAMETERS

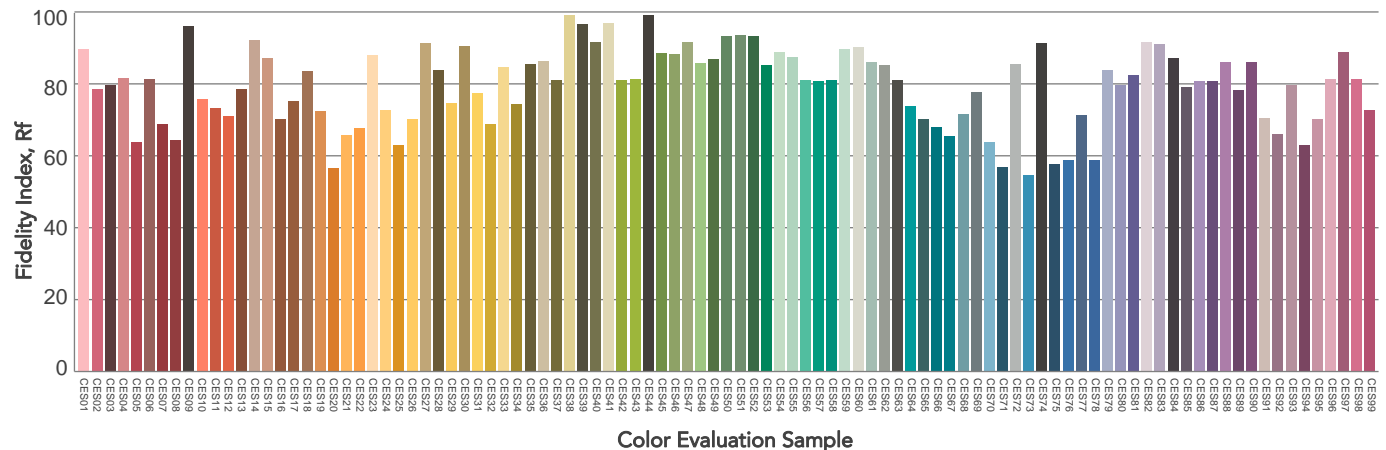
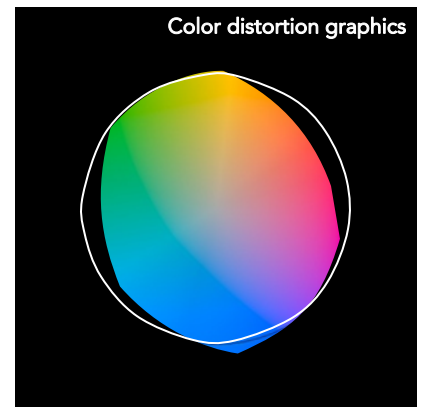
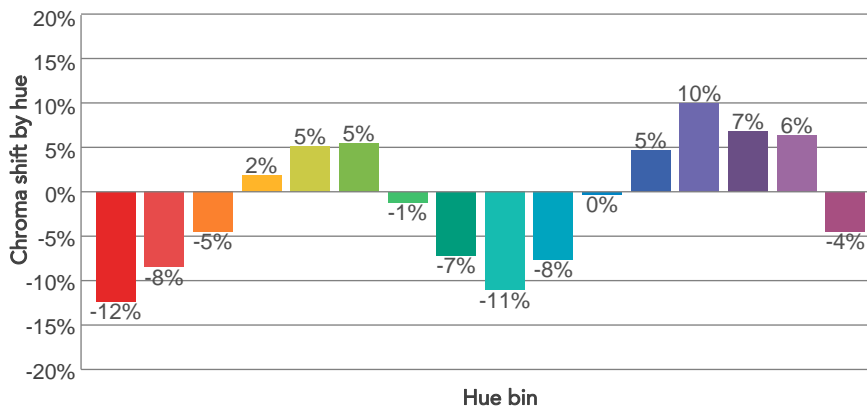
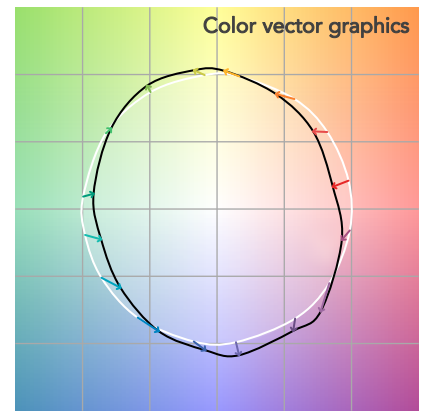
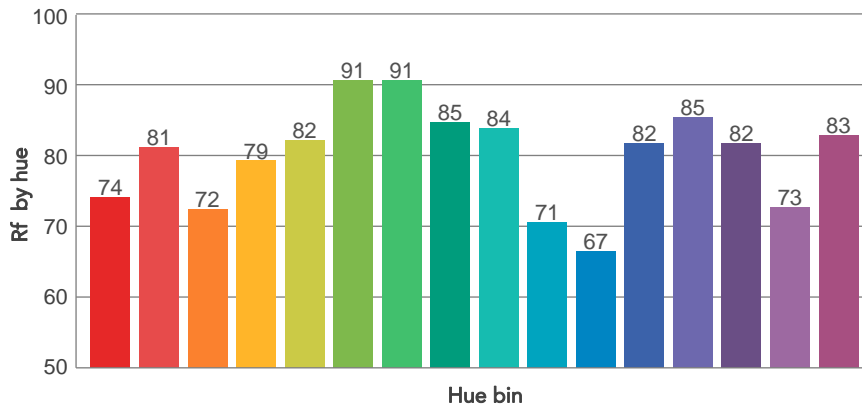
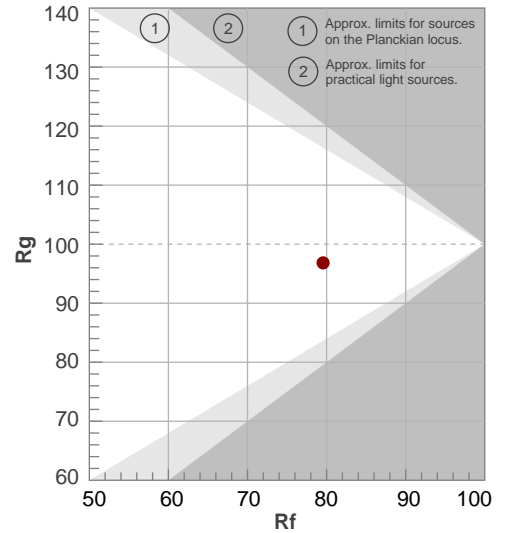
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5711 K	81,1	9,2	79,6	96,8	79,4	69	0,328	0,342	-0,0006

TM30 DETAILS

Rf 79,6
Fidelity index Rf

Rg 96,8
Gammut index

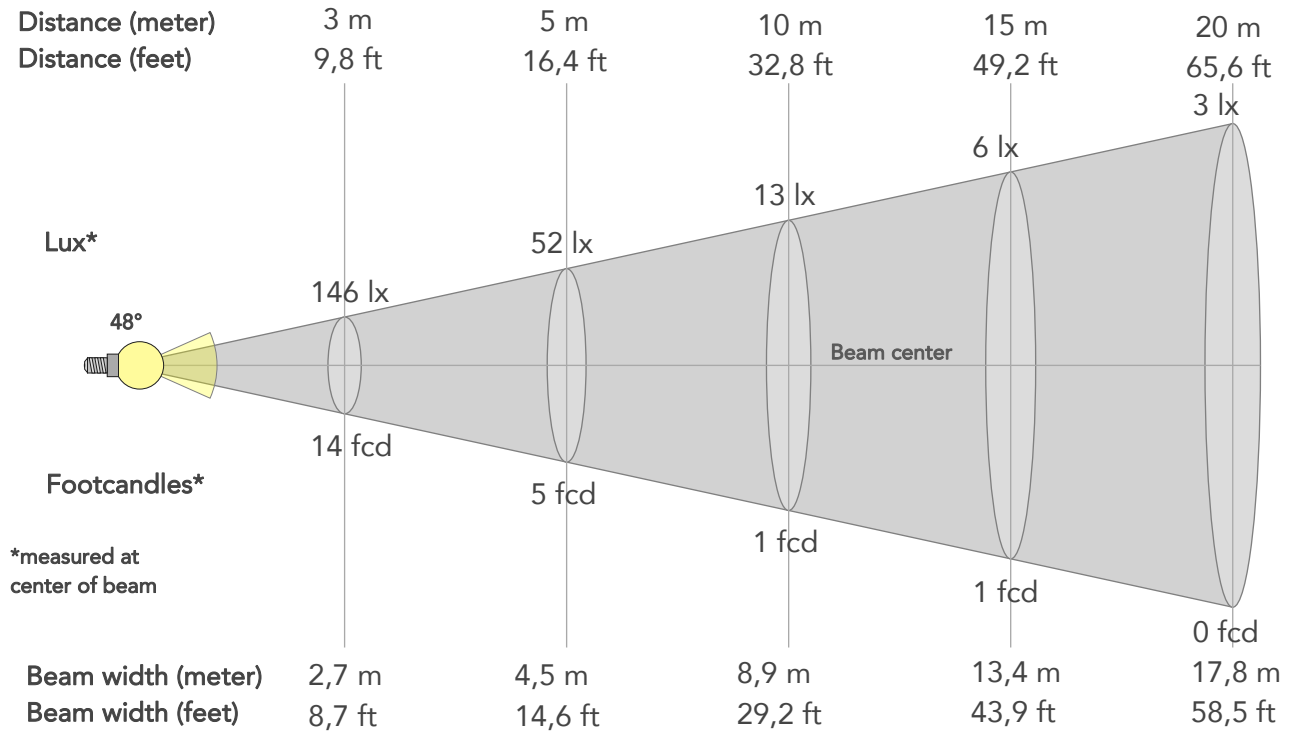
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	74	-12%	-2%
2	81	-8%	6%
3	72	-5%	14%
4	79	2%	12%
5	82	5%	7%
6	91	5%	0%
7	91	-1%	-5%
8	85	-7%	-4%
9	84	-11%	6%
10	71	-8%	14%
11	67	0%	19%
12	82	5%	10%
13	85	10%	0%
14	82	7%	-6%
15	73	6%	-21%
16	83	-4%	-8%



BEAM DETAILS



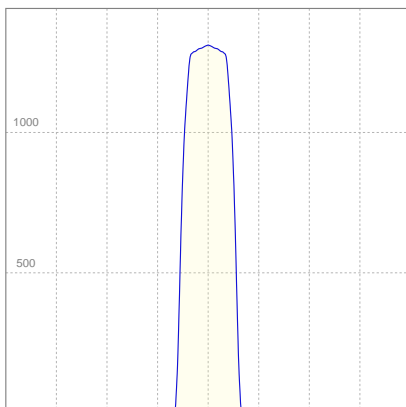
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
48°	55,8°	58,2°	99,6%	99,5%



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	1311lx	328lx	146lx	82lx	52lx	23lx	13lx	6lx	3lx	2lx	1lx	1lx	1lx
Footcand.	122fcd	30fcd	14fcd	8fcd	5fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	0,9m	1,8m	2,7m	3,6m	4,5m	6,7m	8,9m	13,4m	17,8m	22,3m	26,7m	35,7m	44,6m
Beam wid.	2,9ft	5,9ft	8,7ft	11,7ft	14,6ft	21,9ft	29,2ft	43,9ft	58,5ft	73,1ft	87,7ft	117ft	146,2ft

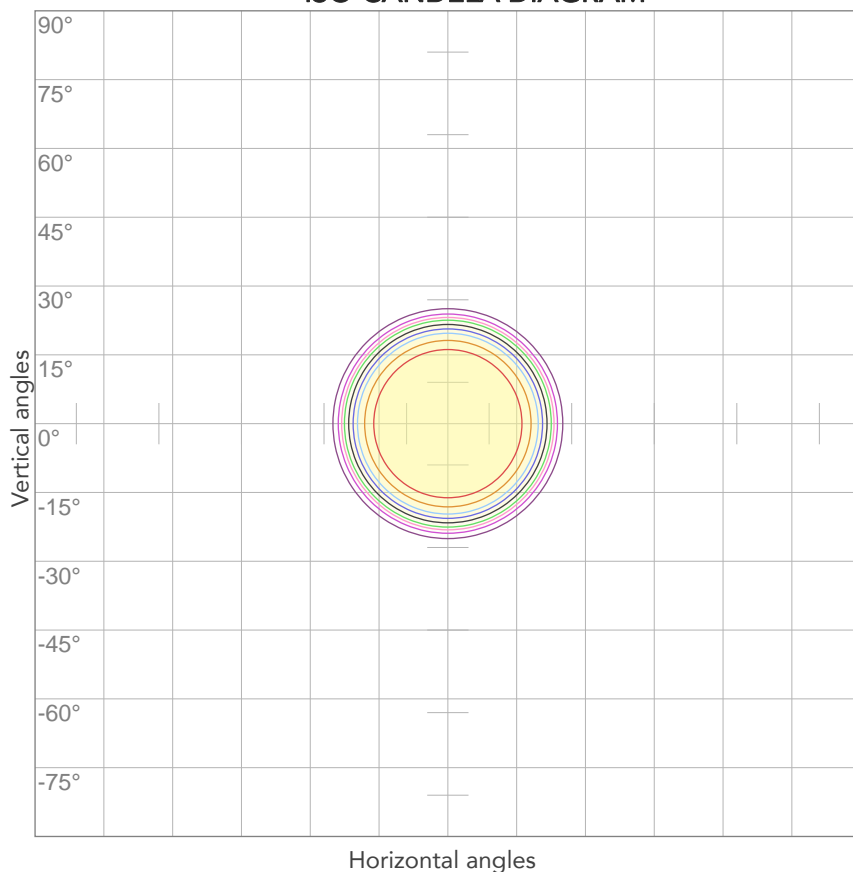
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
227V	0,195A	20,9W	33lm/W
Power FC			
0.47			

ISO CANDELA DIAGRAM



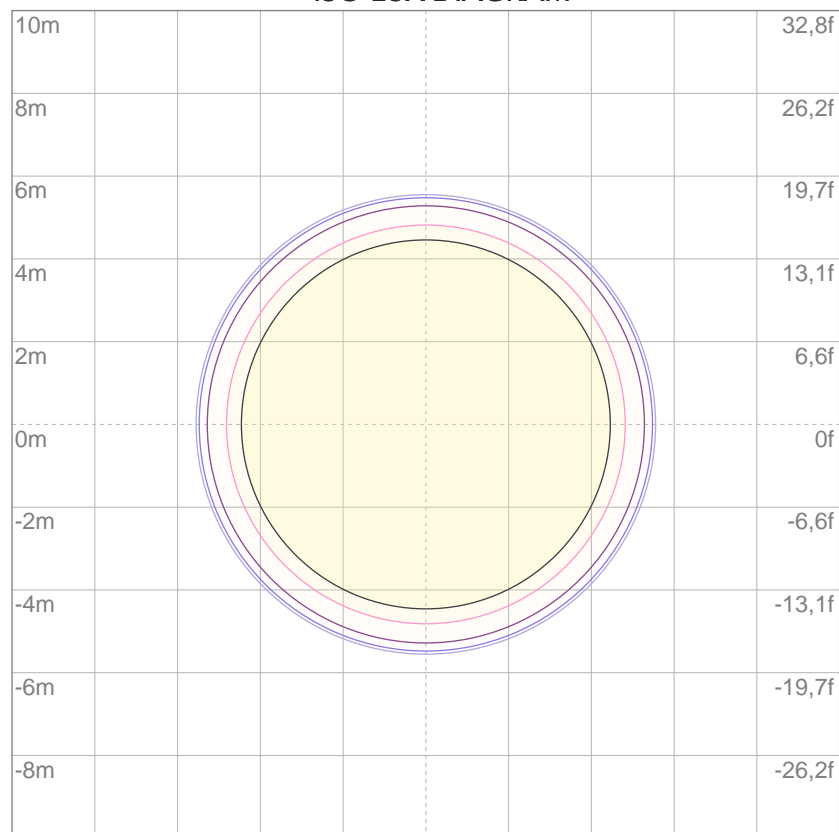
10%	131 cd
20%	262 cd
30%	393 cd
40%	524 cd
50%	655 cd
60%	786 cd
70%	918 cd
80%	1049 cd

Conditions:

Number of c-planes: 2

Candela at center: 1311 cd

ISO LUX DIAGRAM



3%	0,393 lx
5%	0,655 lx
10%	1,31 lx
30%	3,93 lx
50%	6,55 lx

Conditions:

Number of c-planes: 2

Lux at center: 13,1 lx

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



Total lumen output:

547 lm

Peak candela output:

2038 cd

Light quality:

CRI: 90,8

Color temperature:

5425 K

PRODUCT NAME:

MINIECL DY

MEASURAMENT CONDITIONS:

Beam angle:

1530 Wash - Max Zoom

Target:

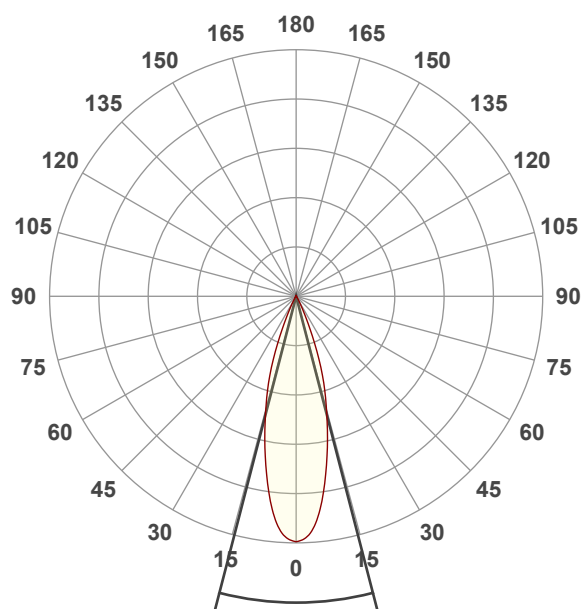
Cold White

Operator:

Paolo Carvone

Date and time:

07/07/2022 11:12:05

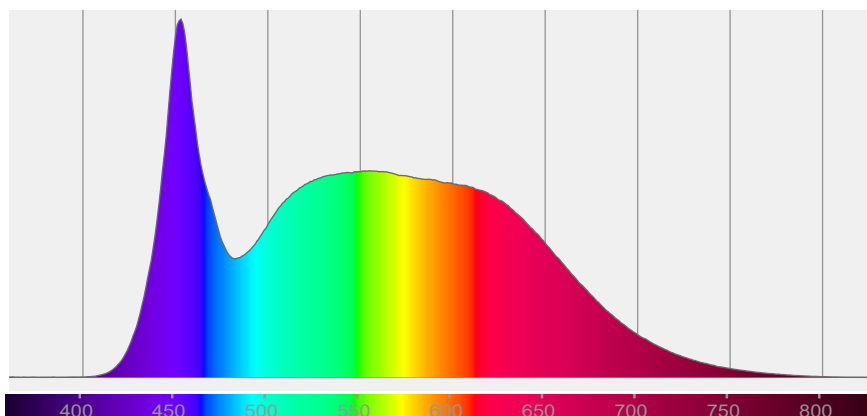


Beam angle 50%: 29°

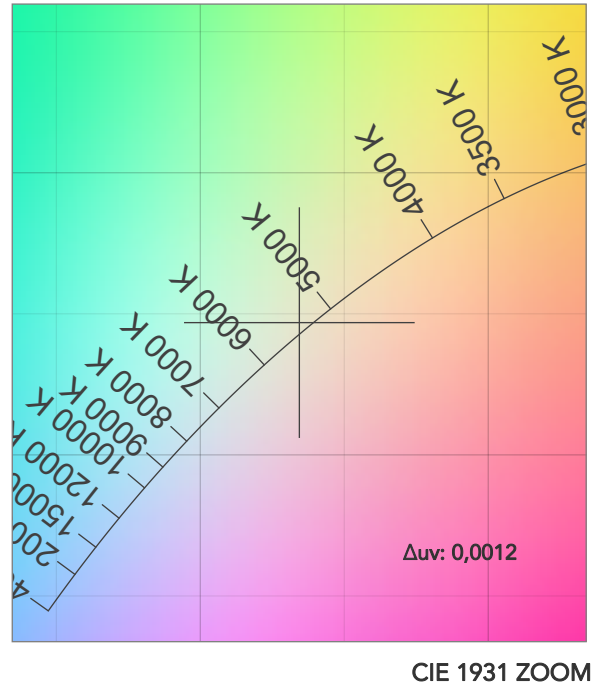
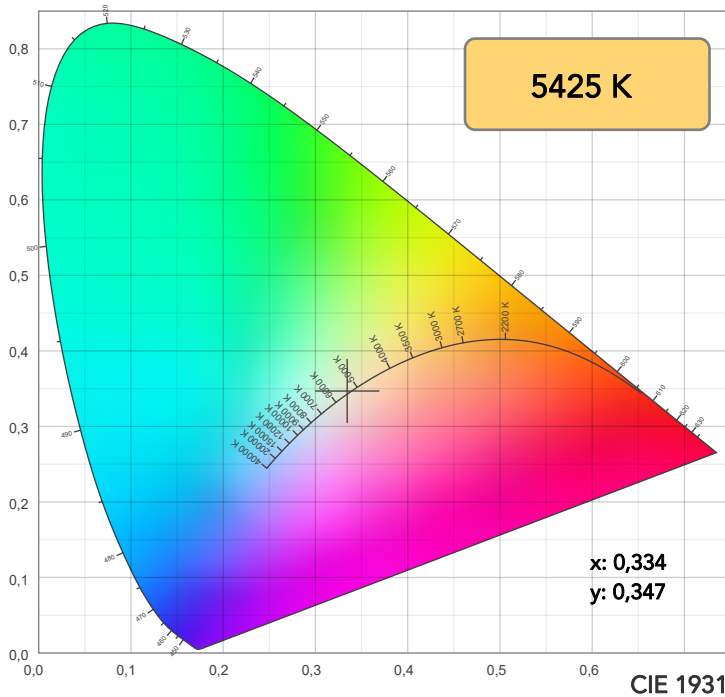
Field angle 10%: 48,9°

Cut off angle 2.5%: 60,4°

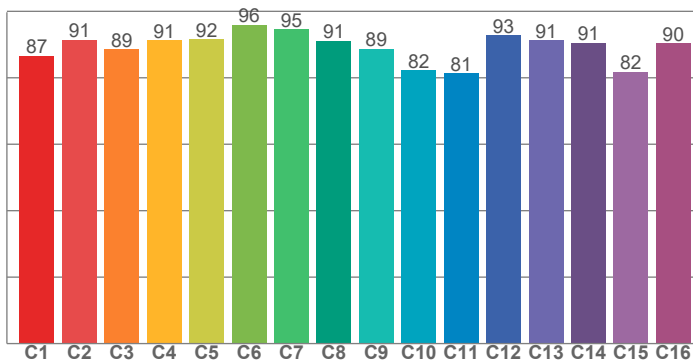
Spectra



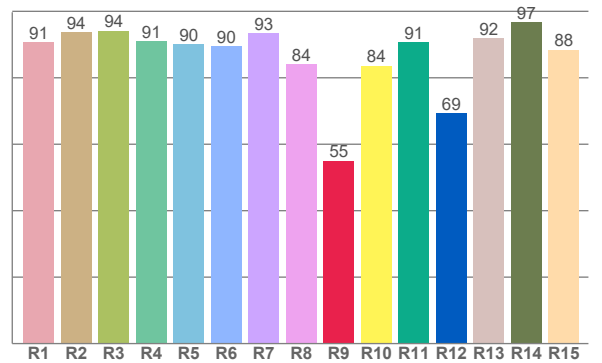
COLOR DETAILS



TM30: 89,2



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
90,8	93,7	94,1	91,0	90,1	89,5	93,4	84,1	55,0	83,7	90,7	69,3	91,9	96,7	88,4

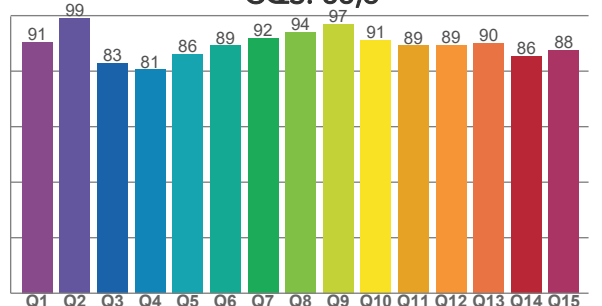
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
86,7	91,4	88,6	91,2	91,6	96,0	94,5	91,1	88,7	82,3	81,3	92,8	91,3	90,6	81,8	90,4

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
90,6	99,0	82,9	80,6	86,2	89,2	91,9	94,1	97,0	91,2	89,2	89,4	90,1	85,5	87,5

CQS: 88,6



COLOR PARAMETERS

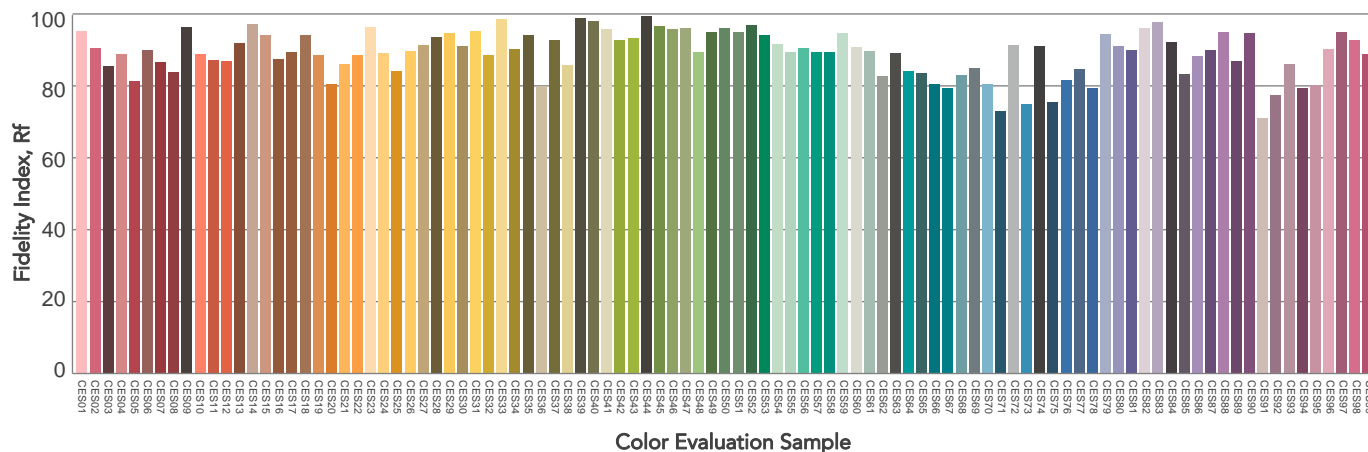
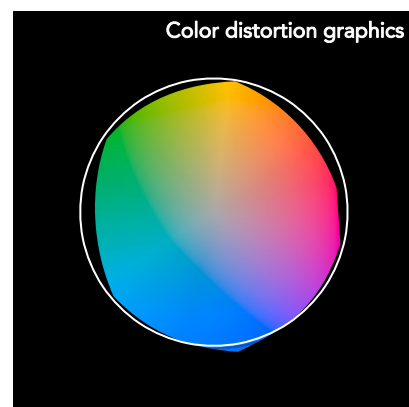
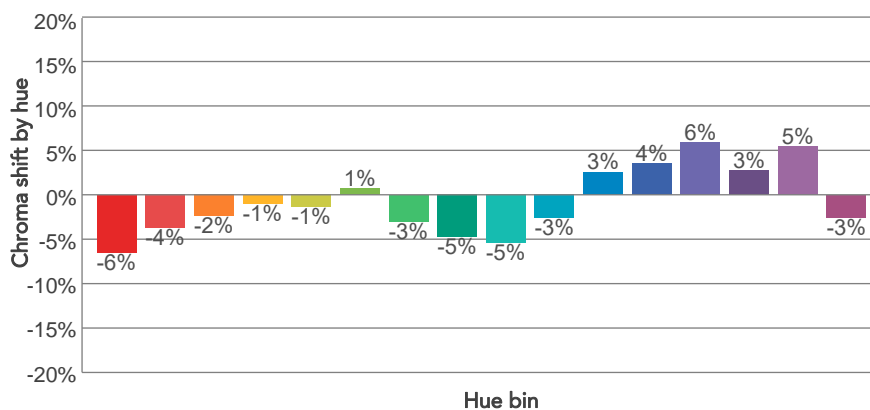
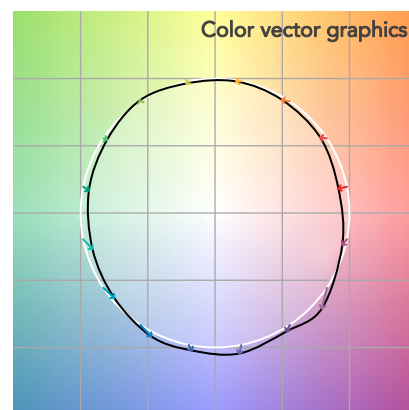
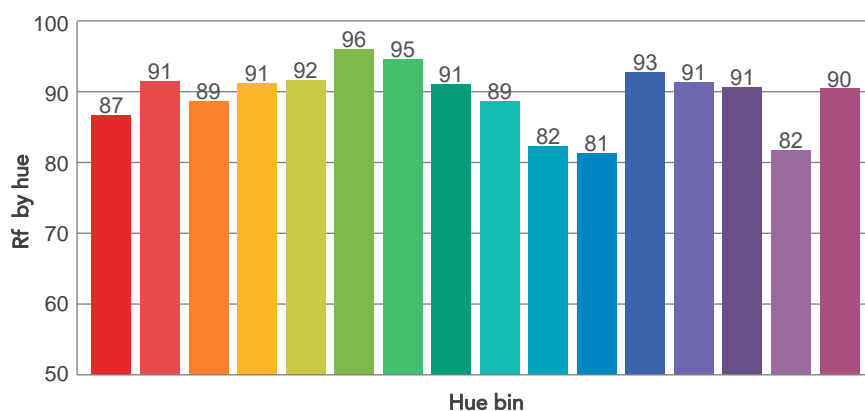
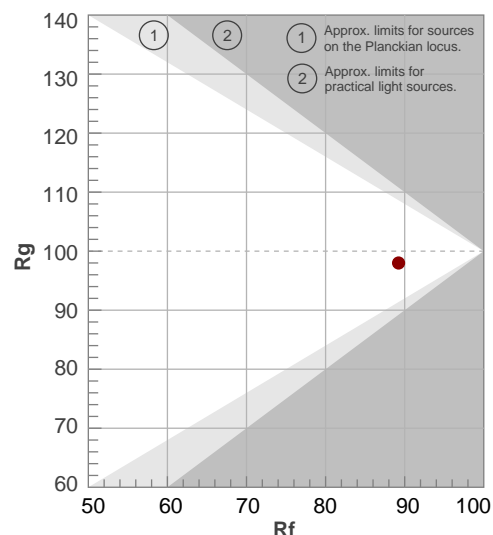
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5425 K	90,8	55,0	89,2	98,0	88,6	93	0,334	0,347	0,0012

TM30 DETAILS

Rf 89,2
Fidelity index Rf

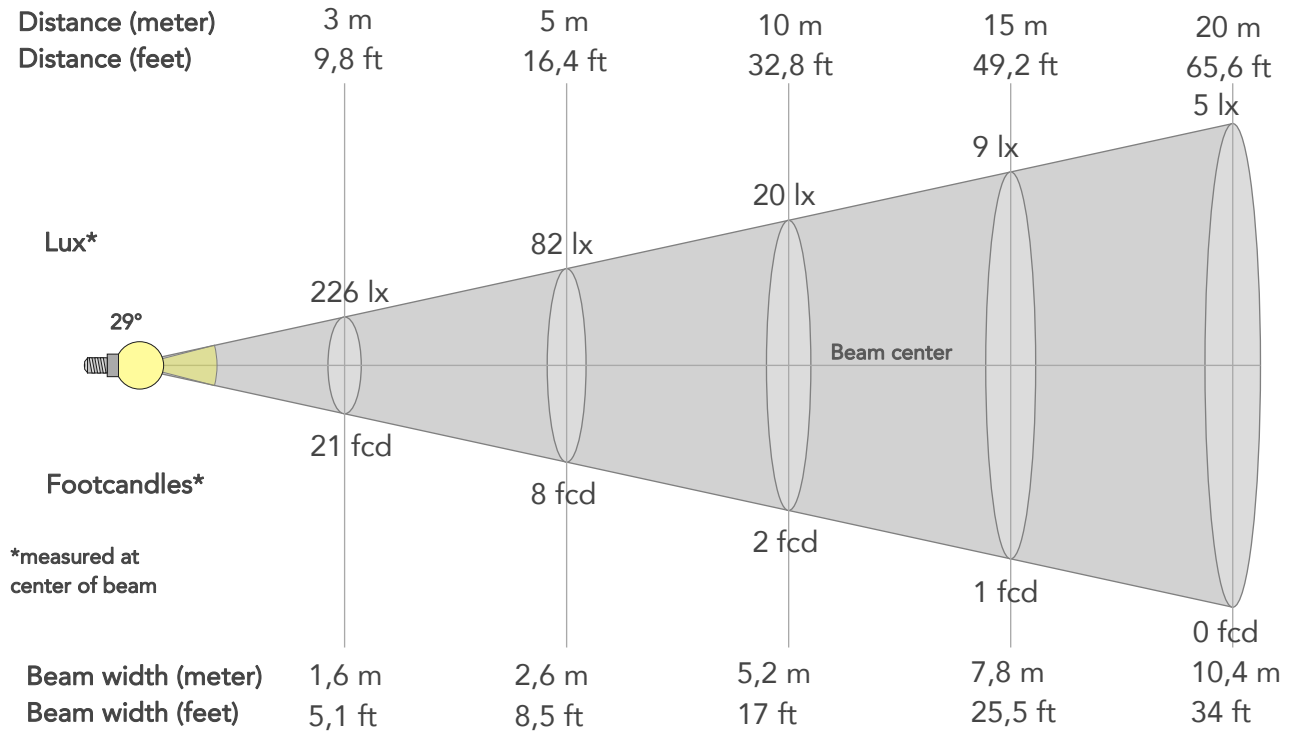
Rg 98,0
Gammut index

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	87	-6%	0%
2	91	-4%	3%
3	89	-2%	6%
4	91	-1%	4%
5	92	-1%	2%
6	96	1%	0%
7	95	-3%	-1%
8	91	-5%	2%
9	89	-5%	8%
10	82	-3%	11%
11	81	3%	11%
12	93	4%	3%
13	91	6%	-3%
14	91	3%	-5%
15	82	5%	-15%
16	90	-3%	-5%



BEAM DETAILS

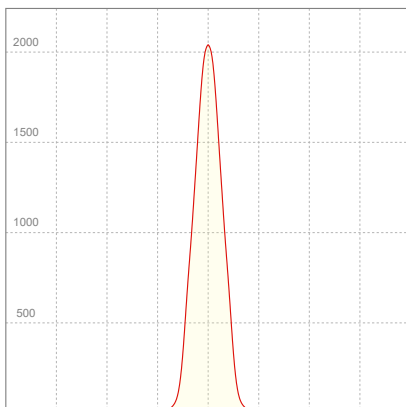
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
29°	48,9°	60,4°	100,0%	99,7%



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	2038lx	509lx	226lx	127lx	82lx	36lx	20lx	9lx	5lx	3lx	2lx	1lx	1lx
Footcand.	189fcd	47fcd	21fcd	12fcd	8fcd	3fcd	2fcd	1fcd	0fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	0,5m	1m	1,6m	2,1m	2,6m	3,9m	5,2m	7,8m	10,4m	12,9m	15,5m	20,7m	25,9m
Beam wid.	1,7ft	3,4ft	5,1ft	6,8ft	8,5ft	12,7ft	17ft	25,5ft	34ft	42,4ft	50,9ft	67,9ft	84,9ft

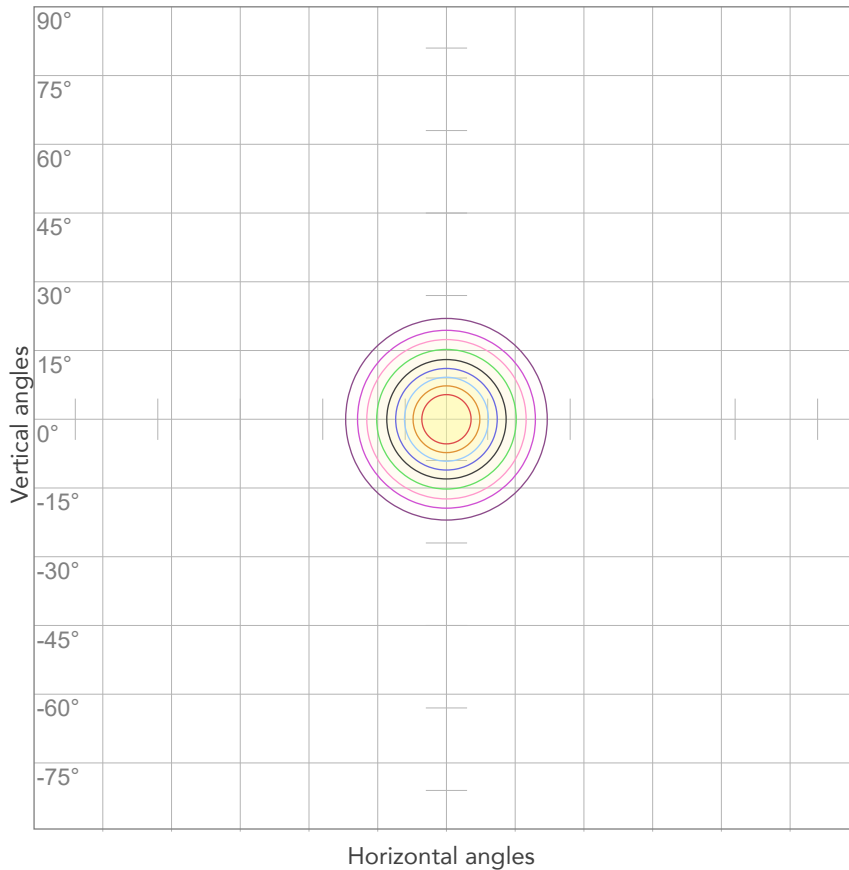
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
224V	0,183A	19,1W	29lm/W

ISO CANDELA DIAGRAM



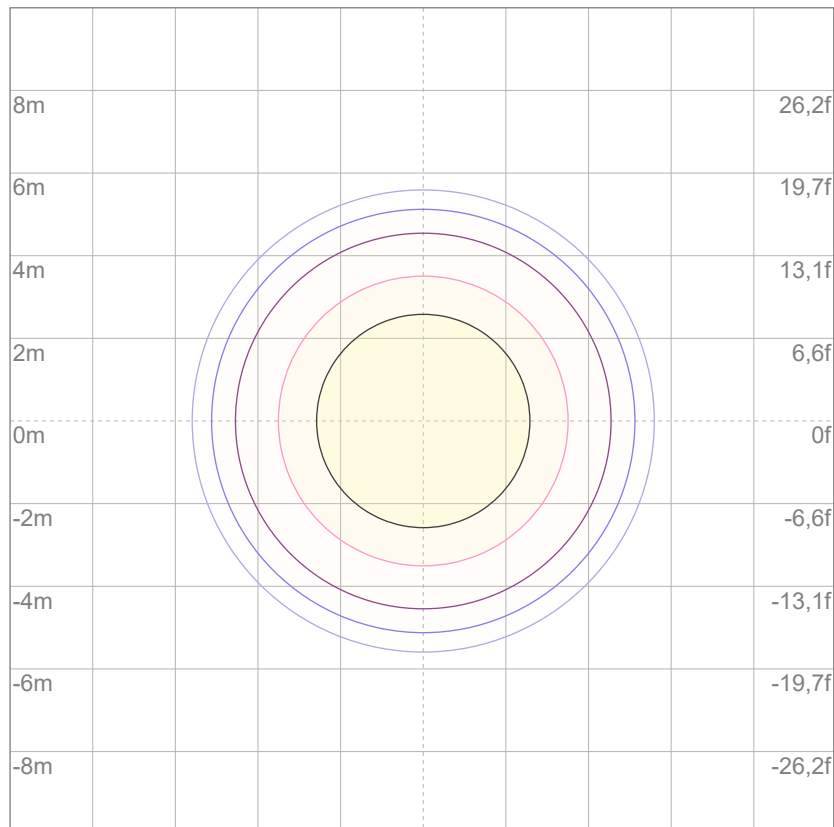
10%	204 cd
20%	408 cd
30%	611 cd
40%	815 cd
50%	1019 cd
60%	1223 cd
70%	1427 cd
80%	1630 cd

Conditions:

Number of c-planes: 2

Candela at center: 2038 cd

ISO LUX DIAGRAM



3%	0,611 lx
5%	1,02 lx
10%	2,04 lx
30%	6,11 lx
50%	10,2 lx

Conditions:

Number of c-planes: 2

Lux at center: 20,4 lx

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



Total lumen output:

374 lm

Peak candela output:

4508 cd

Light quality:

CRI: 90,8

Color temperature:

5438 K

PRODUCT NAME:

MINIECL DY

MEASURAMENT CONDITIONS:

Beam angle:

1530 Wash - Min Zoom

Target:

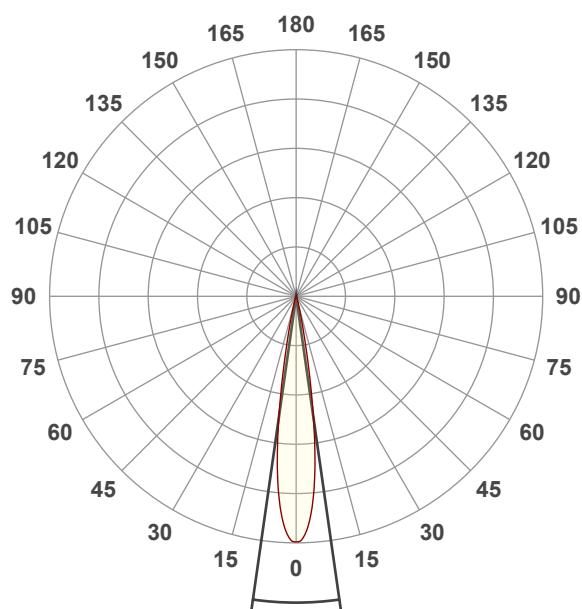
Cold White

Operator:

Paolo Carvone

Date and time:

07/07/2022 11:09:05

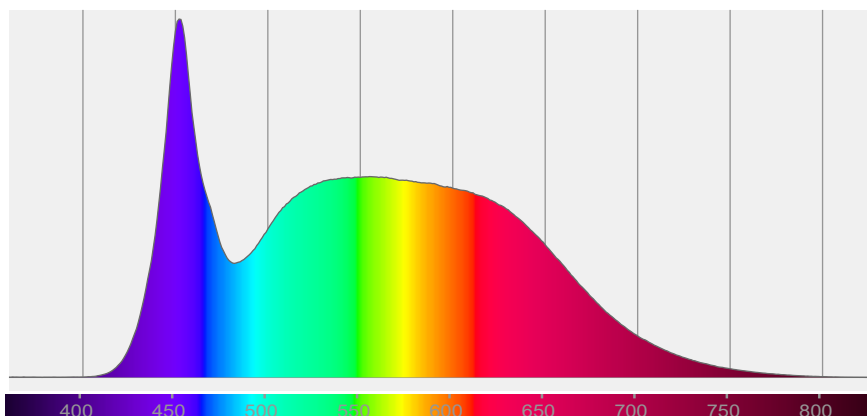


Beam angle 50%: 16,2°

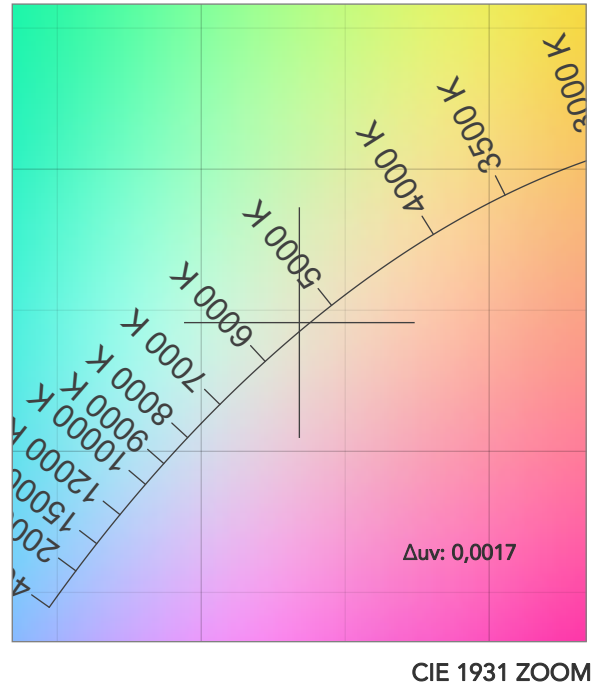
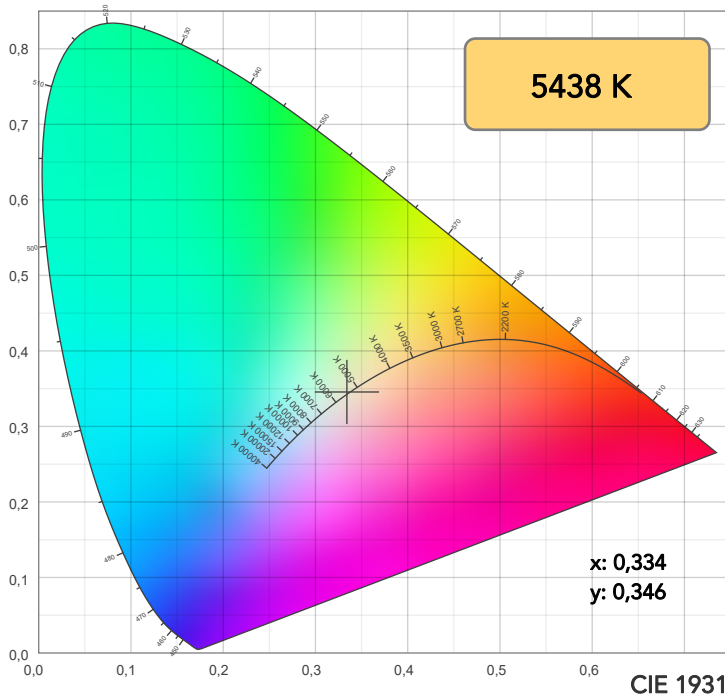
Field angle 10%: 25,6°

Cut off angle 2.5%: 35,2°

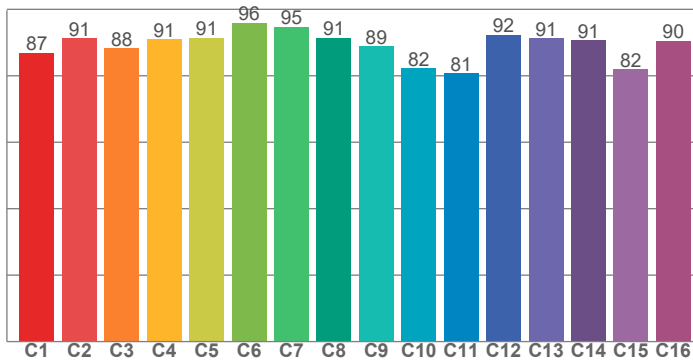
Spectra



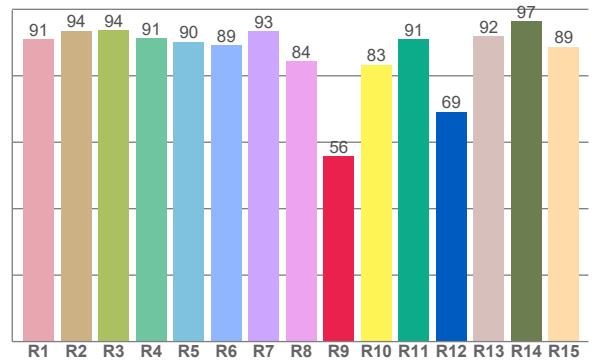
COLOR DETAILS



TM30: 89,2



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
90,9	93,6	93,7	91,2	90,3	89,3	93,4	84,4	55,7	83,3	90,9	69,2	92,0	96,5	88,7

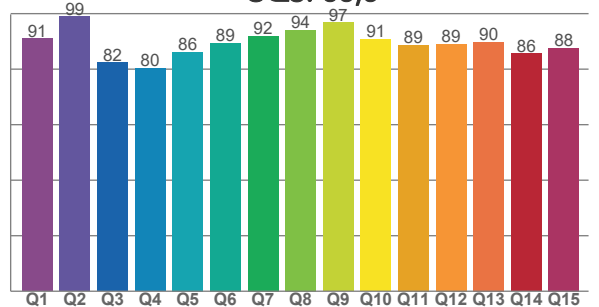
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
86,8	91,3	88,2	91,0	91,4	95,9	94,8	91,3	88,8	82,2	80,8	92,3	91,3	90,6	81,9	90,5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
91,0	98,9	82,3	80,3	86,2	89,4	91,9	94,1	96,7	90,7	88,7	89,0	89,8	85,6	87,7

CQS: 88,5



COLOR PARAMETERS

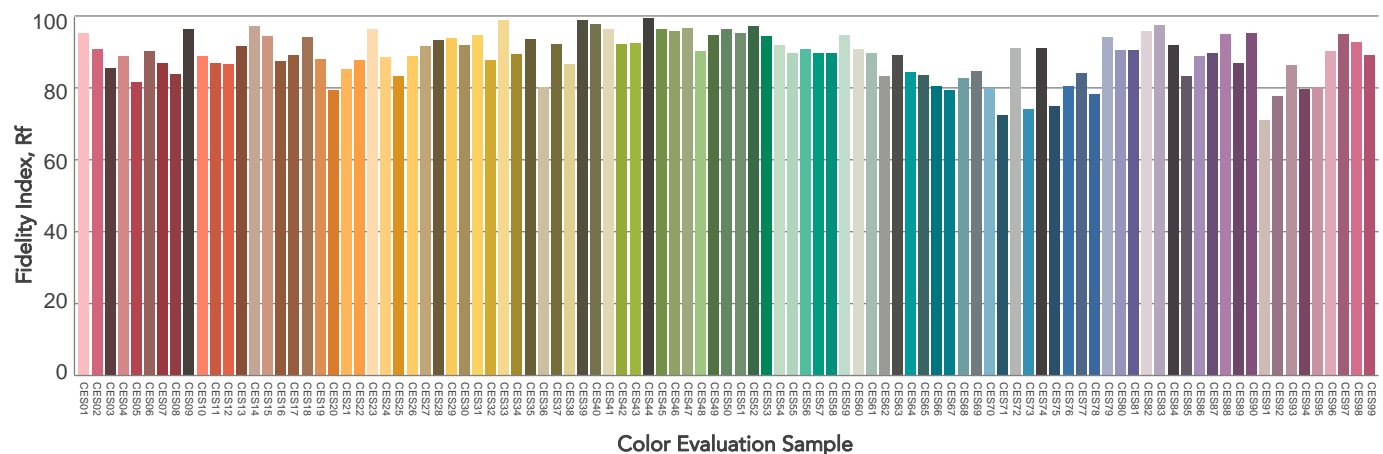
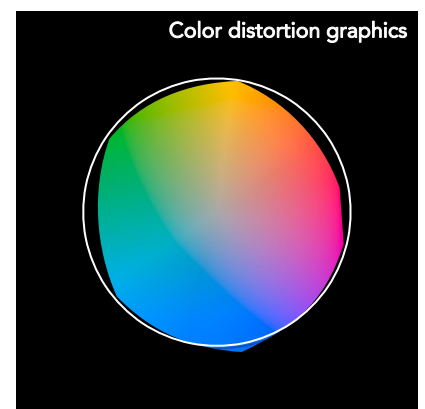
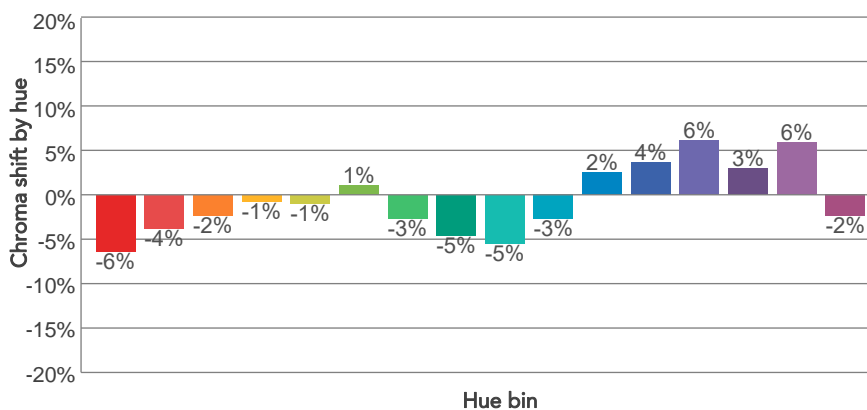
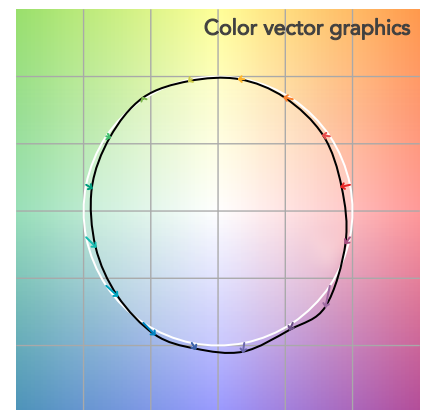
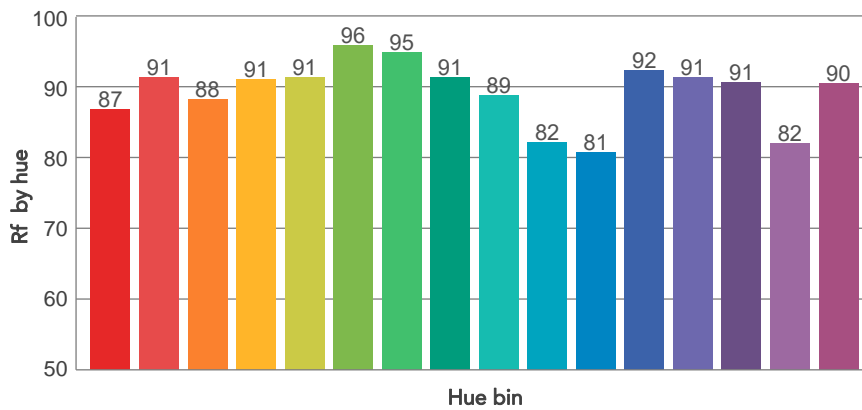
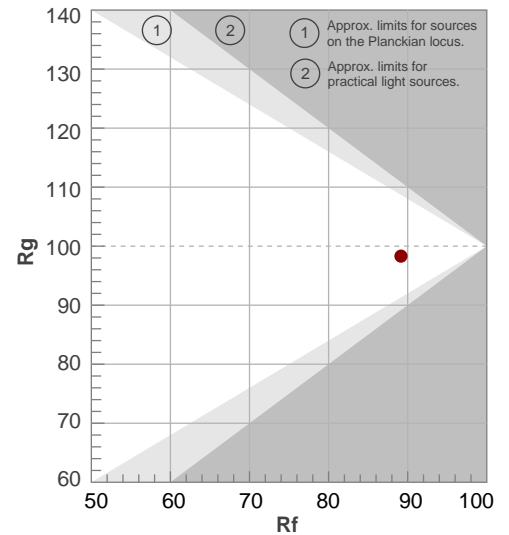
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5438 K	90,8	55,7	89,2	98,3	88,5	93	0,334	0,346	0,0017

TM30 DETAILS

Rf 89,2
Fidelity index Rf

Rg 98,3
Gammut index

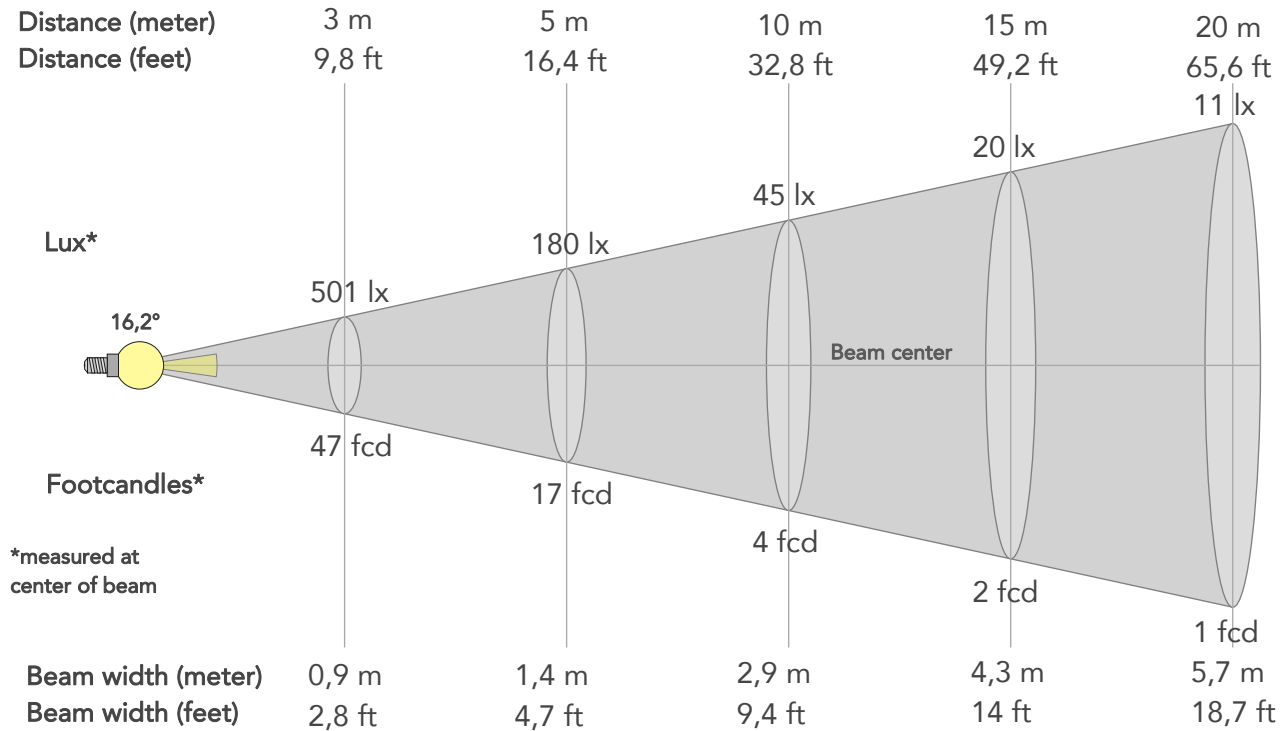
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	87	-6%	0%
2	91	-4%	3%
3	88	-2%	6%
4	91	-1%	4%
5	91	-1%	2%
6	96	1%	0%
7	95	-3%	-1%
8	91	-5%	2%
9	89	-5%	8%
10	82	-3%	11%
11	81	2%	12%
12	92	4%	3%
13	91	6%	-2%
14	91	3%	-4%
15	82	6%	-15%
16	90	-2%	-5%



BEAM DETAILS



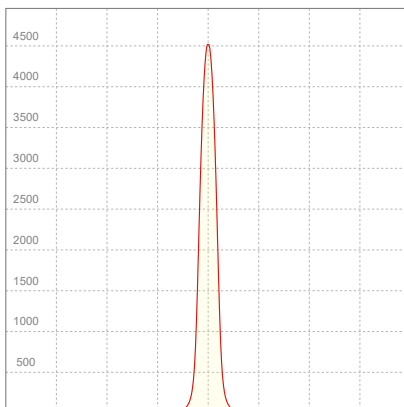
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
16,2°	25,6°	35,2°	100,0%	100,0%



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	4508lx	1127lx	501lx	282lx	180lx	80lx	45lx	20lx	11lx	7lx	5lx	3lx	2lx
Footcand.	419fcd	105fcd	47fcd	26fcd	17fcd	7fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd
Beam wid.	0,3m	0,6m	0,9m	1,1m	1,4m	2,1m	2,9m	4,3m	5,7m	7,1m	8,6m	11,4m	14,3m
Beam wid.	0,9ft	1,9ft	2,8ft	3,7ft	4,7ft	7ft	9,4ft	14ft	18,7ft	23,4ft	28,1ft	37,4ft	46,8ft

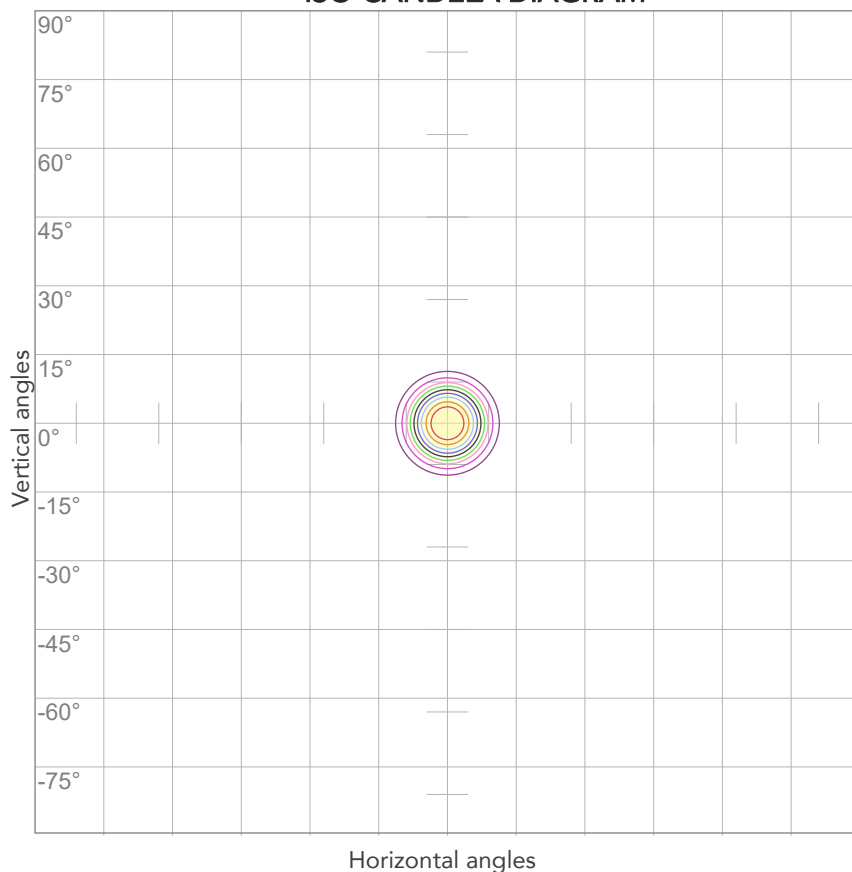
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
223V	0,187A	19,3W	19lm/W

ISO CANDELA DIAGRAM



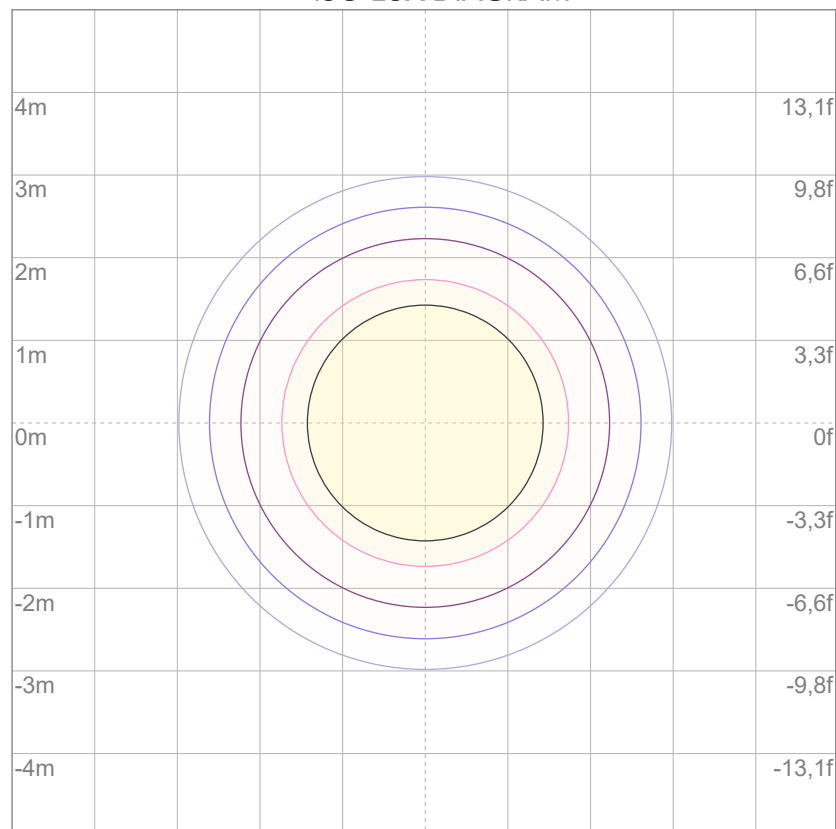
10%	451 cd
20%	902 cd
30%	1352 cd
40%	1803 cd
50%	2254 cd
60%	2705 cd
70%	3156 cd
80%	3606 cd

Conditions:

Number of c-planes: 2

Candela at center: 4508 cd

ISO LUX DIAGRAM



3%	1,35 lx
5%	2,25 lx
10%	4,51 lx
30%	13,5 lx
50%	22,5 lx

Conditions:

Number of c-planes: 2

Lux at center: 45,1 lx

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



Total lumen output:

599 lm

Peak candela output:

818 cd

Light quality:

CRI: 91,4

Color temperature:

5446 K

PRODUCT NAME:

MINIECL DY

MEASURAMENT CONDITIONS:

Beam angle:

2550 Wash - Max Zoom

Target:

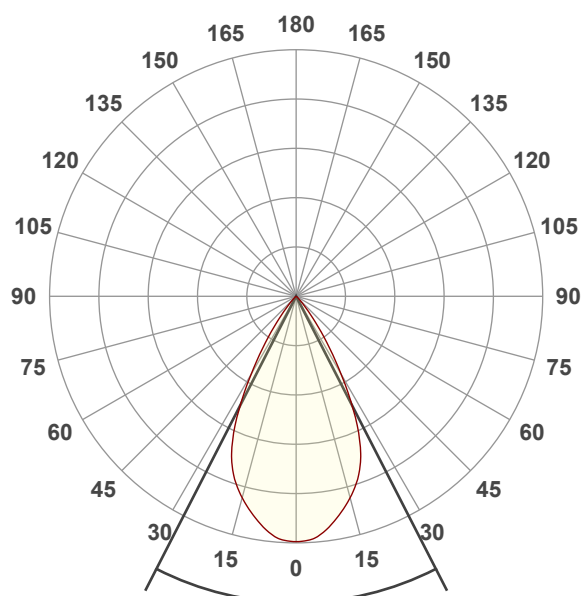
Cold White

Operator:

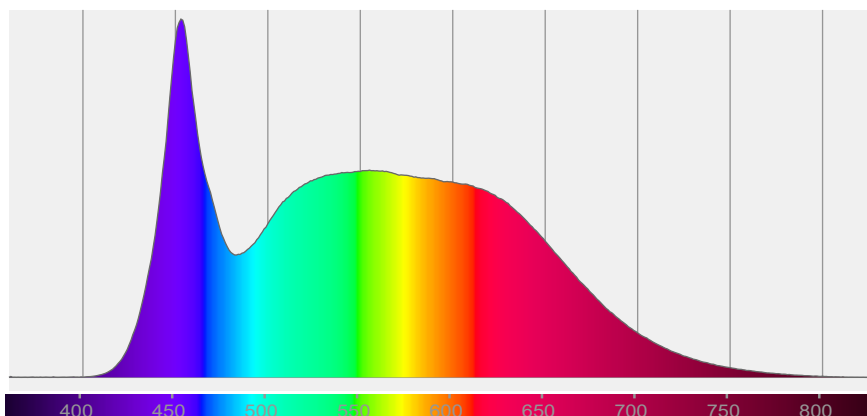
Paolo Carvone

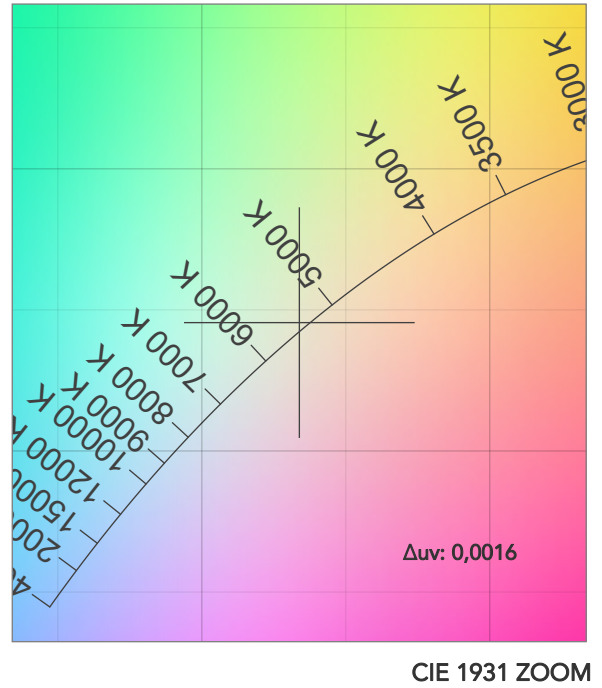
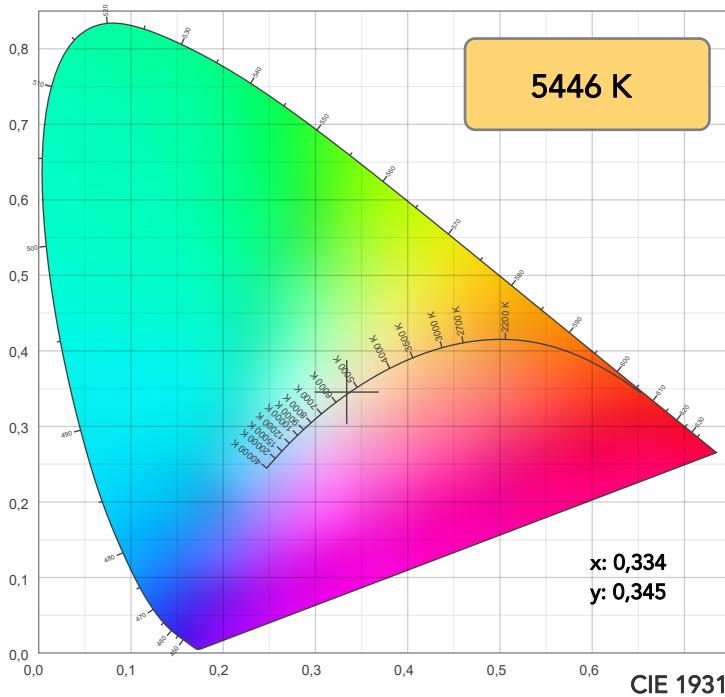
Date and time:

07/07/2022 11:17:40

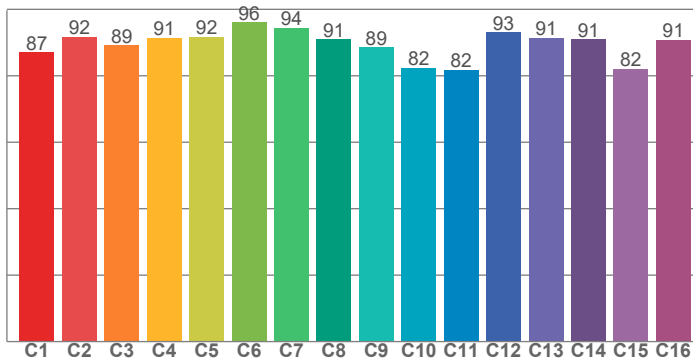


Spectra

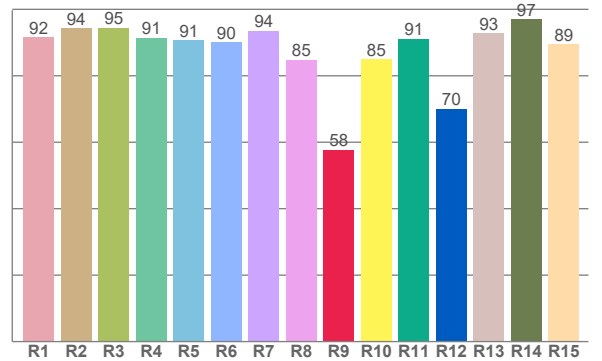




TM30: 89,5



CRI: 91,4 (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
91,5	94,4	94,5	91,4	90,7	90,1	93,6	84,9	57,7	85,0	91,2	70,1	92,7	97,0	89,4

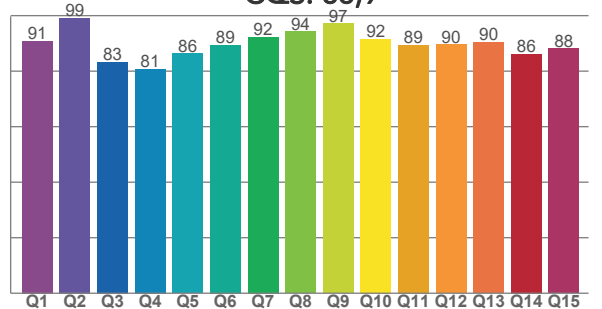
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
87,1	91,7	89,1	91,5	91,6	96,1	94,4	91,0	88,6	82,4	81,7	93,1	91,4	91,0	82,1	90,8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
90,8	99,1	83,4	80,9	86,3	89,5	92,4	94,3	97,1	91,6	89,5	89,6	90,4	86,3	88,1

CQS: 88,9



COLOR PARAMETERS

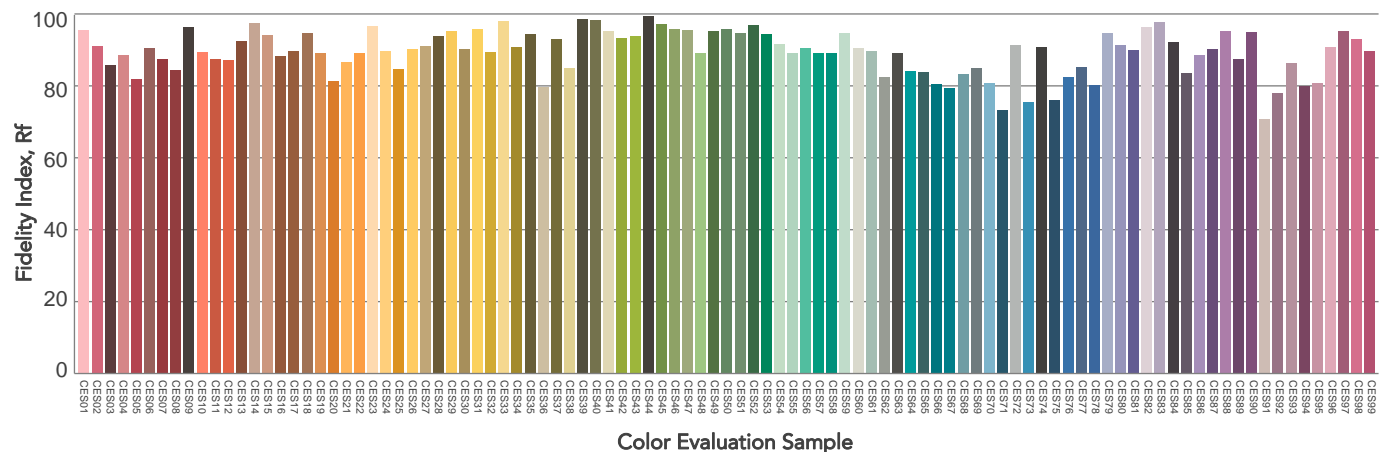
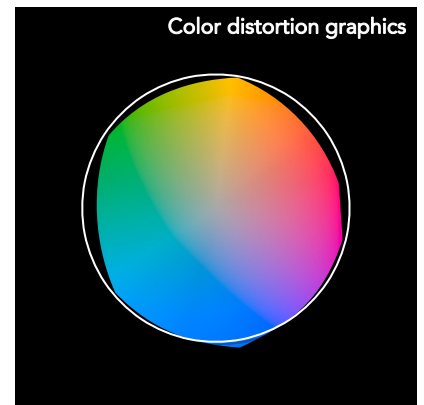
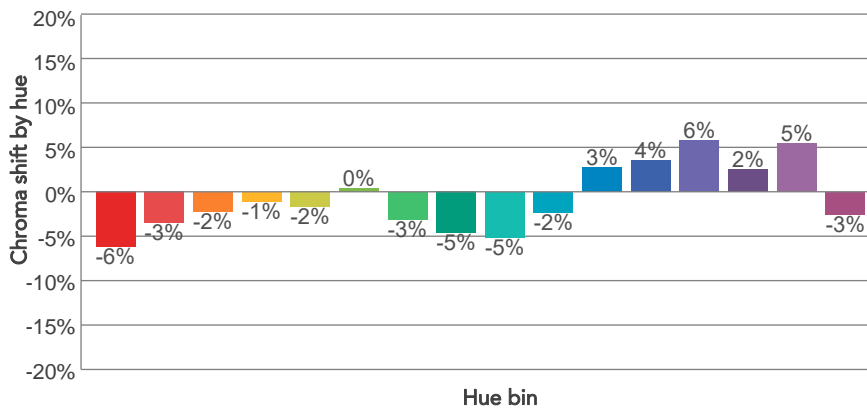
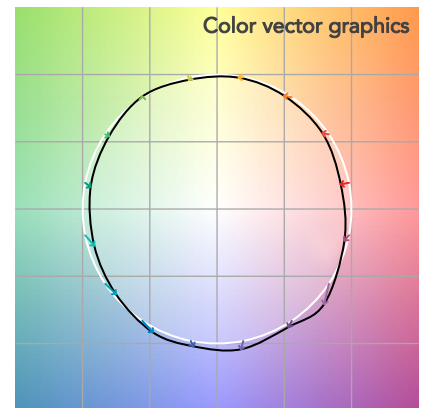
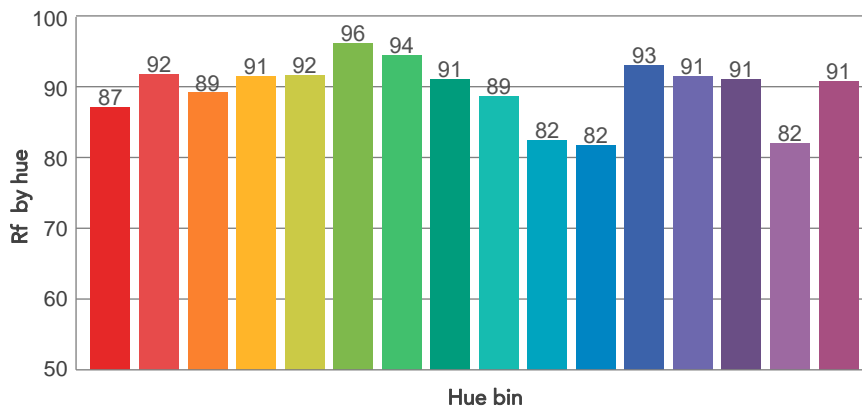
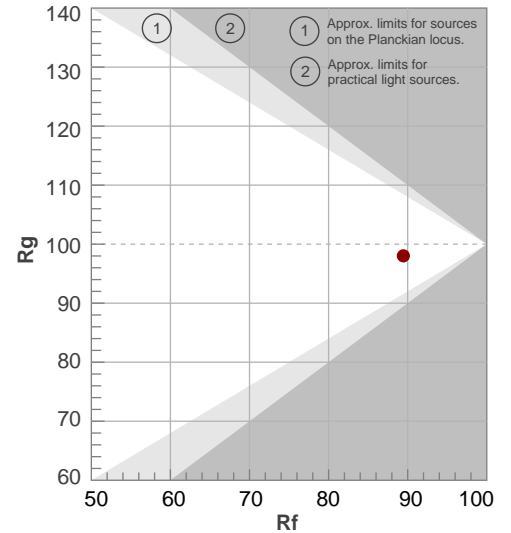
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5446 K	91,4	57,7	89,5	98,0	88,9	93	0,334	0,345	0,0016

TM30 DETAILS

Rf 89,5
Fidelity index Rf

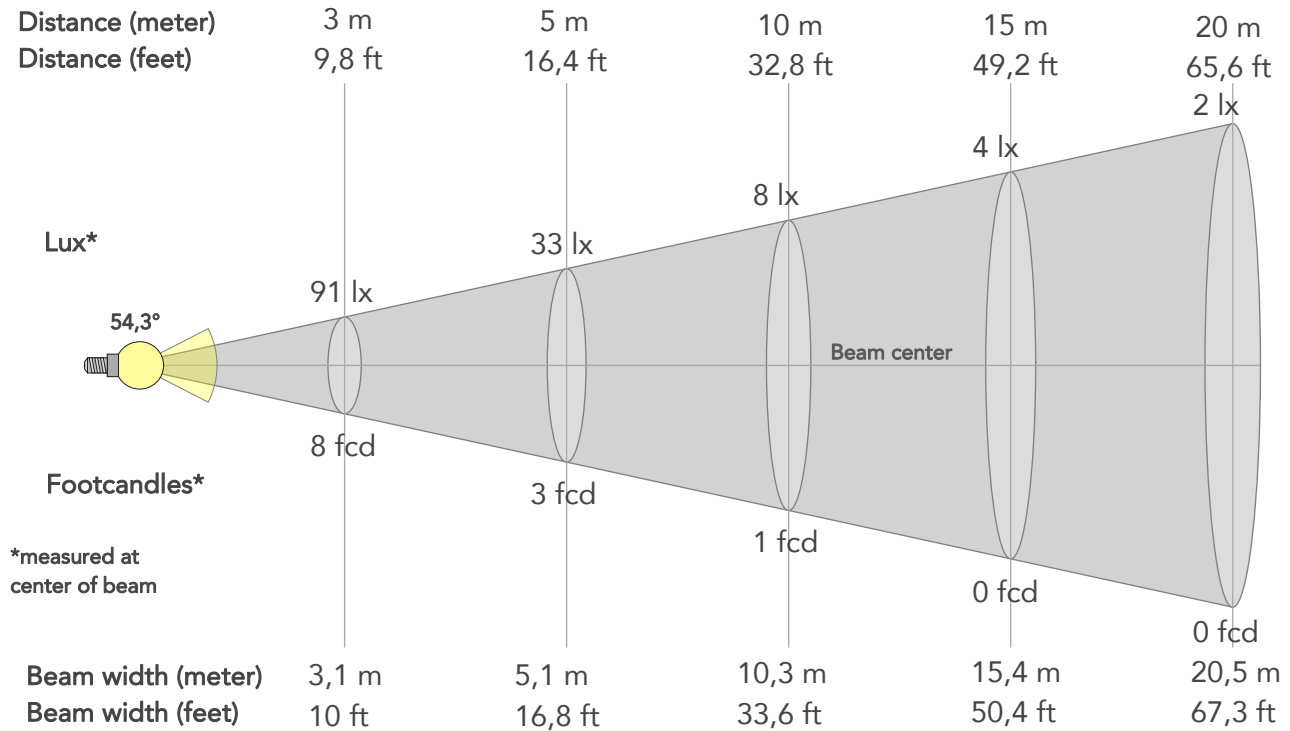
Rg 98,0
Gammut index

		Graphic shifts (%)	
Hue Bin	R _f	Chroma	Hue
1	87	-6%	0%
2	92	-3%	3%
3	89	-2%	5%
4	91	-1%	3%
5	92	-2%	2%
6	96	0%	0%
7	94	-3%	0%
8	91	-5%	2%
9	89	-5%	9%
10	82	-2%	11%
11	82	3%	11%
12	93	4%	3%
13	91	6%	-3%
14	91	2%	-5%
15	82	5%	-14%
16	91	-3%	-4%



BEAM DETAILS

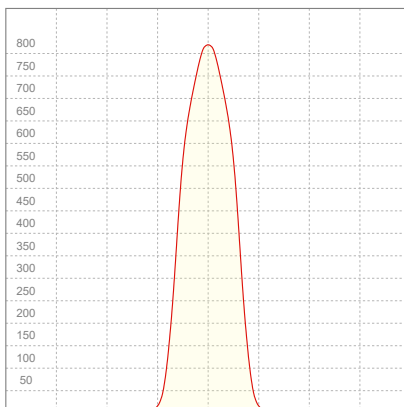
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
54,3°	76,2°	88°	100,0%	99,0%



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	818lx	205lx	91lx	51lx	33lx	15lx	8lx	4lx	2lx	1lx	1lx	1lx	0lx
Footcand.	76fcd	19fcd	8fcd	5fcd	3fcd	1fcd	1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	1m	2,1m	3,1m	4,1m	5,1m	7,7m	10,3m	15,4m	20,5m	25,6m	30,8m	41m	51,3m
Beam wid.	3,4ft	6,8ft	10ft	13,4ft	16,8ft	25,2ft	33,6ft	50,4ft	67,3ft	84,1ft	100,9ft	134,5ft	168,1ft

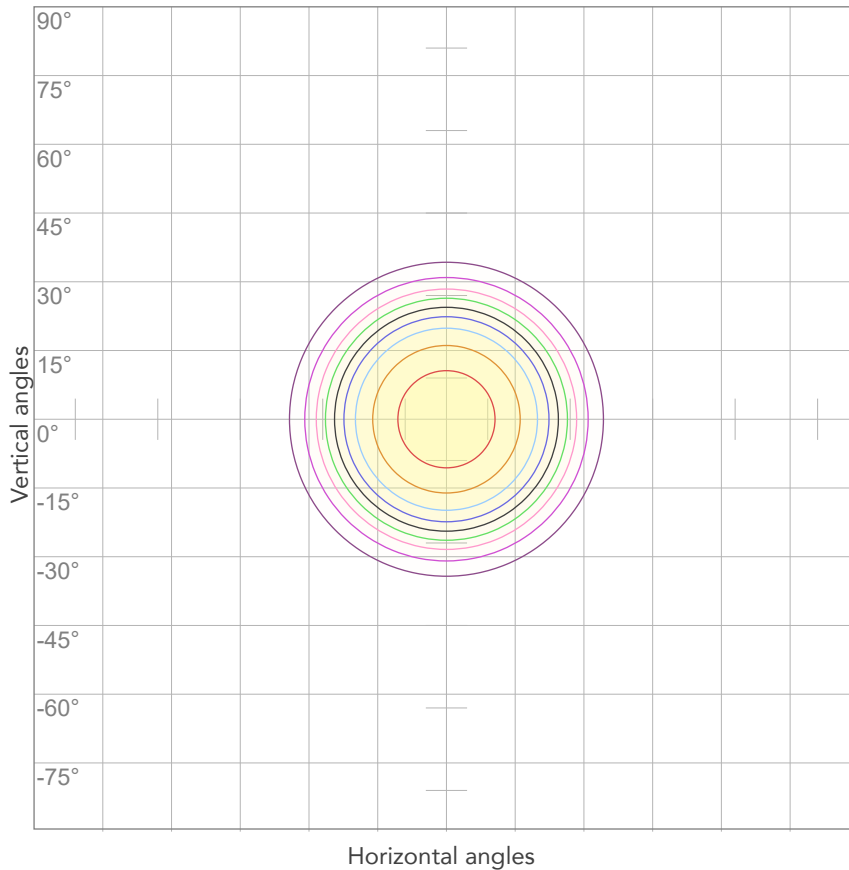
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
224V	0,182A	18,9W	32lm/W

ISO CANDELA DIAGRAM



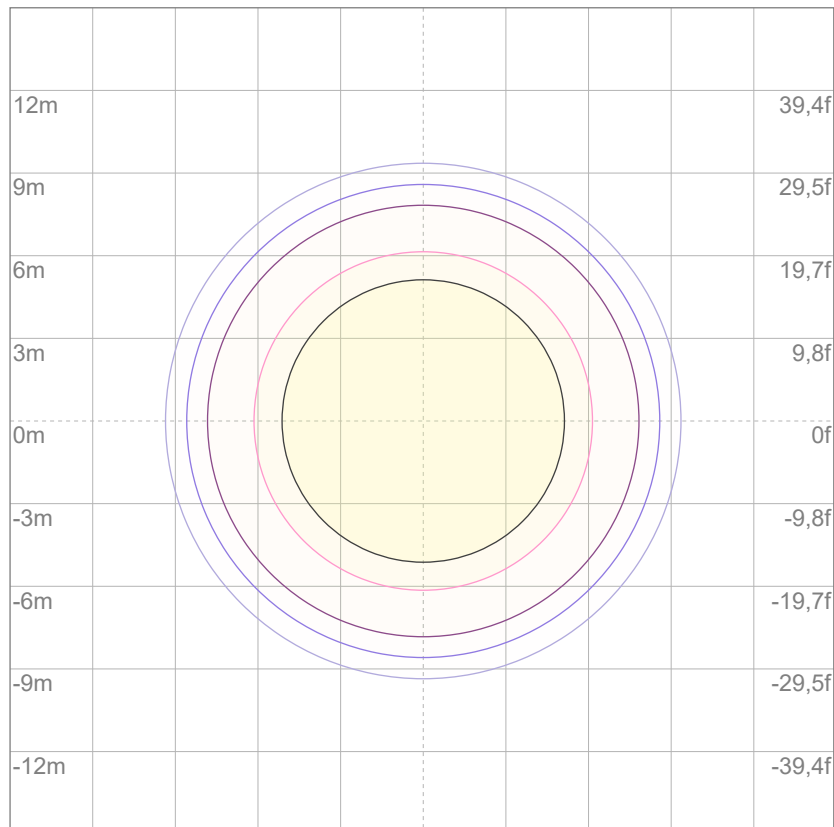
10%	82 cd
20%	164 cd
30%	246 cd
40%	327 cd
50%	409 cd
60%	491 cd
70%	573 cd
80%	655 cd

Conditions:

Number of c-planes: 2

Candela at center: 818 cd

ISO LUX DIAGRAM



3%	0,246 lx
5%	0,409 lx
10%	0,818 lx
30%	2,46 lx
50%	4,09 lx

Conditions:

Number of c-planes: 2

Lux at center: 8,18 lx

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



Total lumen output:

410 lm

Peak candela output:

1694 cd

Light quality:

CRI: 91,7

Color temperature:

5477 K

PRODUCT NAME:

MINIECL DY

MEASURAMENT CONDITIONS:

Beam angle:

2550 Wash - Min Zoom

Target:

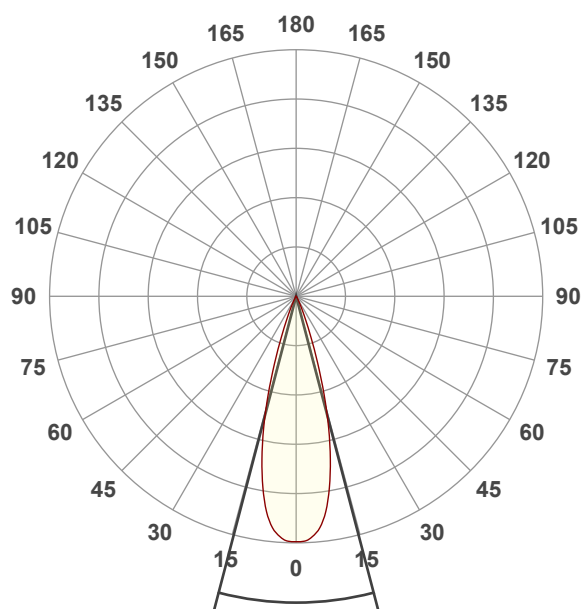
Cold White

Operator:

Paolo Carvone

Date and time:

07/07/2022 11:15:33

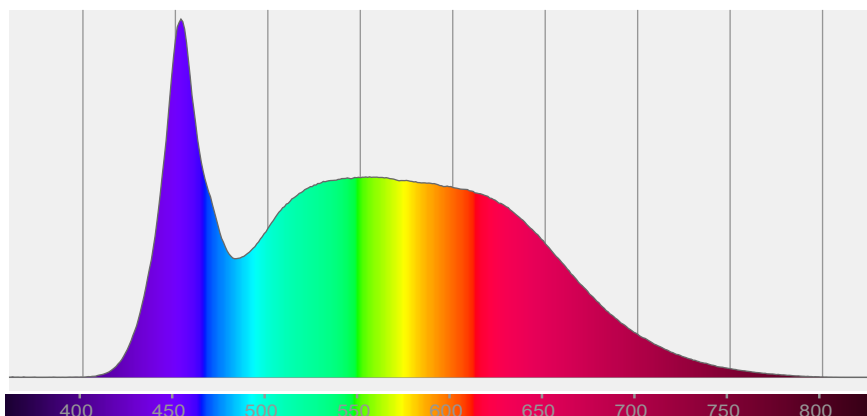


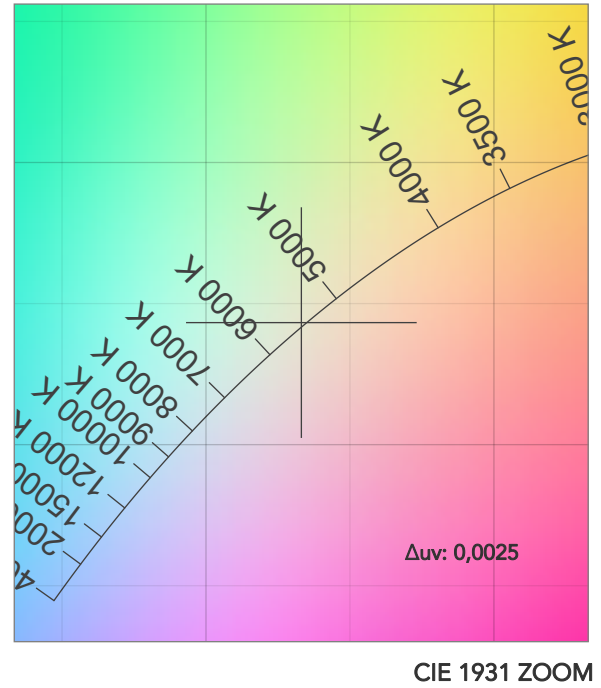
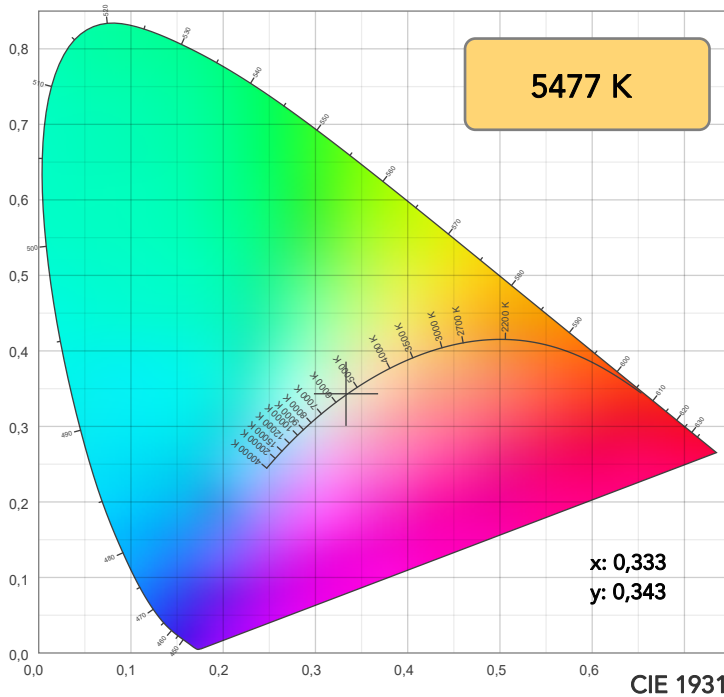
Beam angle 50%: 29,3°

Field angle 10%: 44,3°

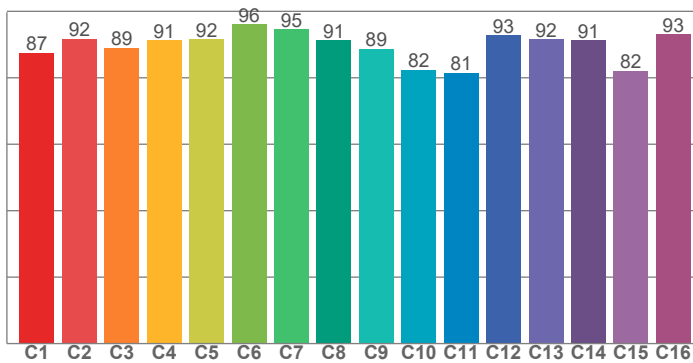
Cut off angle 2.5%: 55,3°

Spectra

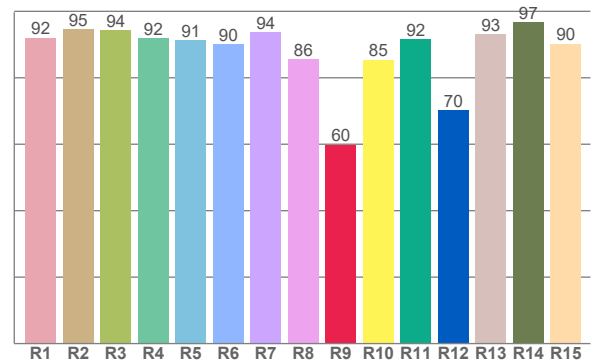




TM30: 89,5



CRI: 91,7 (R1-R8)



CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
92,0	94,6	94,3	91,9	91,2	90,2	93,7	85,6	59,8	85,4	91,7	70,2	93,2	96,8	90,2

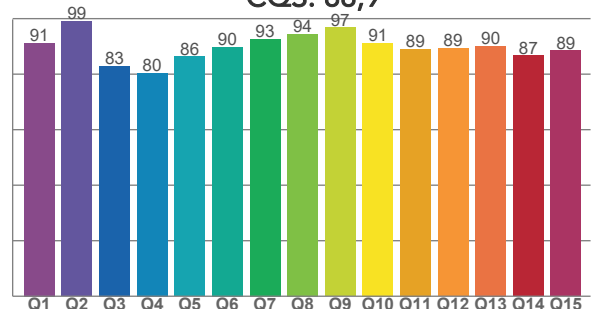
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
87,4	91,7	89,0	91,3	91,5	96,1	94,6	91,2	88,6	82,3	81,4	92,8	91,5	91,2	82,1	93,1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
91,3	99,0	82,9	80,5	86,3	89,7	92,6	94,5	96,8	91,2	89,1	89,3	90,2	86,7	88,5

CQS: 88,9



COLOR PARAMETERS

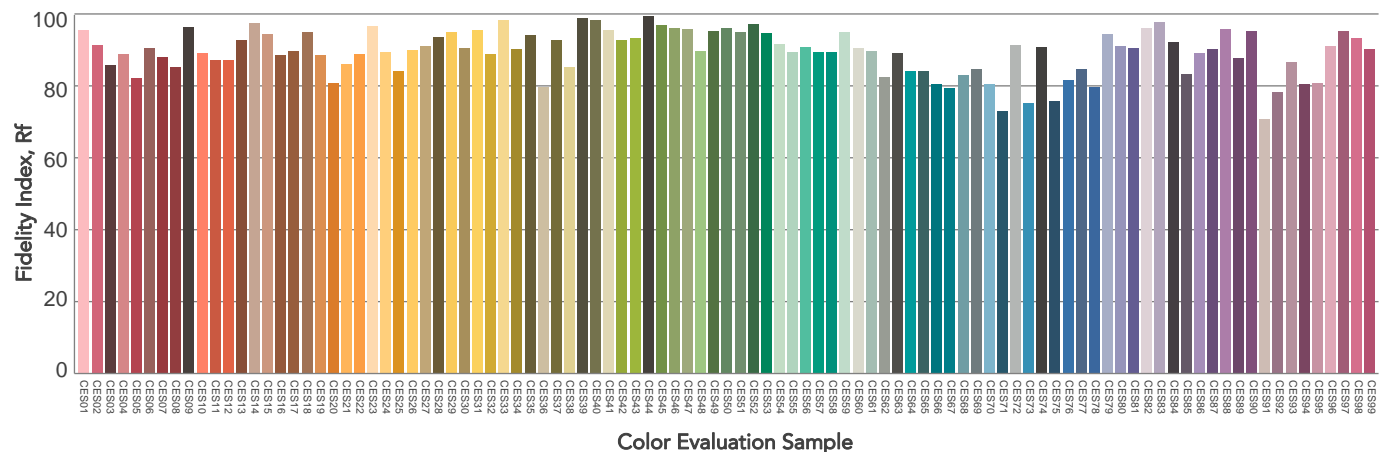
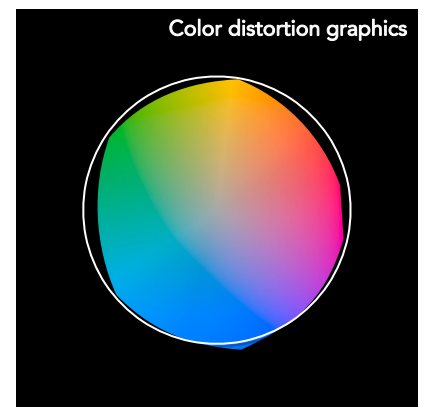
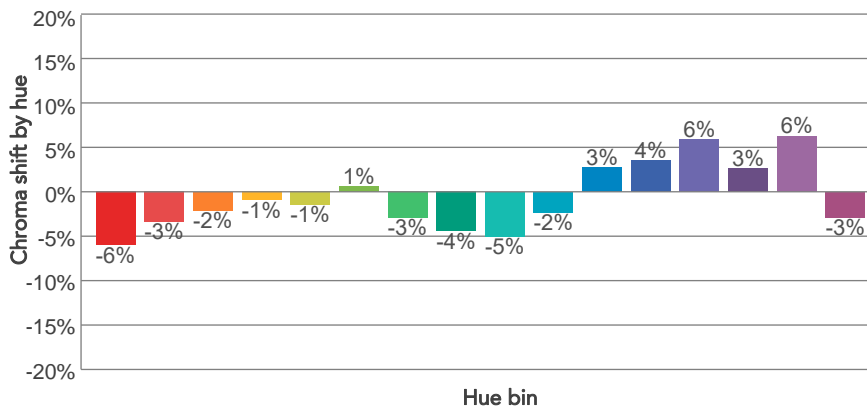
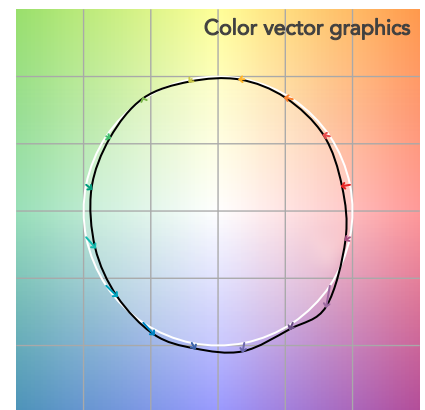
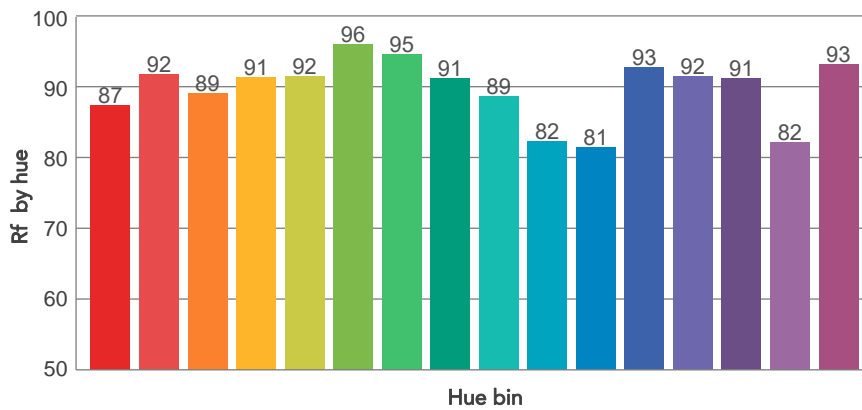
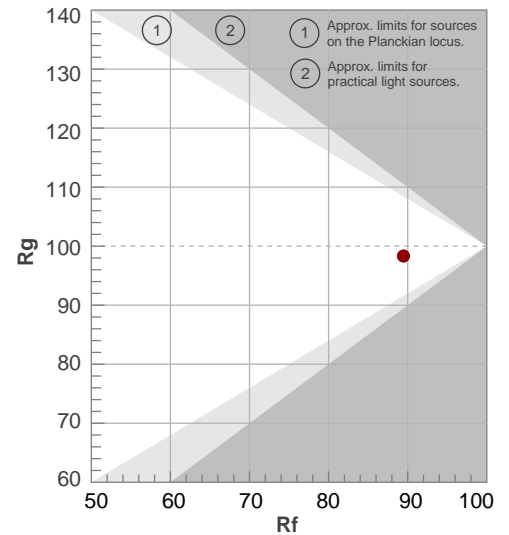
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5477 K	91,7	59,8	89,5	98,3	88,9	93	0,333	0,343	0,0025

TM30 DETAILS

Rf 89,5
Fidelity index Rf

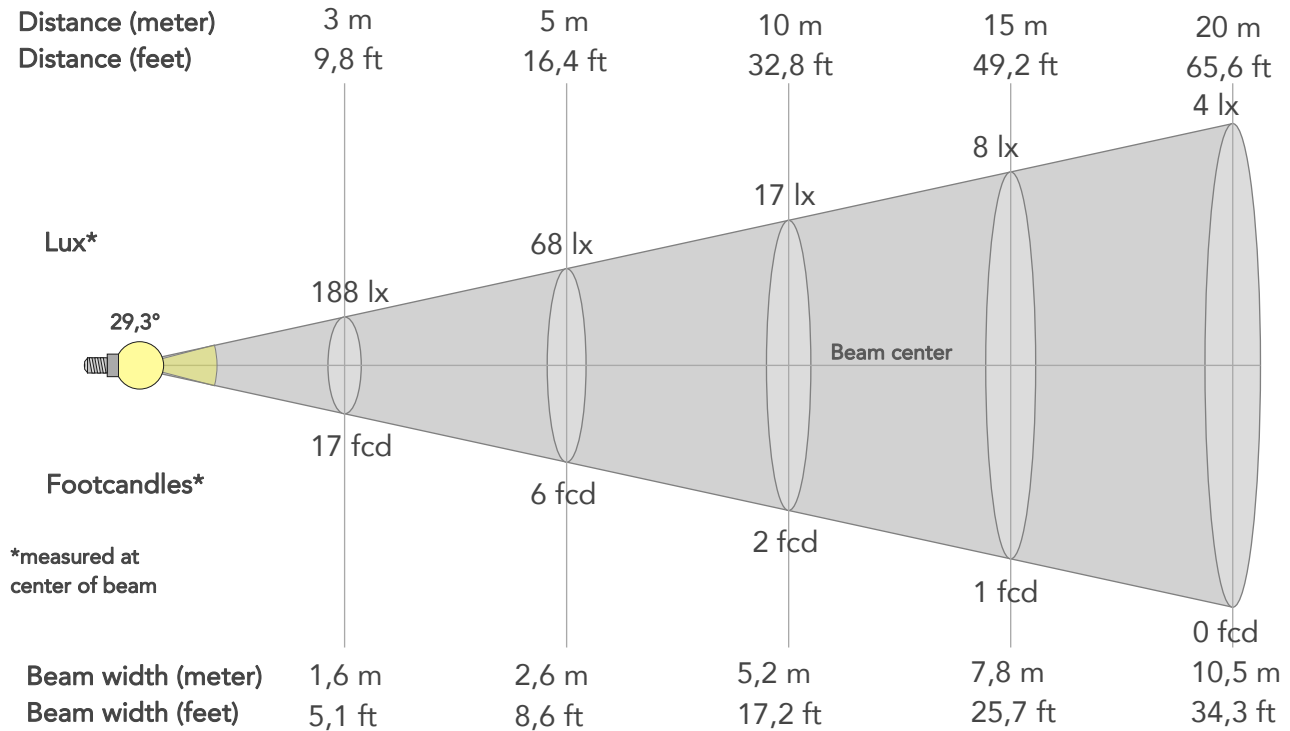
Rg 98,3
Gammut index

		Graphic shifts (%)	
Hue Bin	R _f	Chroma	Hue
1	87	-6%	0%
2	92	-3%	3%
3	89	-2%	5%
4	91	-1%	3%
5	92	-1%	2%
6	96	1%	0%
7	95	-3%	0%
8	91	-4%	2%
9	89	-5%	9%
10	82	-2%	11%
11	81	3%	11%
12	93	4%	3%
13	92	6%	-2%
14	91	3%	-4%
15	82	6%	-14%
16	93	-3%	-3%



BEAM DETAILS

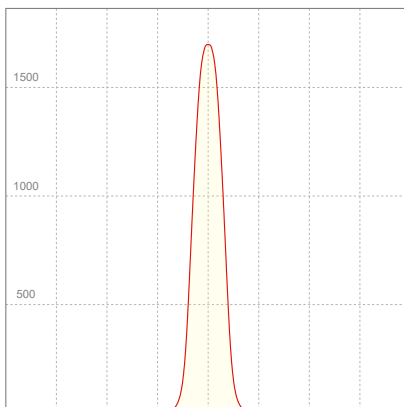
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
29,3°	44,3°	55,3°	100,0%	100,0%



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	1694lx	424lx	188lx	106lx	68lx	30lx	17lx	8lx	4lx	3lx	2lx	1lx	1lx
Footcand.	157fcd	39fcd	17fcd	10fcd	6fcd	3fcd	2fcd	1fcd	0fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	0,5m	1m	1,6m	2,1m	2,6m	3,9m	5,2m	7,8m	10,5m	13,1m	15,7m	20,9m	26,2m
Beam wid.	1,7ft	3,5ft	5,1ft	6,9ft	8,6ft	12,9ft	17,2ft	25,7ft	34,3ft	42,9ft	51,5ft	68,6ft	85,8ft

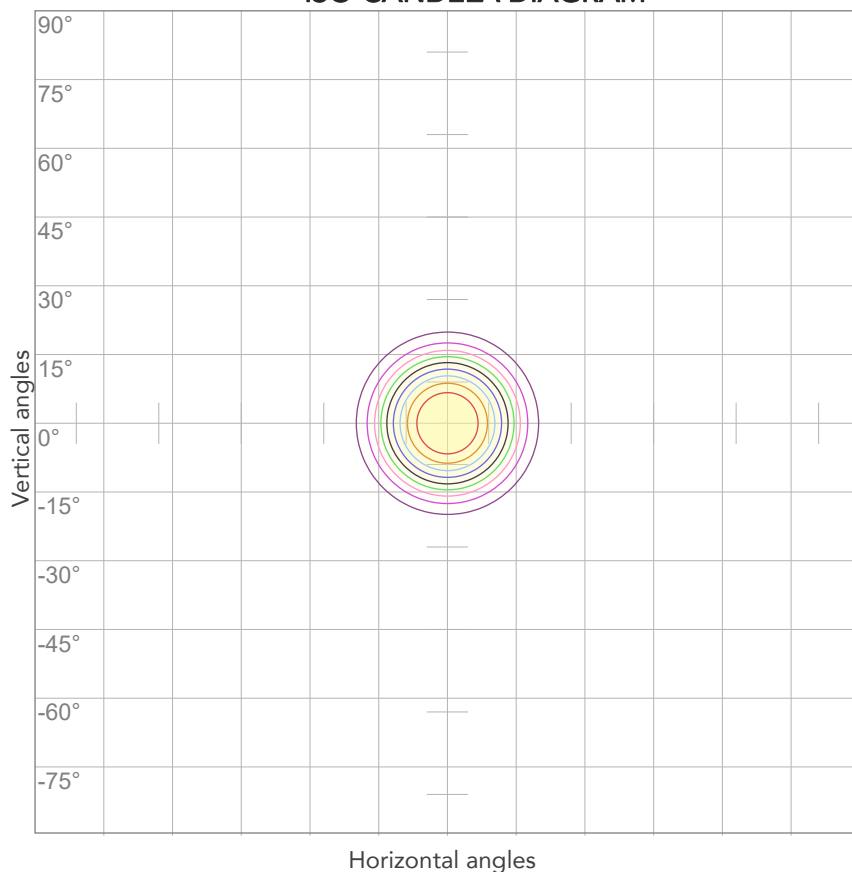
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
223V	0,181A	18,9W	22lm/W

ISO CANDELA DIAGRAM



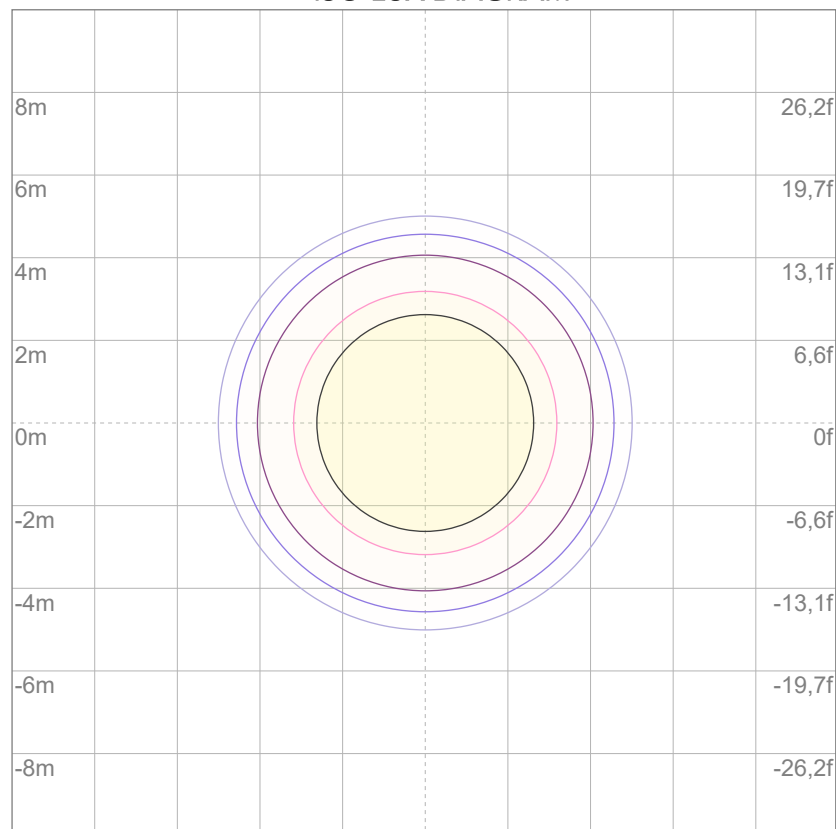
10%	169 cd
20%	339 cd
30%	508 cd
40%	678 cd
50%	847 cd
60%	1017 cd
70%	1186 cd
80%	1356 cd

Conditions:

Number of c-planes: 2

Candela at center: 1694 cd

ISO LUX DIAGRAM



3%	0,508 lx
5%	0,847 lx
10%	1,69 lx
30%	5,08 lx
50%	8,47 lx

Conditions:

Number of c-planes: 2

Lux at center: 16,9 lx

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