



Photometric Test Report



Diamond 19TW

19x15 W moving LED wash Tunable White

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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:

4818 lm

Peak candela output:

27235 cd

Light quality:

CRI: 83,1

Color temperature:

4908 K

PRODUCT NAME:

Diamond 19TW

MEASURAMENT CONDITIONS:

Beam angle:

Max Zoom

Target:

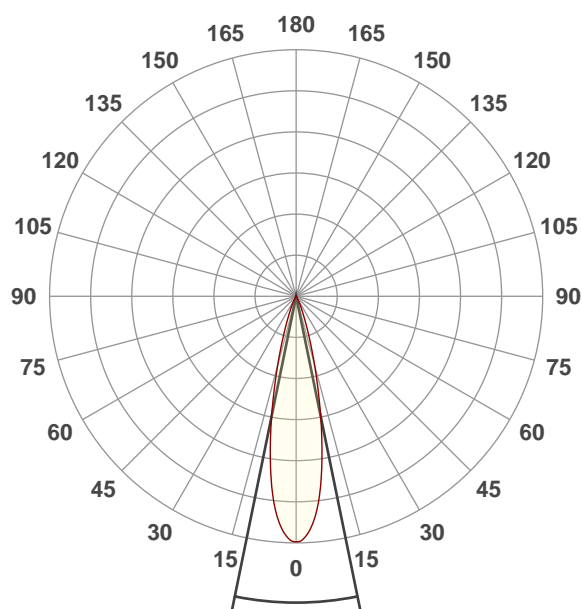
Full On

Operator:

Paolo Carvone

Date and time:

26/10/2020 13:02:08

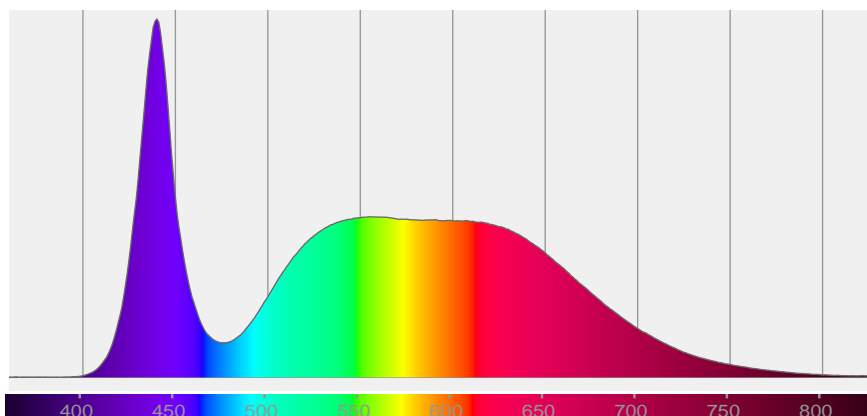


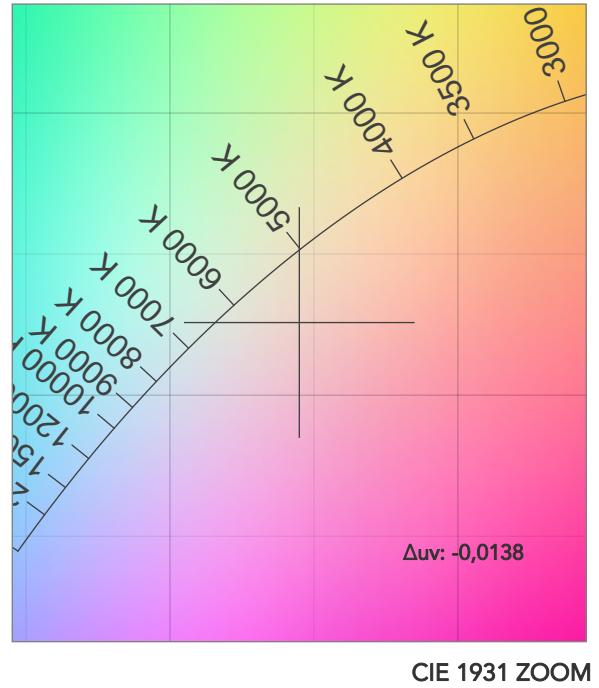
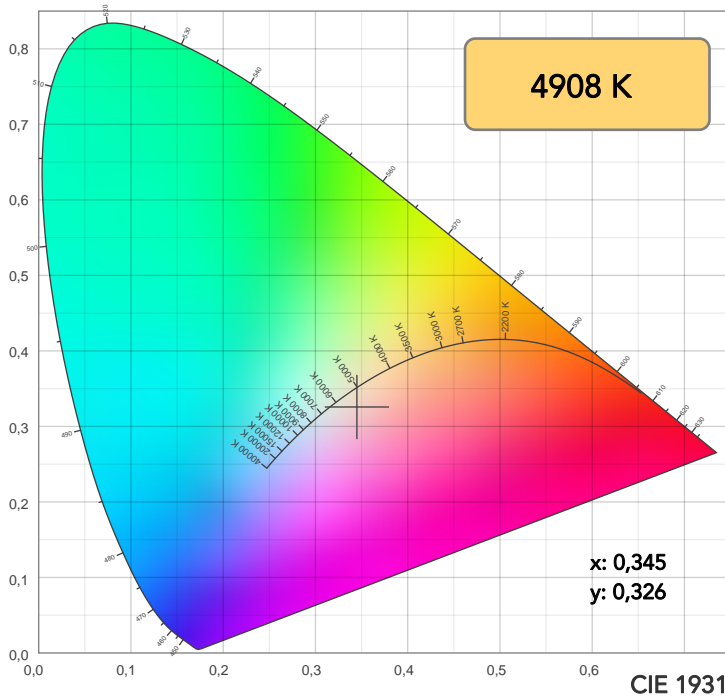
Beam angle 50%: 23,1°

Field angle 10%: 40,8°

Cut off angle 2.5%: 53,8°

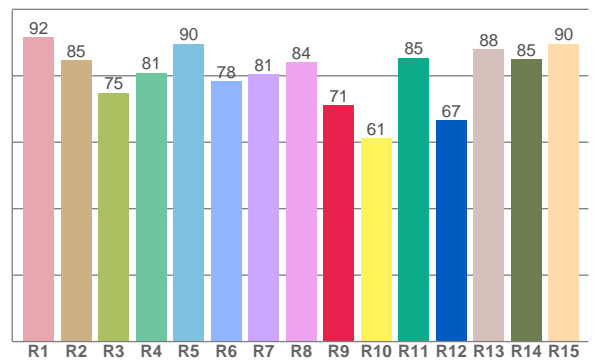
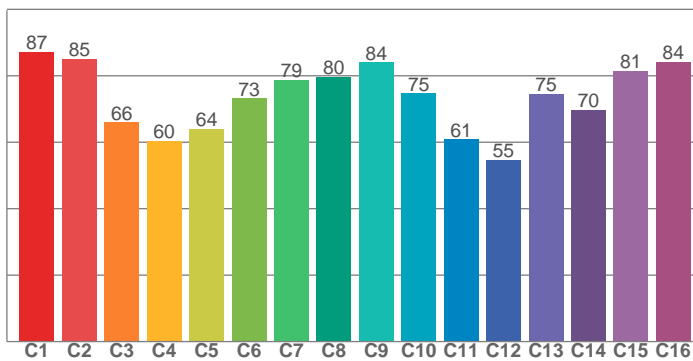
Spectra





TM30: 73,6

CRI: 83,1 (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
91,7	84,7	74,9	80,9	89,6	78,4	80,5	84,1	71,1	61,2	85,5	66,6	88,0	85,0	89,6

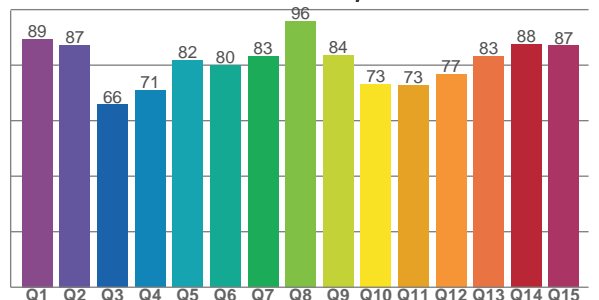
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
87,3	85,1	66,0	60,4	64,1	73,1	78,7	79,6	84,1	74,8	60,9	54,8	74,6	69,8	81,4	84,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89,4	87,2	65,8	70,9	81,7	80,0	83,2	95,9	83,7	73,3	72,8	76,9	83,3	87,5	87,1

CQS: 79,7



COLOR PARAMETERS

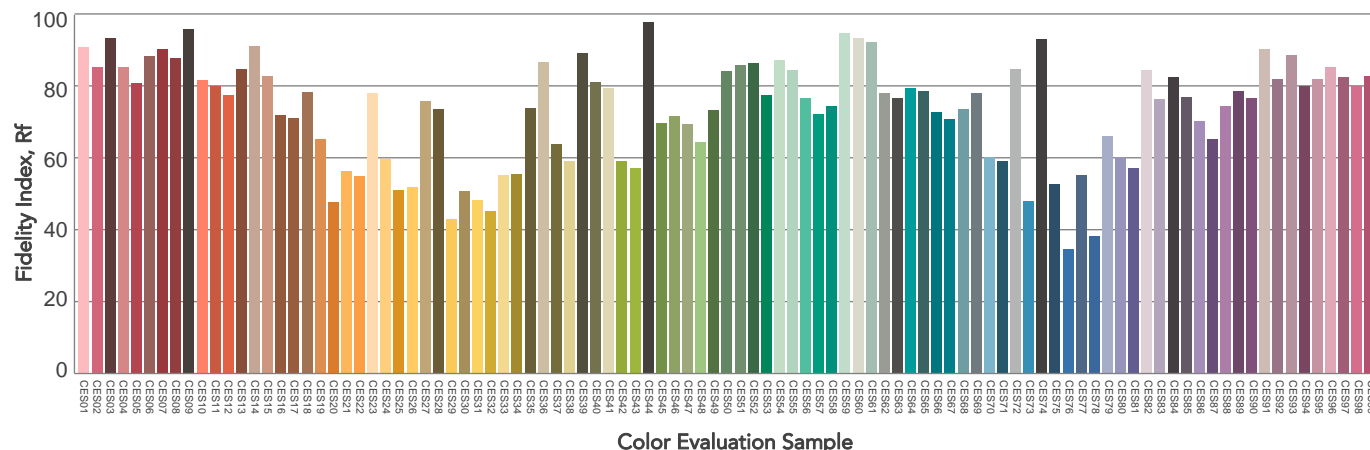
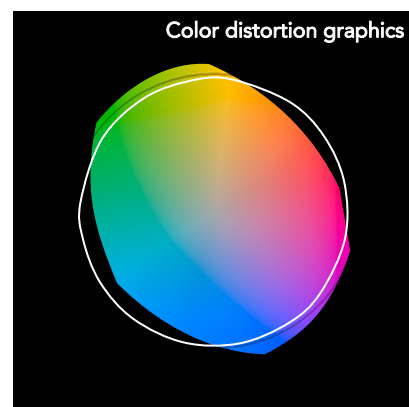
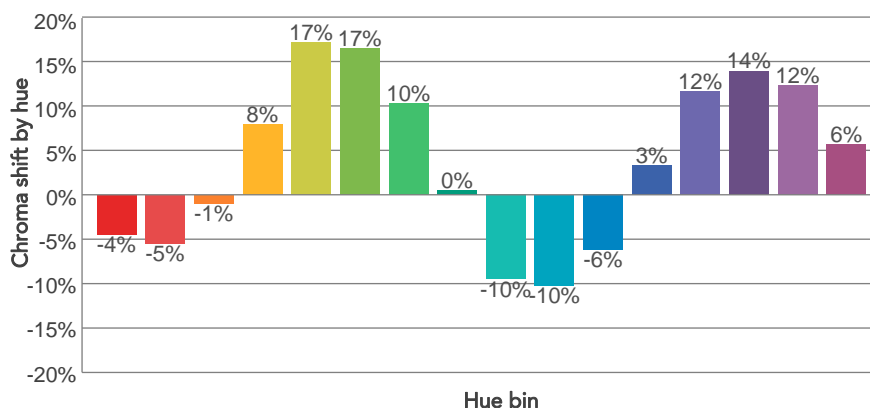
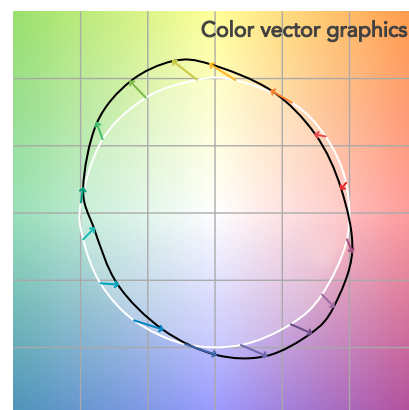
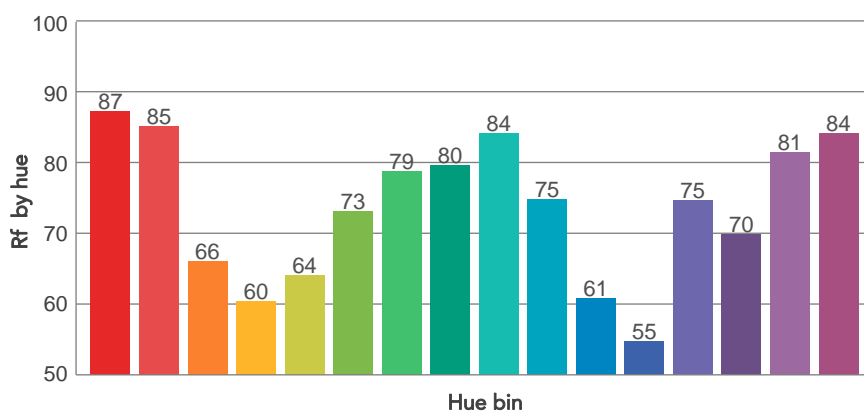
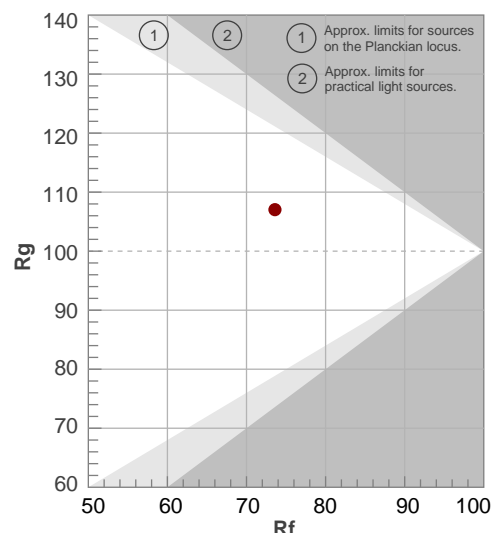
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
4908 K	83,1	71,1	73,6	107,0	79,7	61	0,345	0,326	-0,0138

TM30 DETAILS

Rf 73,6
Fidelity index Rf

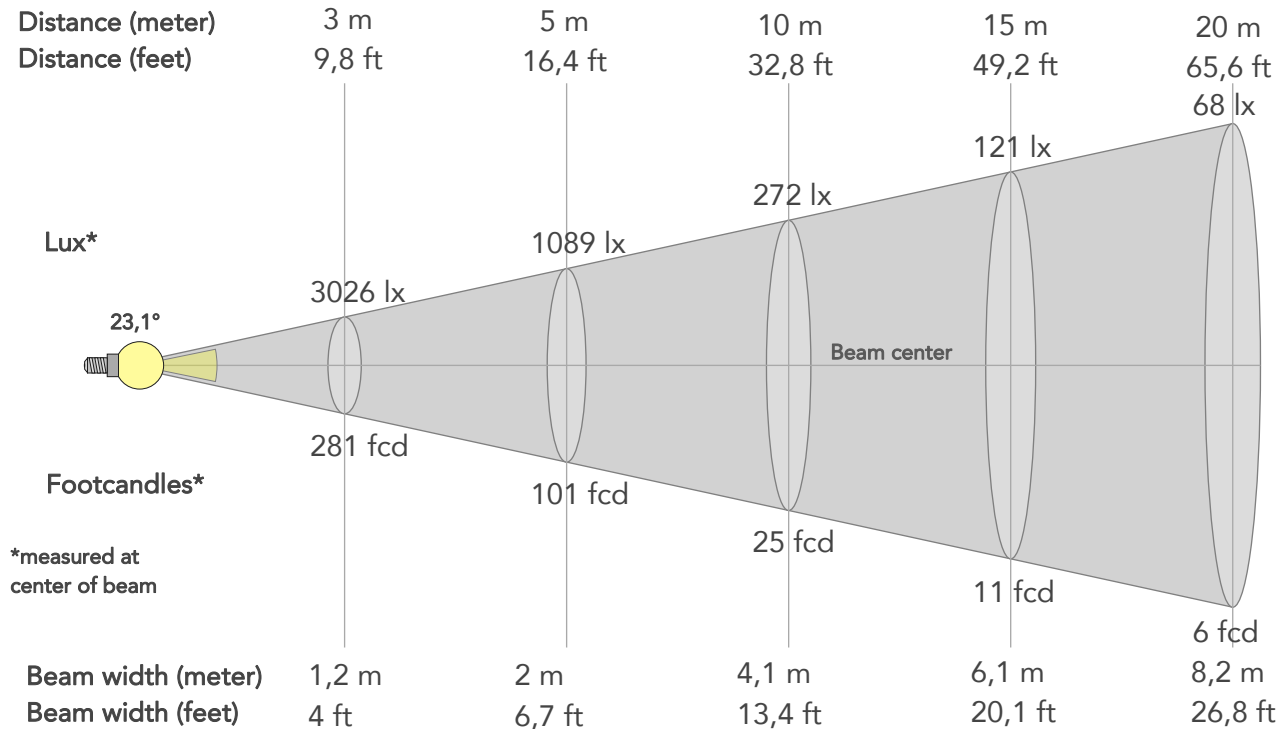
Rg 107,0
Gammut index

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	87	-4%	-4%
2	85	-5%	6%
3	66	-1%	18%
4	60	8%	21%
5	64	17%	15%
6	73	17%	3%
7	79	10%	-8%
8	80	0%	-11%
9	84	-10%	-6%
10	75	-10%	8%
11	61	-6%	21%
12	55	3%	24%
13	75	12%	17%
14	70	14%	9%
15	81	12%	-3%
16	84	6%	-8%



BEAM DETAILS

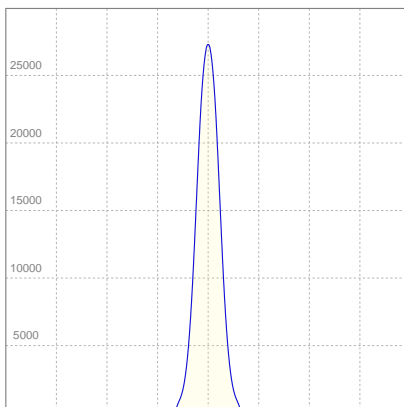
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
23,1°	40,8°	53,8°	100,0%	99,8%



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	27235lx	6809lx	3026lx	1702lx	1089lx	484lx	272lx	121lx	68lx	44lx	30lx	17lx	11lx
Footcand.	2530fcd	633fcd	281fcd	158fcd	101fcd	45fcd	25fcd	11fcd	6fcd	4fcd	3fcd	2fcd	1fcd
Beam wid.	0,4m	0,8m	1,2m	1,6m	2m	3,1m	4,1m	6,1m	8,2m	10,2m	12,3m	16,4m	20,4m
Beam wid.	1,3ft	2,7ft	4ft	5,4ft	6,7ft	10,1ft	13,4ft	20,1ft	26,8ft	33,5ft	40,2ft	53,6ft	67,1ft

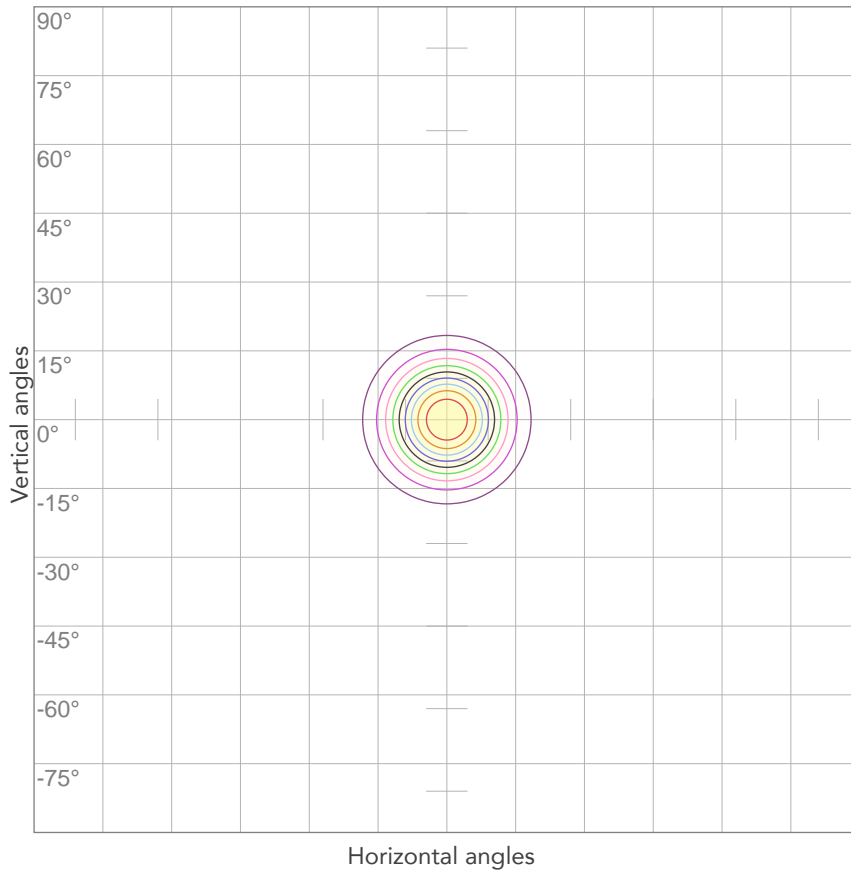
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	1,32A	281,3W	17lm/W
Power Fc			
0,90			

ISO CANDELA DIAGRAM



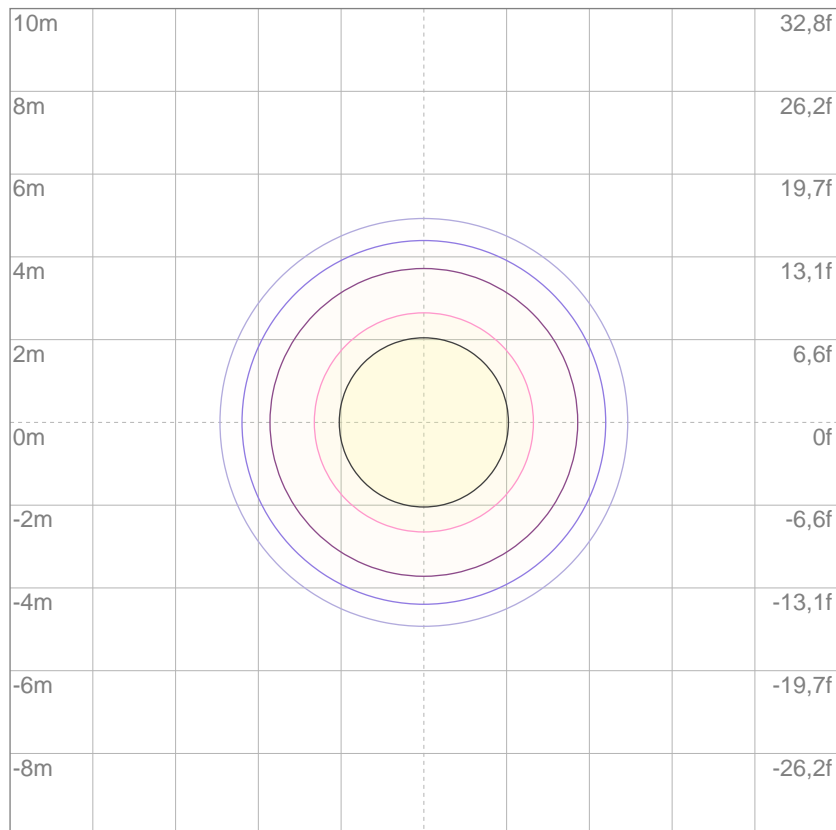
10%	2723 cd
20%	5447 cd
30%	8170 cd
40%	10894 cd
50%	13617 cd
60%	16341 cd
70%	19064 cd
80%	21788 cd

Conditions:

Number of c-planes: 2

Candela at center: 27235 cd

ISO LUX DIAGRAM



3%	8,17 lx
5%	13,6 lx
10%	27,2 lx
30%	81,7 lx
50%	136 lx

Conditions:

Number of c-planes: 2

Lux at center: 272 lx

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



Total lumen output:

4271 lm

Peak candela output:

140795 cd

Light quality:

CRI: 83,1

Color temperature:

4943 K

PRODUCT NAME:

Diamond 19TW

MEASUREMENT CONDITIONS:

Beam angle:

Med Zoom

Target:

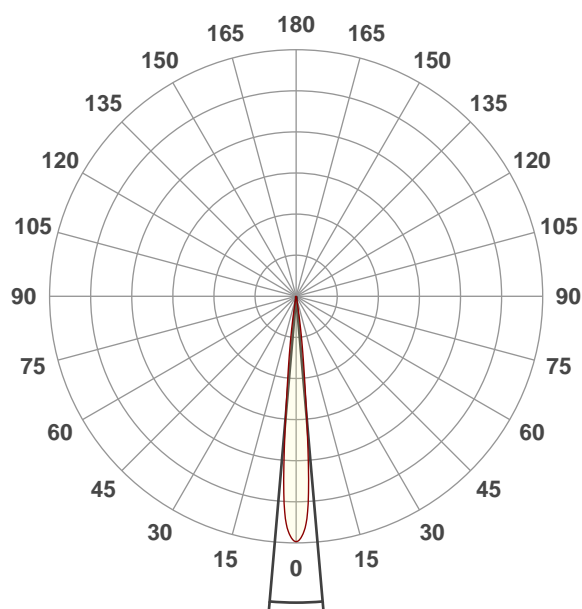
Full On

Operator:

Paolo Carvone

Date and time:

26/10/2020 13:11:58

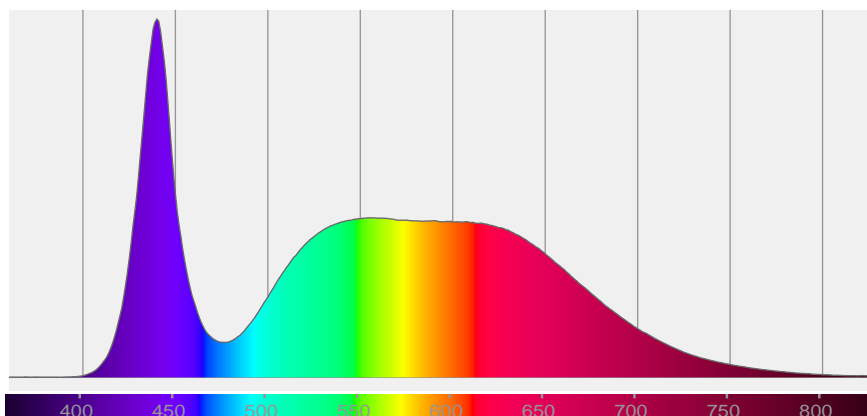


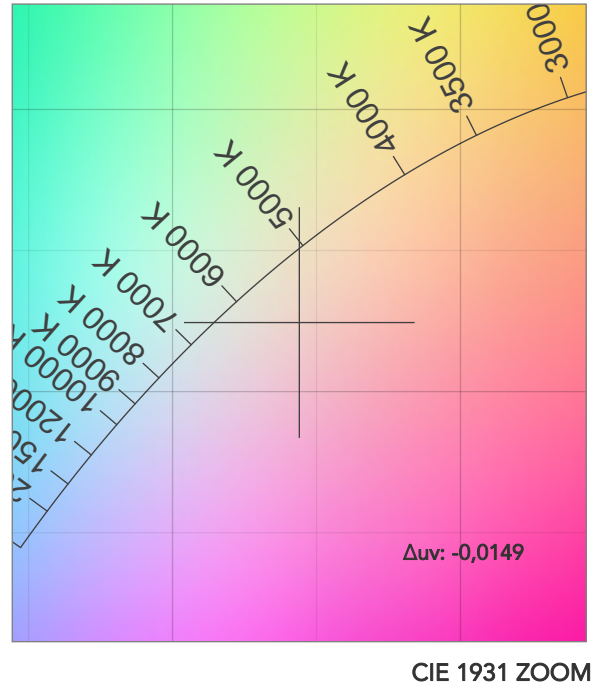
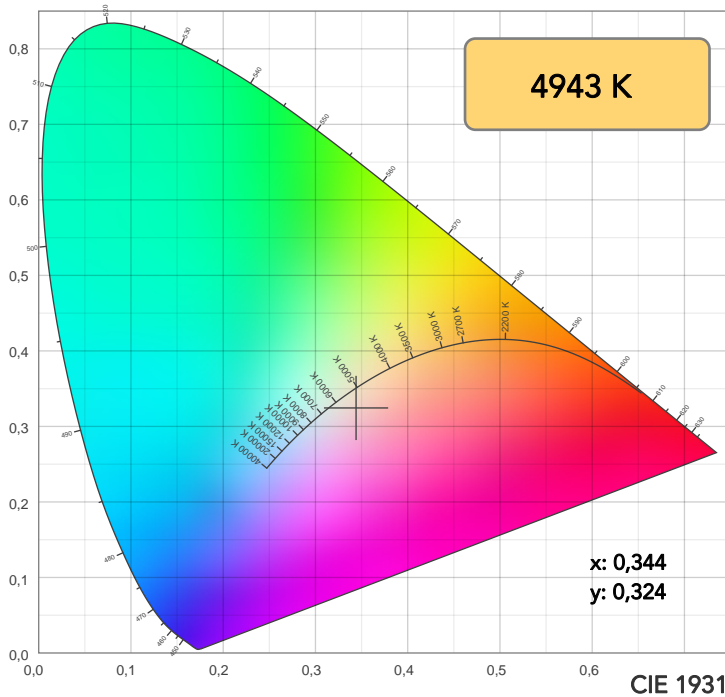
Beam angle 50%: 9,9°

Field angle 10%: 16,5°

Cut off angle 2.5%: 19,2°

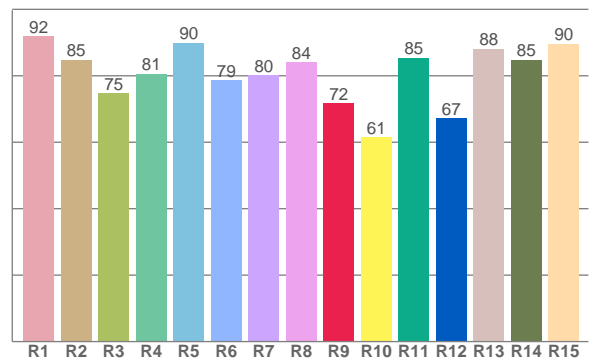
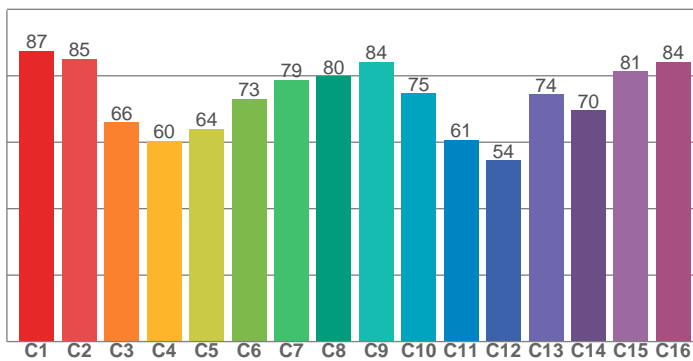
Spectra





TM30: 73,6

CRI: 83,1 (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
92,0	84,8	74,8	80,6	90,0	78,6	80,2	84,0	71,8	61,4	85,4	67,3	88,1	84,9	89,6

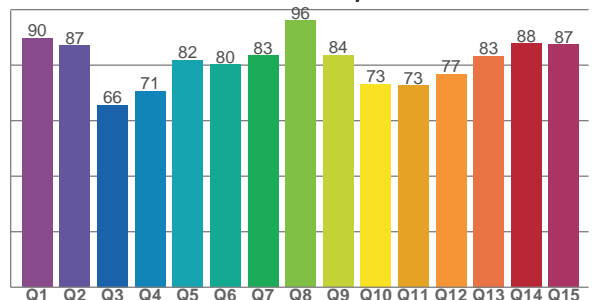
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
87,5	85,1	65,9	60,4	64,0	73,1	78,8	79,9	84,2	74,7	60,7	54,5	74,4	69,5	81,3	84,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89,7	87,1	65,6	70,7	81,8	80,2	83,4	96,1	83,6	73,2	72,6	76,7	83,3	87,8	87,4

CQS: 79,7



COLOR PARAMETERS

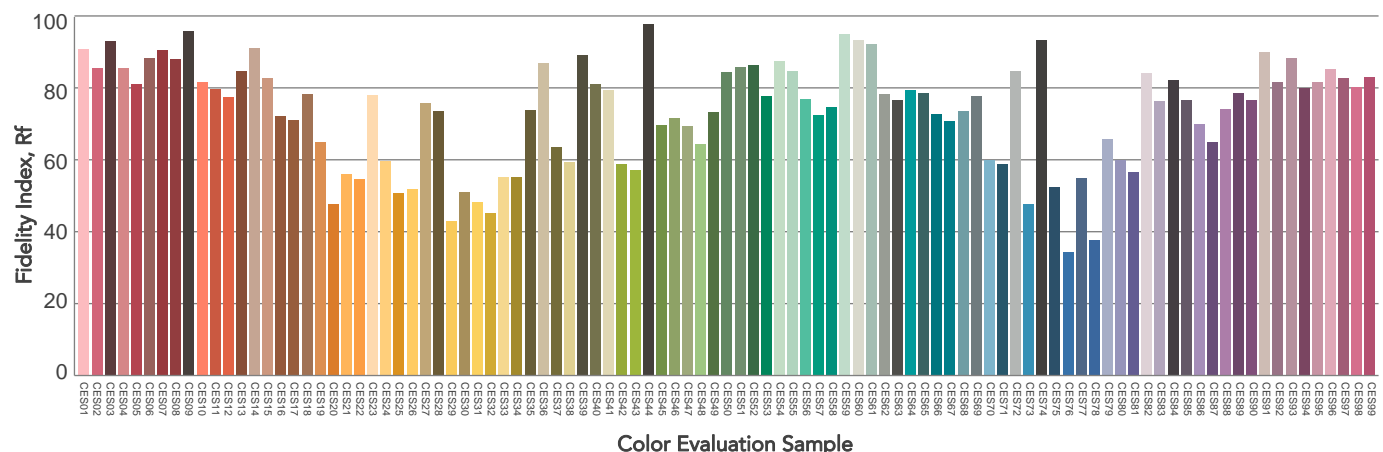
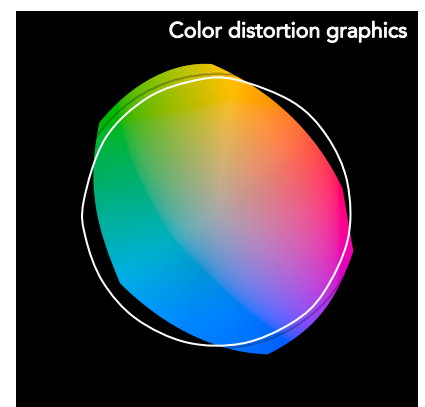
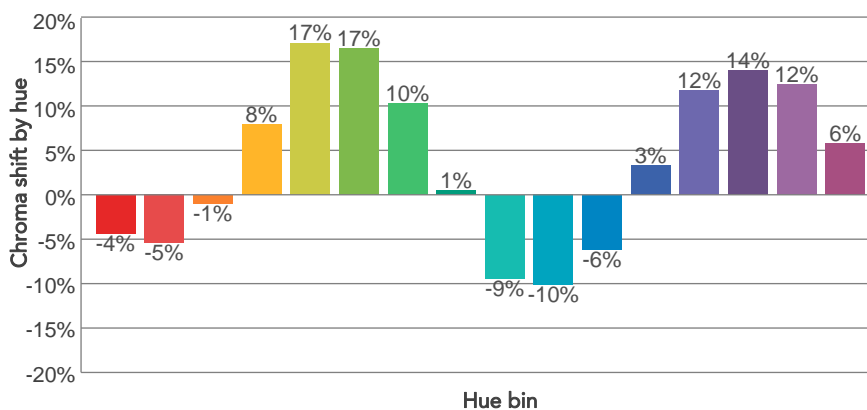
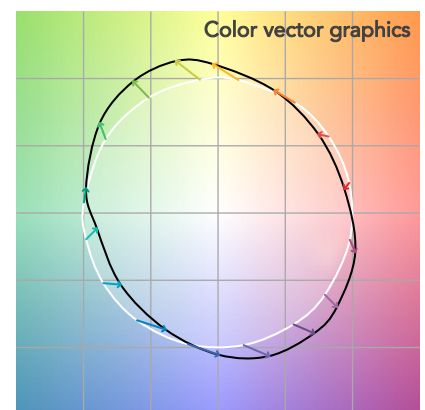
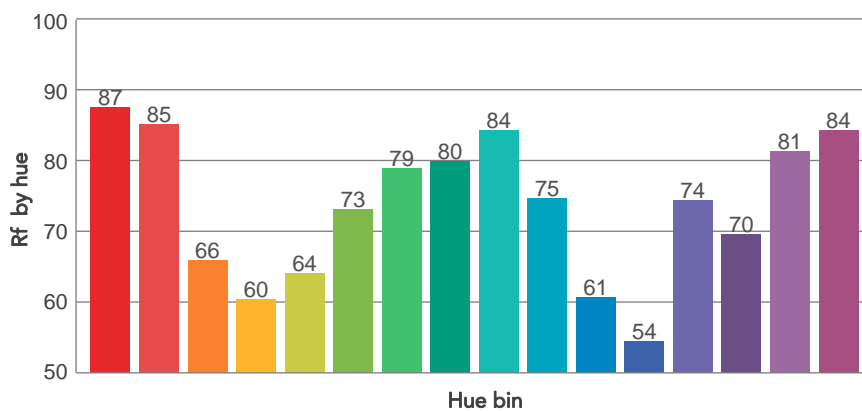
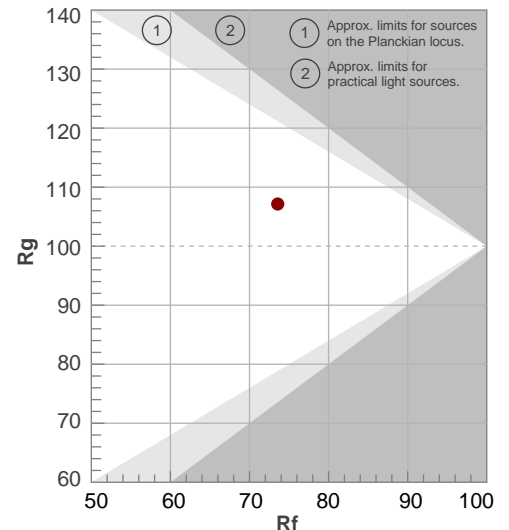
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
4943 K	83,1	71,8	73,6	107,1	79,7	62	0,344	0,324	-0,0149

TM30 DETAILS

Rf 73,6
Fidelity index Rf

Rg 107,1
Gammut index

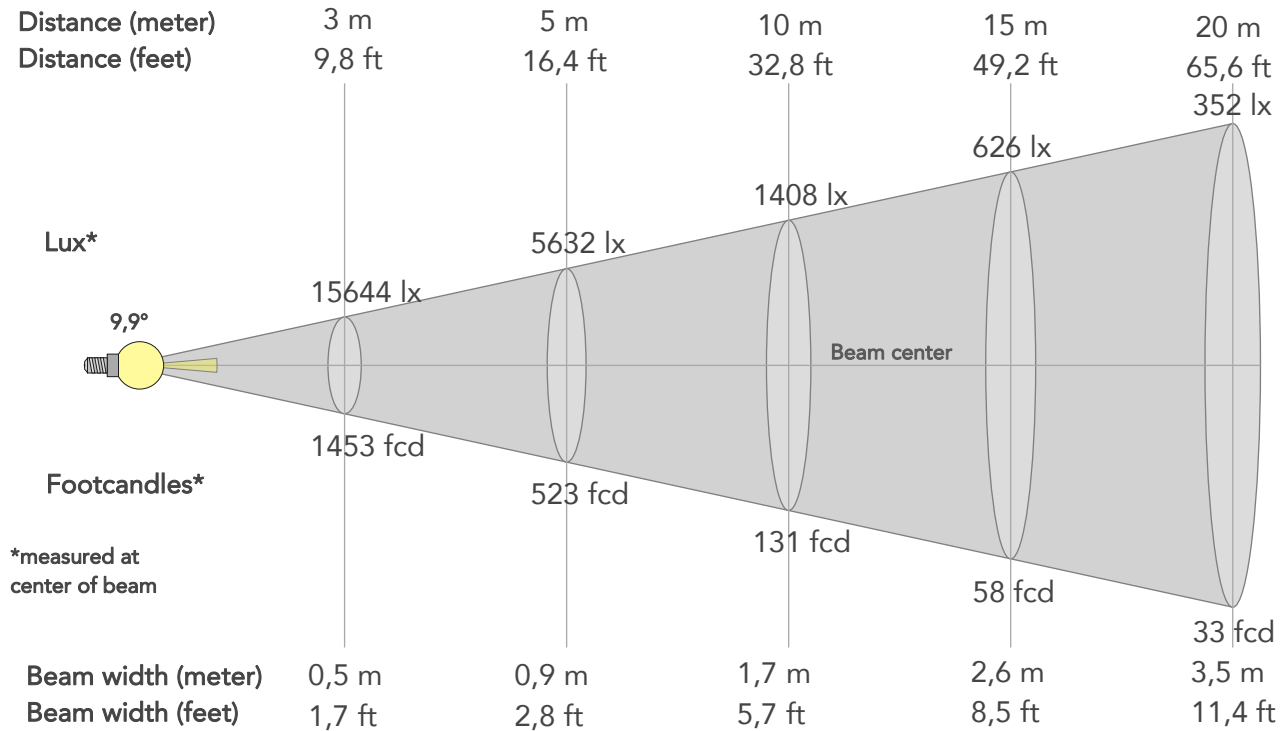
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	87	-4%	-4%
2	85	-5%	6%
3	66	-1%	18%
4	60	8%	21%
5	64	17%	15%
6	73	17%	3%
7	79	10%	-8%
8	80	1%	-11%
9	84	-9%	-6%
10	75	-10%	8%
11	61	-6%	21%
12	54	3%	24%
13	74	12%	17%
14	70	14%	9%
15	81	12%	-3%
16	84	6%	-8%



BEAM DETAILS



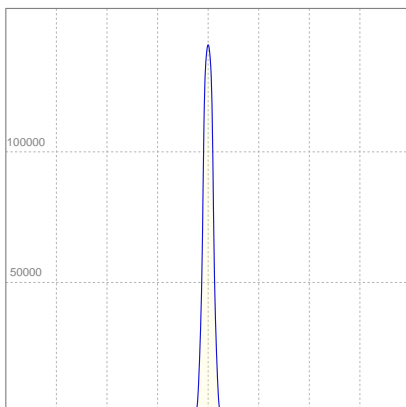
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
9,9°	16,5°	19,2°	100,0%	100,0%



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	140795lx	35199lx	15644lx	8800lx	5632lx	2503lx	1408lx	626lx	352lx	225lx	156lx	88lx	56lx
Footcand.	13080fcd	3270fcd	1453fcd	818fcd	523fcd	233fcd	131fcd	58fcd	33fcd	21fcd	15fcd	8fcd	5fcd
Beam wid.	0,2m	0,3m	0,5m	0,7m	0,9m	1,3m	1,7m	2,6m	3,5m	4,3m	5,2m	6,9m	8,7m
Beam wid.	0,6ft	1,1ft	1,7ft	2,3ft	2,8ft	4,3ft	5,7ft	8,5ft	11,4ft	14,2ft	17,1ft	22,8ft	28,5ft

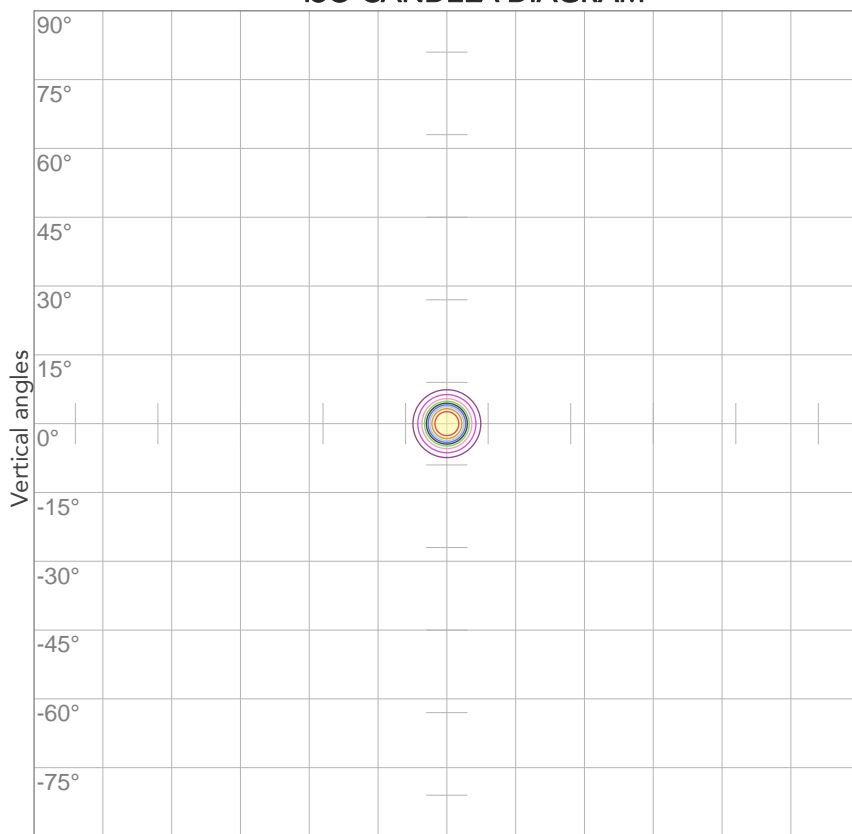
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
224V	1,32A	280,3W	15lm/W
Power Fc			
0,90			

ISO CANDELA DIAGRAM



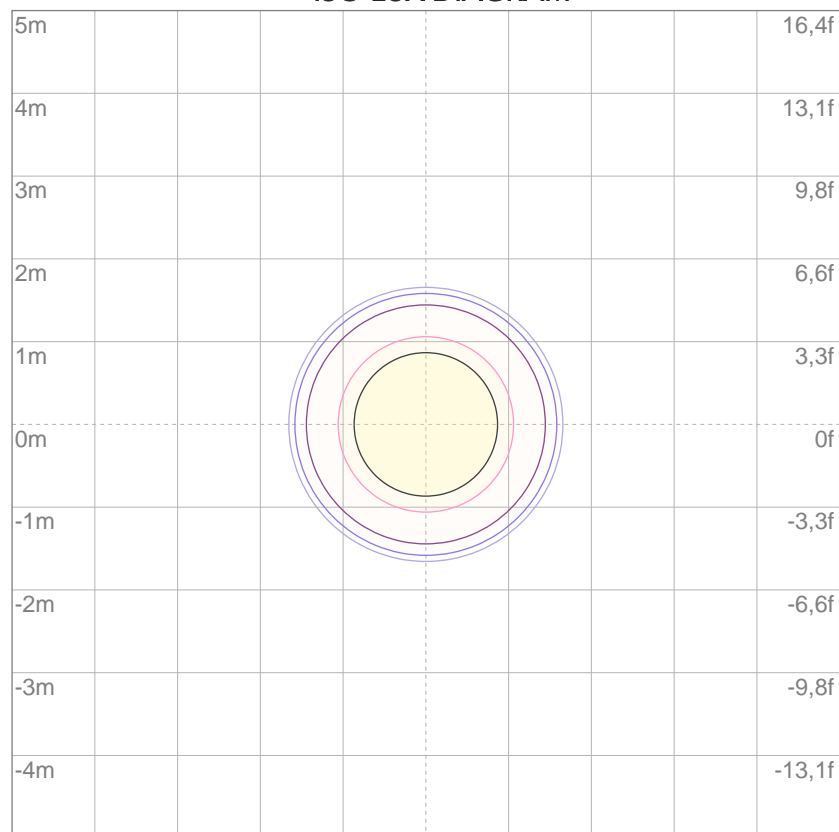
10%	14079 cd
20%	28159 cd
30%	42238 cd
40%	56318 cd
50%	70397 cd
60%	84477 cd
70%	98556 cd
80%	112636 cd

Conditions:

Number of c-planes: 2

Candela at center: 140795 cd

ISO LUX DIAGRAM



3%	42,2 lx
5%	70,4 lx
10%	141 lx
30%	422 lx
50%	704 lx

Conditions:

Number of c-planes: 2

Lux at center: 1408 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:

3129 lm

Peak candela output:

146471 cd

Light quality:

CRI: 83,2

Color temperature:

4838 K

PRODUCT NAME:

Diamond 19TW

MEASURAMENT CONDITIONS:

Beam angle:

Min Zoom

Target:

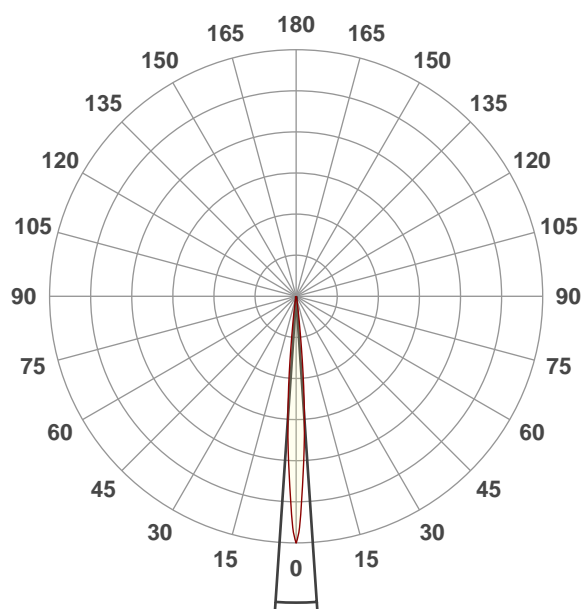
Full On

Operator:

Paolo Carvone

Date and time:

26/10/2020 12:59:01

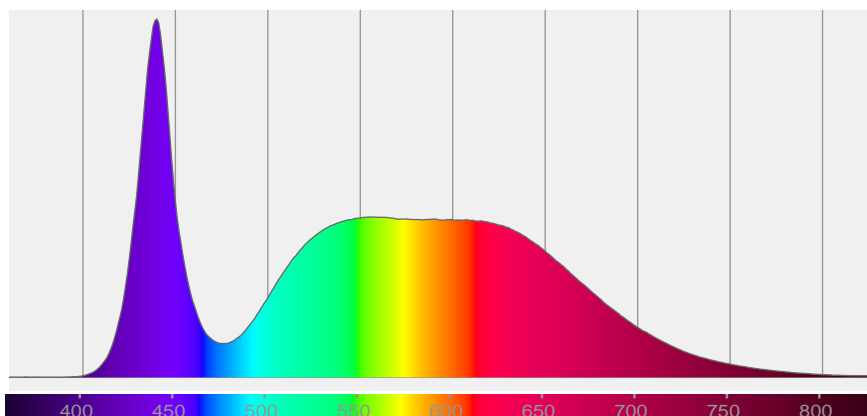


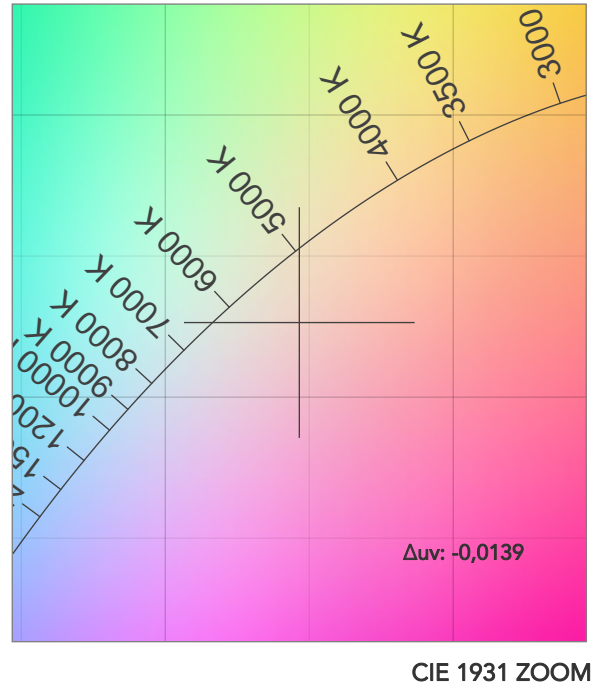
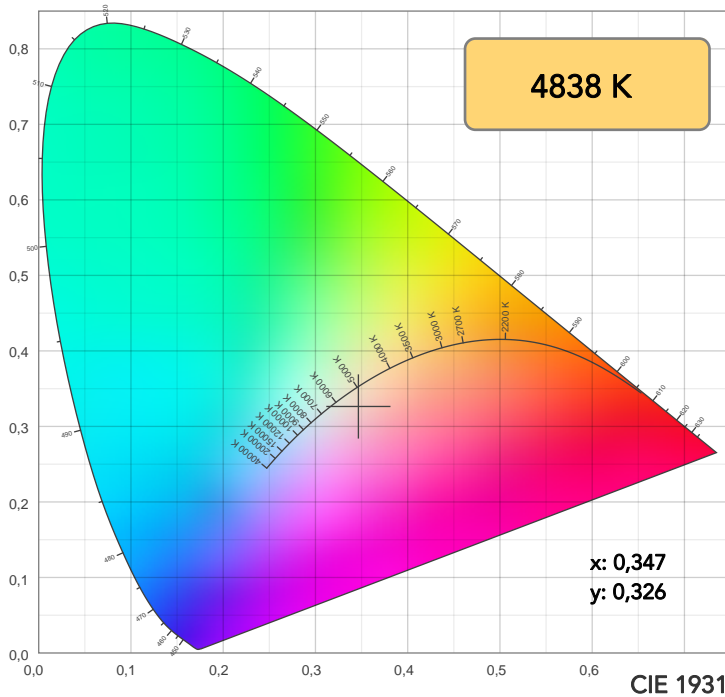
Beam angle 50%: 7,7°

Field angle 10%: 14,2°

Cut off angle 2.5%: 19,2°

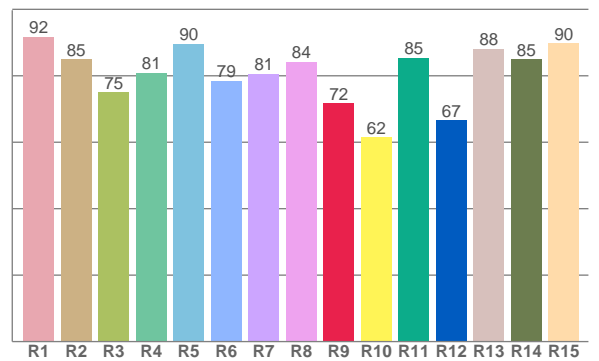
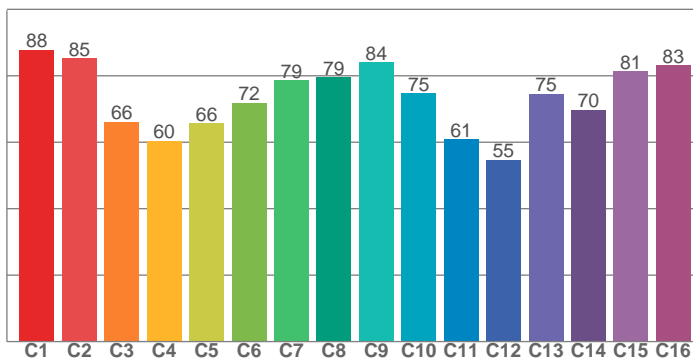
Spectra





TM30: 73,6

CRI: 83,2 (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
91,8	84,9	75,0	80,9	89,6	78,5	80,6	84,2	71,8	61,5	85,5	66,7	88,2	85,0	89,8

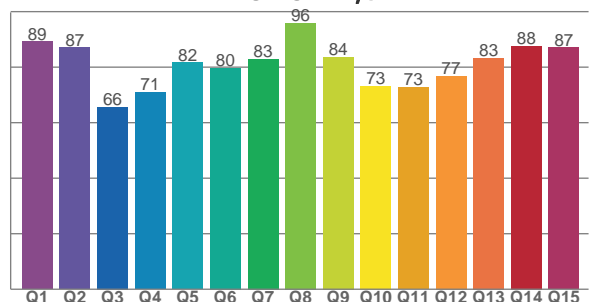
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
87,8	85,2	66,1	60,4	65,7	71,9	78,6	79,5	84,0	74,8	60,9	54,7	74,6	69,8	81,4	83,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89,3	87,1	65,7	70,9	81,6	79,6	82,9	95,8	83,7	73,2	72,7	76,8	83,3	87,7	87,0

CQS: 79,6



COLOR PARAMETERS

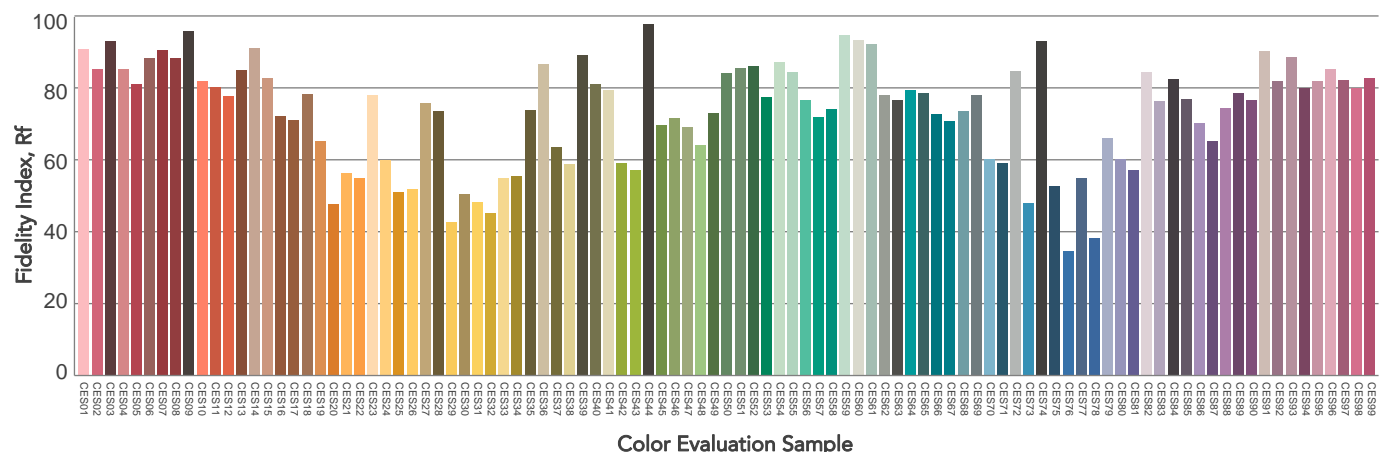
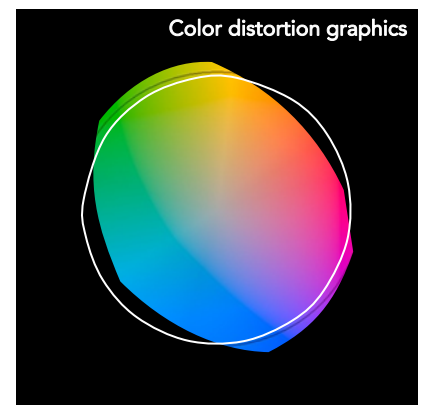
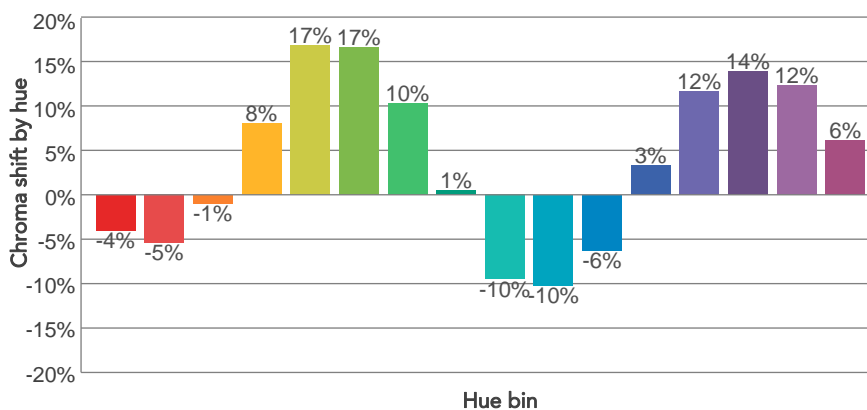
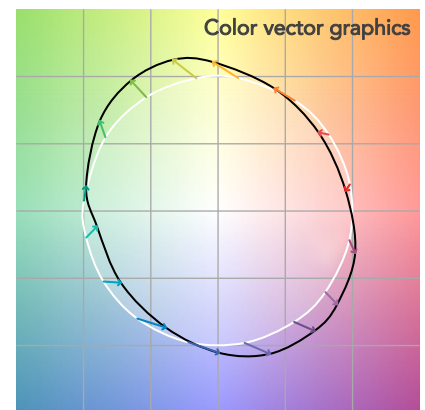
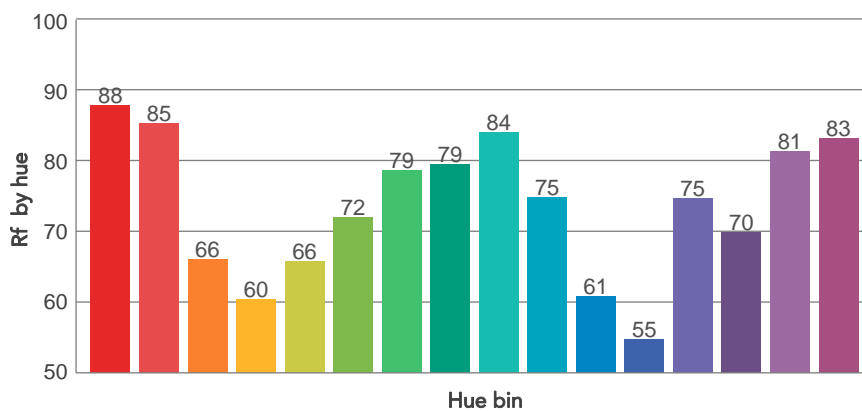
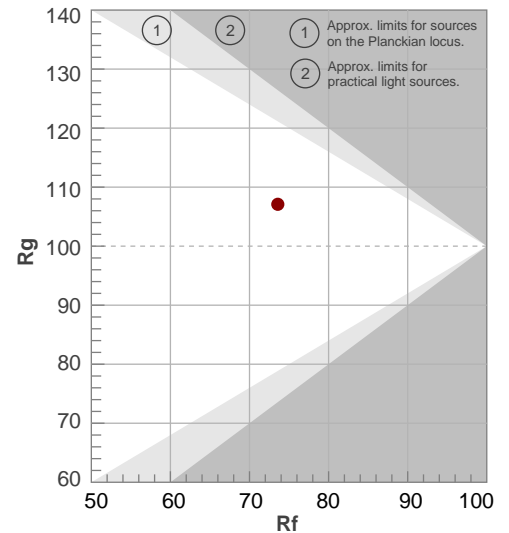
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
4838 K	83,2	71,8	73,6	107,1	79,6	61	0,347	0,326	-0,0139

TM30 DETAILS

Rf 73,6
Fidelity index Rf

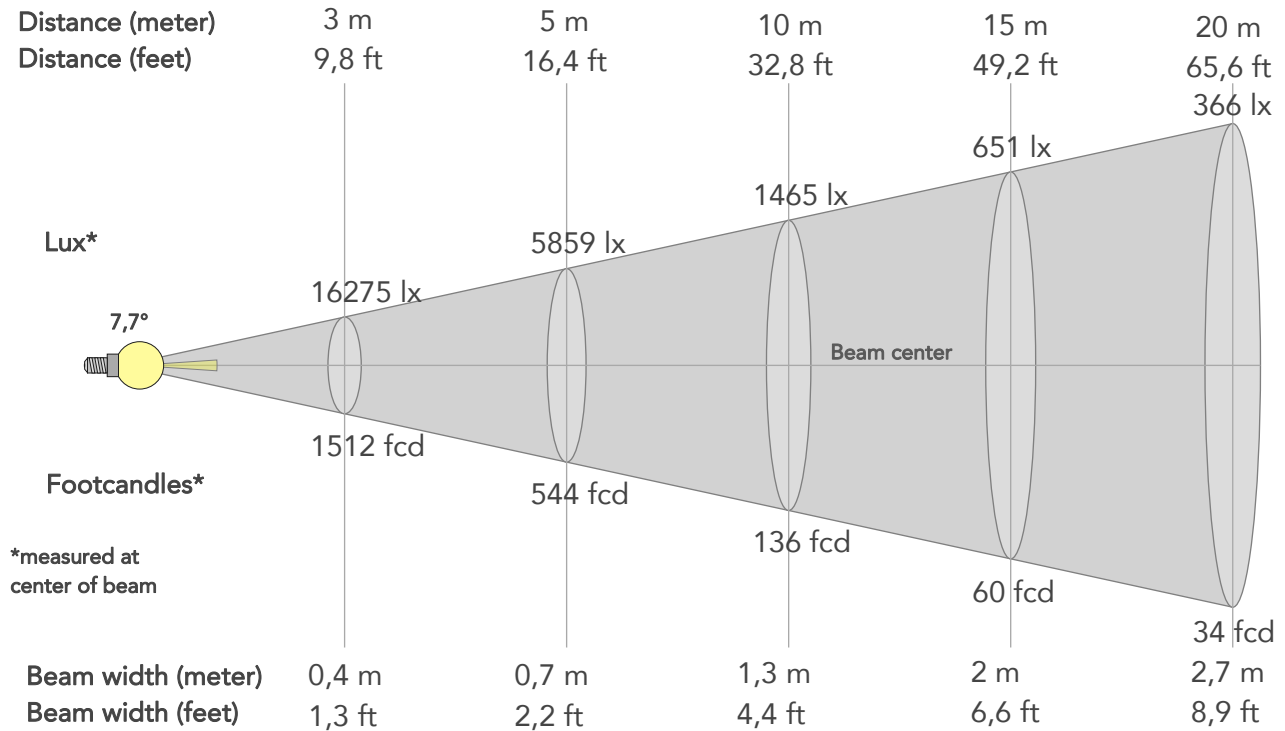
Rg 107,1
Gammut index

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	88	-4%	-4%
2	85	-5%	6%
3	66	-1%	17%
4	60	8%	21%
5	66	17%	15%
6	72	17%	3%
7	79	10%	-8%
8	79	1%	-11%
9	84	-10%	-7%
10	75	-10%	8%
11	61	-6%	21%
12	55	3%	24%
13	75	12%	17%
14	70	14%	9%
15	81	12%	-3%
16	83	6%	-8%



BEAM DETAILS

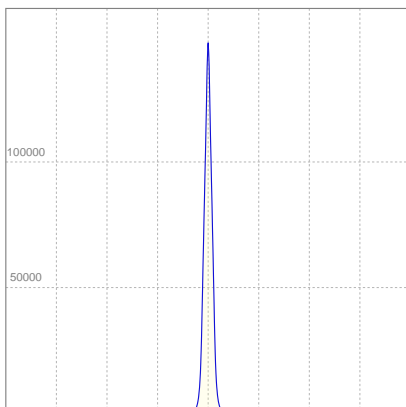
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
7,7°	14,2°	19,2°	100,0%	100,0%



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	146471lx	36618lx	16275lx	9154lx	5859lx	2604lx	1465lx	651lx	366lx	234lx	163lx	92lx	59lx
Footcand.	13608fcd	3402fcd	1512fcd	850fcd	544fcd	242fcd	136fcd	60fcd	34fcd	22fcd	15fcd	9fcd	5fcd
Beam wid.	0,1m	0,3m	0,4m	0,5m	0,7m	1m	1,3m	2m	2,7m	3,4m	4m	5,4m	6,7m
Beam wid.	0,4ft	0,9ft	1,3ft	1,8ft	2,2ft	3,3ft	4,4ft	6,6ft	8,9ft	11,1ft	13,3ft	17,7ft	22,1ft

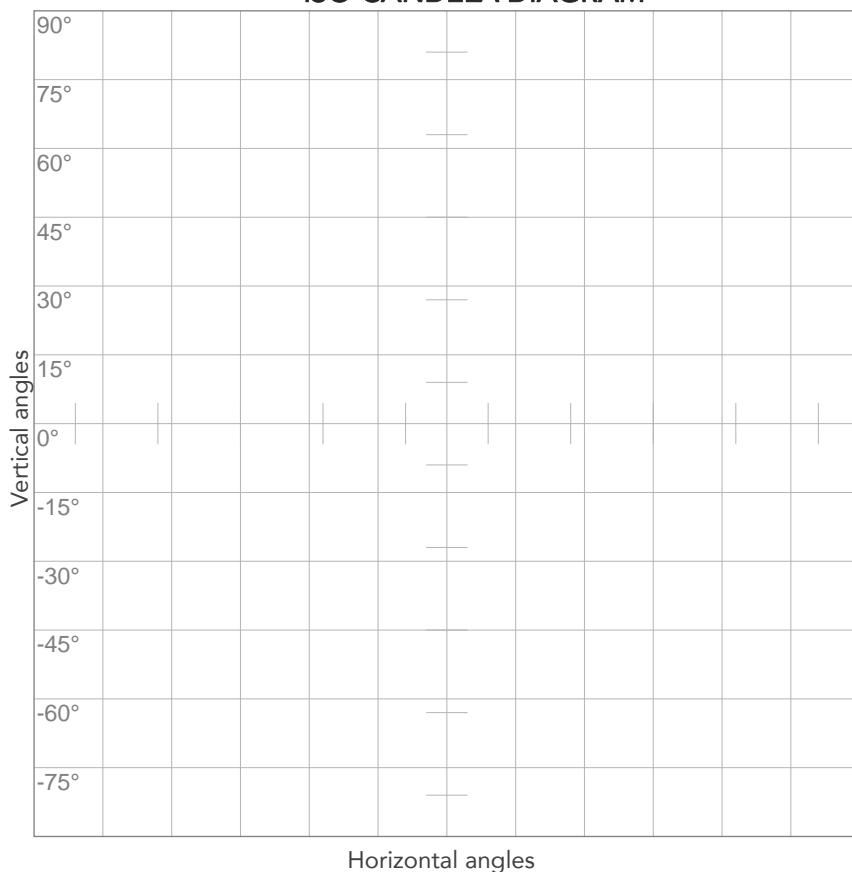
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	1,31A	281,7W	11lm/W
Power Fc			
0,90			

ISO CANDELA DIAGRAM



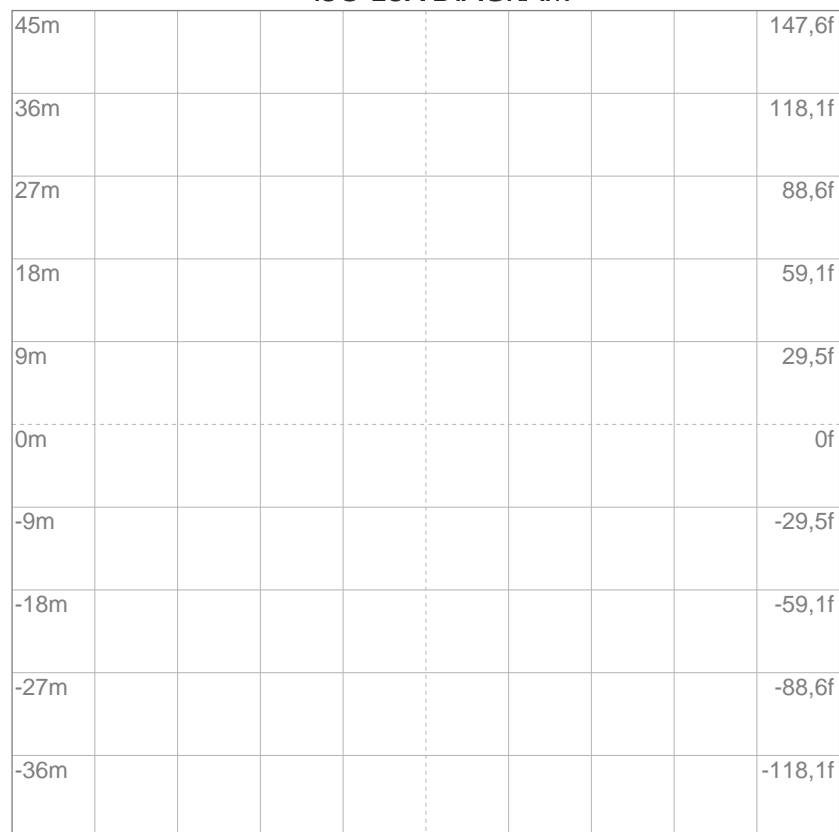
10%	14647 cd
20%	29294 cd
30%	43941 cd
40%	58588 cd
50%	73235 cd
60%	87883 cd
70%	102530 cd
80%	117177 cd

Conditions:

Number of c-planes: 2

Candela at center: 146471 cd

ISO LUX DIAGRAM



3%	43,9 lx
5%	73,2 lx
10%	146 lx
30%	439 lx
50%	732 lx

Conditions:

Number of c-planes: 2

Lux at center: 1465 lx

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



Total lumen output:

3213 lm

Peak candela output:

18197 cd

Light quality:

CRI: 70,4

Color temperature:

7992 K

PRODUCT NAME:

Diamond 19TW

MEASURAMENT CONDITIONS:

Beam angle:

Max Zoom

Target:

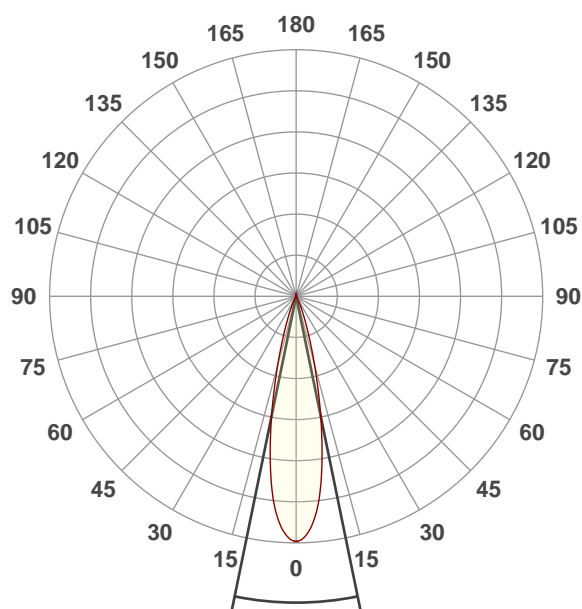
Cold White

Operator:

Paolo Carvone

Date and time:

26/10/2020 13:05:00

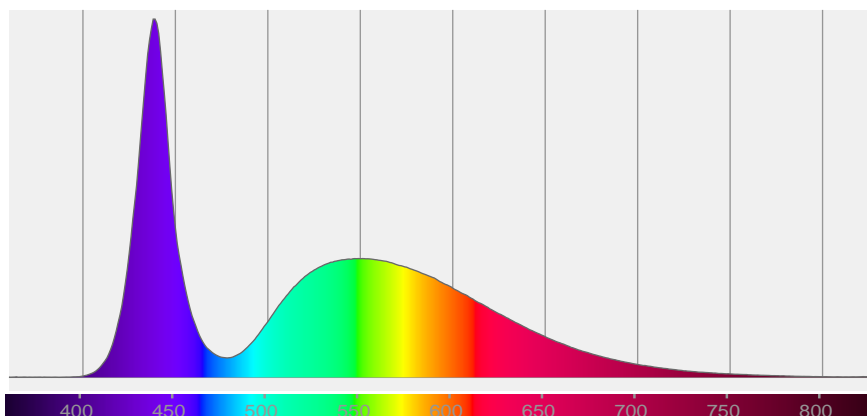


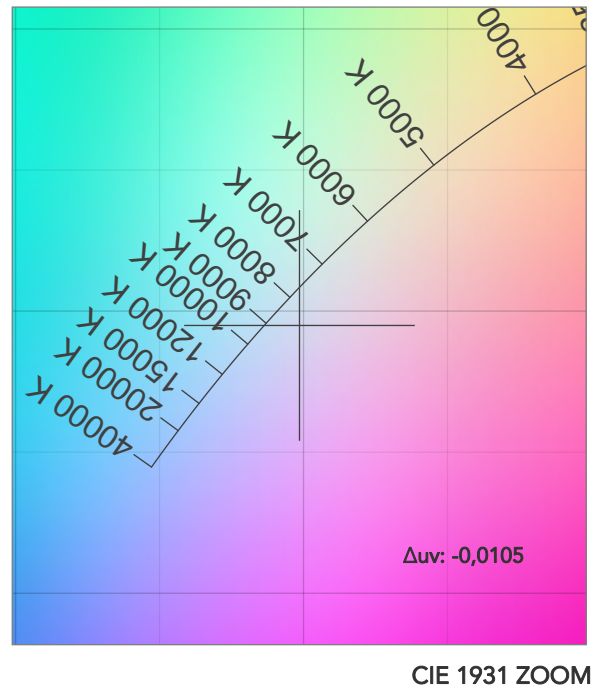
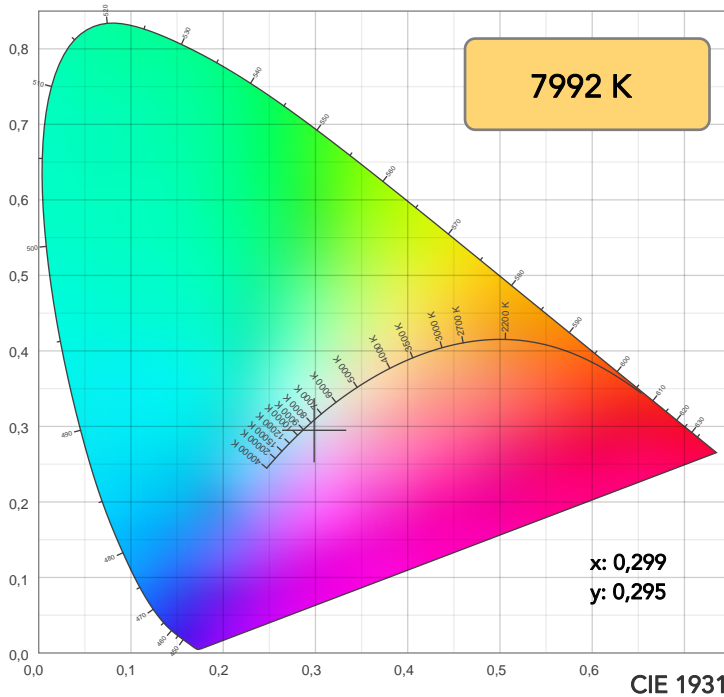
Beam angle 50%: 23,2°

Field angle 10%: 40,8°

Cut off angle 2.5%: 53,8°

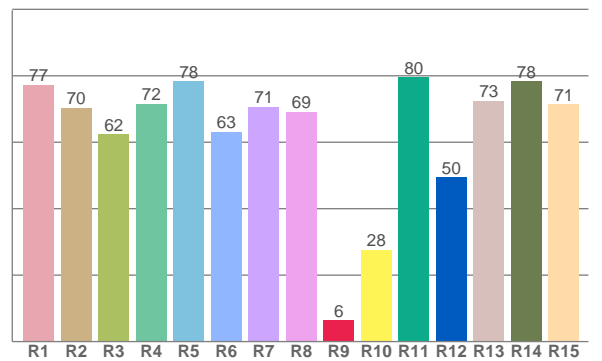
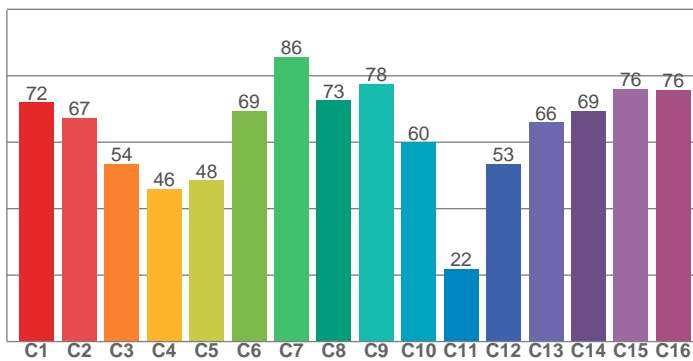
Spectra





TM30: 62,4

CRI: 70,4 (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
77,3	70,4	62,4	71,6	78,4	63,2	70,7	69,1	6,4	27,6	79,6	49,5	72,5	78,4	71,4

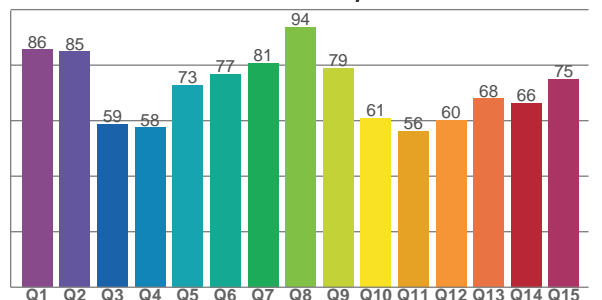
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
72,0	67,4	53,6	46,0	48,5	69,4	85,7	72,7	77,6	59,9	22,0	53,4	65,9	69,4	76,0	75,8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
85,5	84,8	58,7	57,5	72,9	76,8	80,7	93,6	78,9	61,0	56,3	60,3	67,9	66,3	75,0

CQS: 69,6



COLOR PARAMETERS

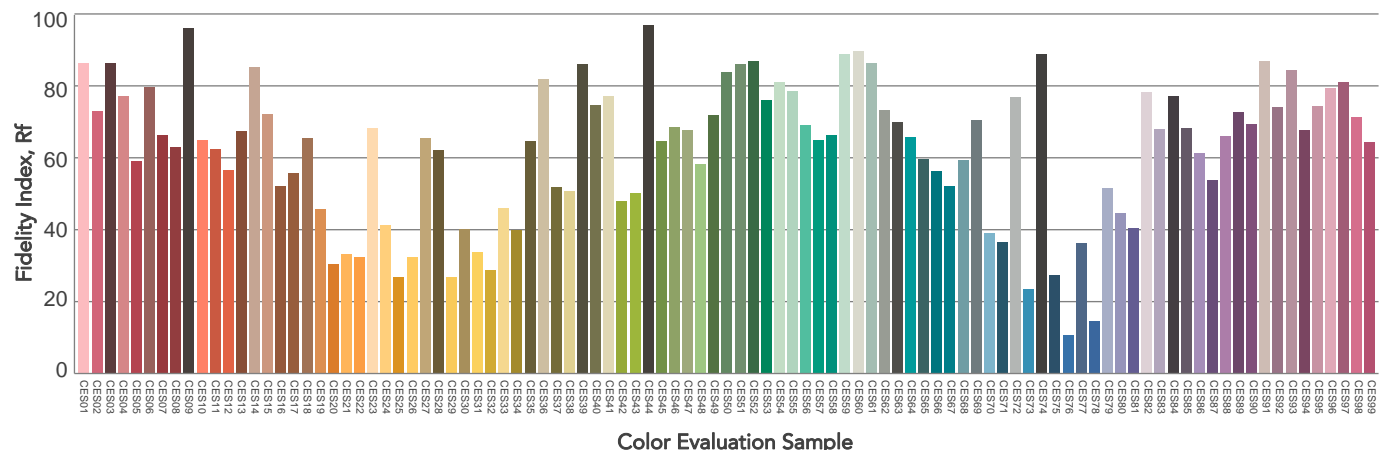
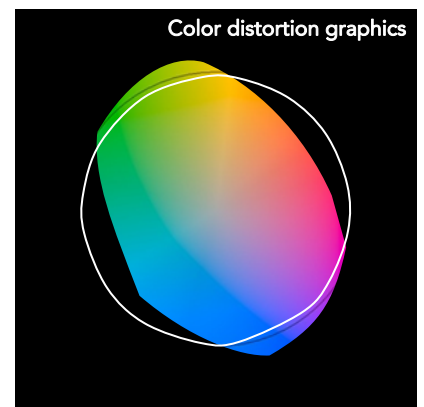
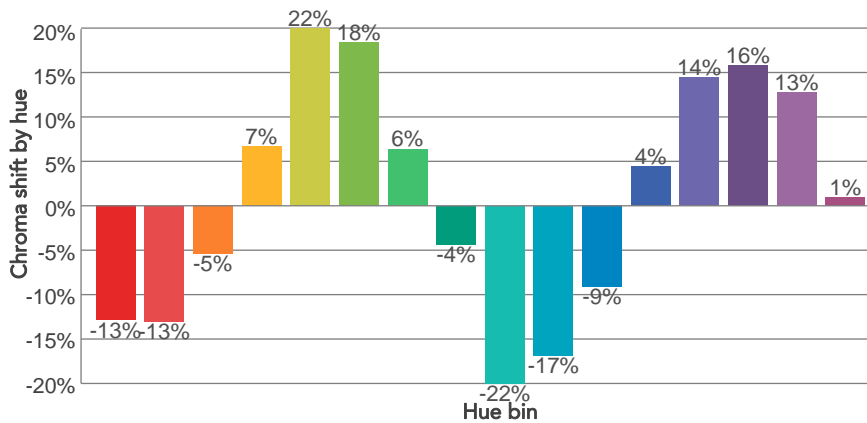
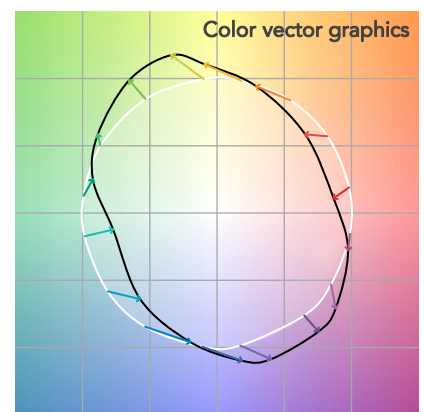
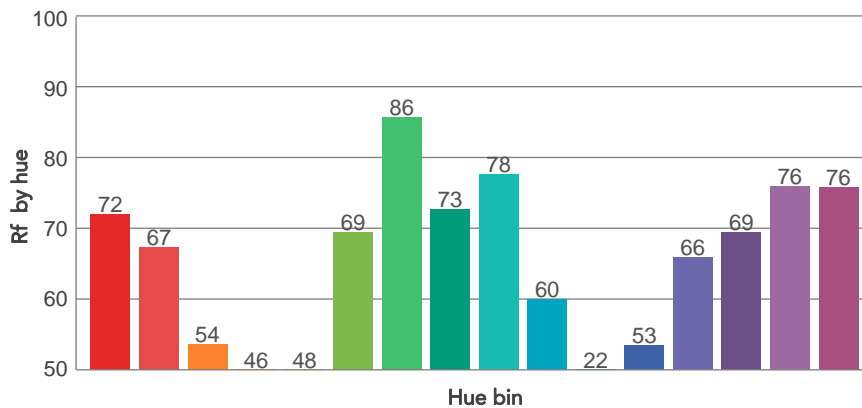
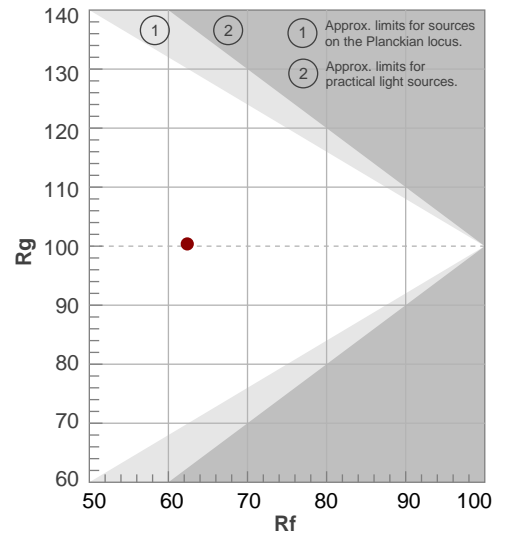
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
7992 K	70,4	6,4	62,4	100,4	69,6	48	0,299	0,295	-0,0105

TM30 DETAILS

Rf 62,4
Fidelity index Rf

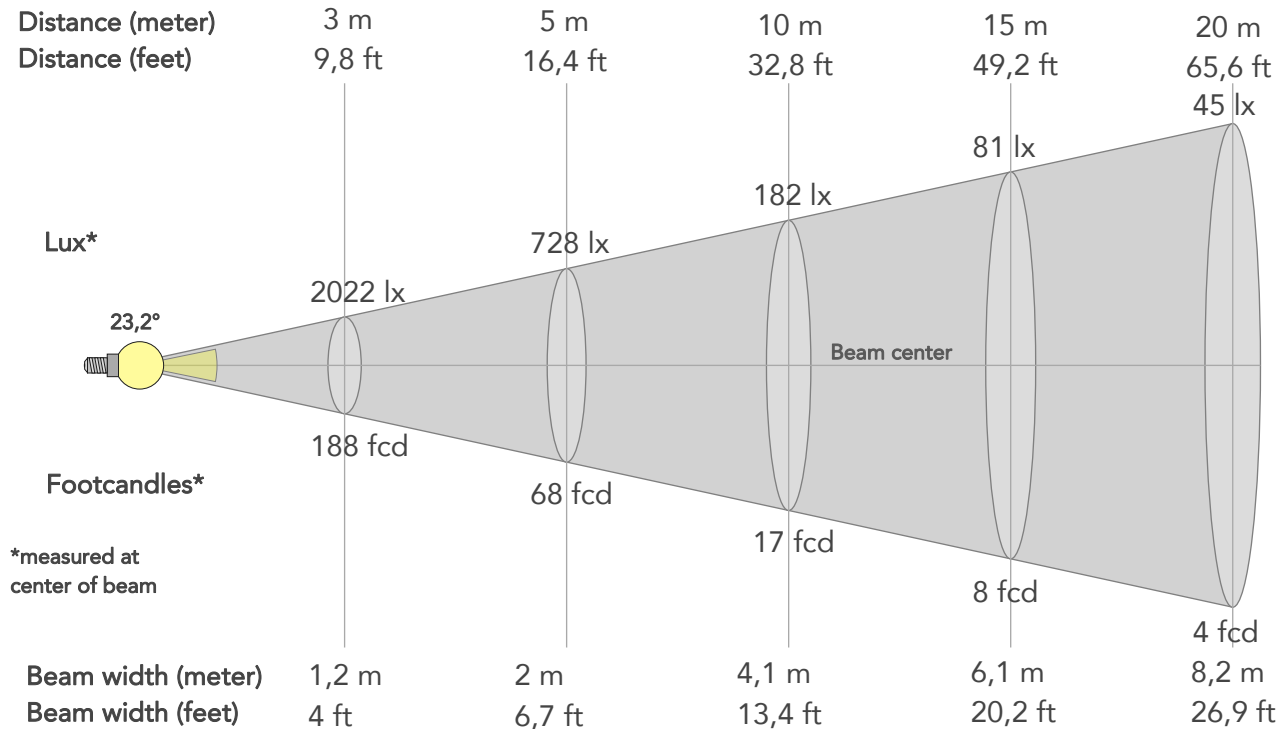
Rg 100,4
Gammut index

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	72	-13%	-6%
2	67	-13%	10%
3	54	-5%	27%
4	46	7%	29%
5	48	22%	20%
6	69	18%	2%
7	86	6%	-6%
8	73	-4%	-13%
9	78	-22%	-1%
10	60	-17%	18%
11	22	-9%	34%
12	53	4%	31%
13	66	14%	20%
14	69	16%	2%
15	76	13%	-13%
16	76	1%	-12%



BEAM DETAILS

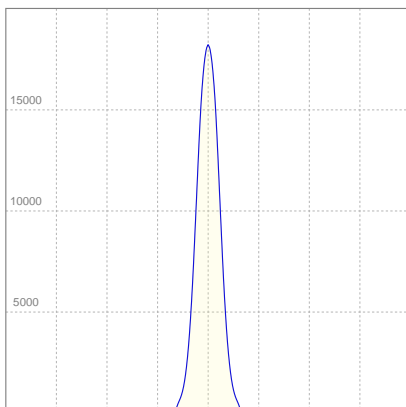
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
23,2°	40,8°	53,8°	100,0%	99,9%



BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	18197lx	4549lx	2022lx	1137lx	728lx	323lx	182lx	81lx	45lx	29lx	20lx	11lx	7lx
Footcand.	1691fcd	423fcd	188fcd	106fcd	68fcd	30fcd	17fcd	8fcd	4fcd	3fcd	2fcd	1fcd	1fcd
Beam wid.	0,4m	0,8m	1,2m	1,6m	2m	3,1m	4,1m	6,1m	8,2m	10,2m	12,3m	16,4m	20,5m
Beam wid.	1,4ft	2,7ft	4ft	5,4ft	6,7ft	10,1ft	13,4ft	20,2ft	26,9ft	33,6ft	40,3ft	53,8ft	67,2ft

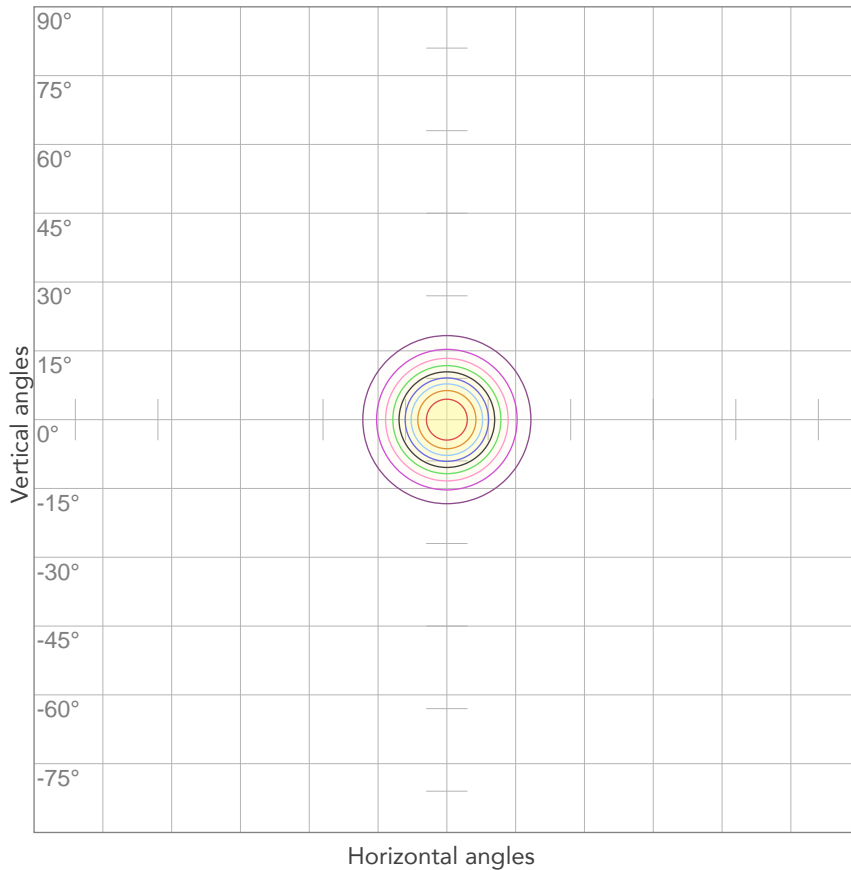
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,709A	144W	22lm/W

ISO CANDELA DIAGRAM



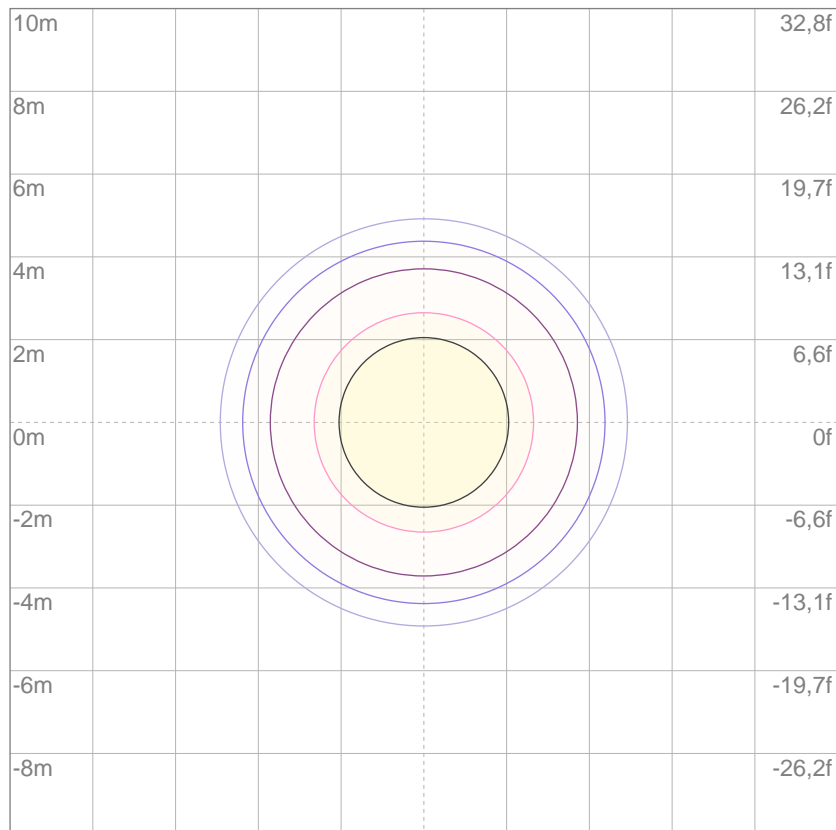
10%	1820 cd
20%	3639 cd
30%	5459 cd
40%	7279 cd
50%	9098 cd
60%	10918 cd
70%	12738 cd
80%	14557 cd

Conditions:

Number of c-planes: 2

Candela at center: 18197 cd

ISO LUX DIAGRAM



3%	5,46 lx
5%	9,10 lx
10%	18,2 lx
30%	54,6 lx
50%	91,0 lx

Conditions:

Number of c-planes: 2

Lux at center: 182 lx

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



Total lumen output:

2820 lm

Peak candela output:

92901 cd

Light quality:

CRI: 70,5

Color temperature:

8210 K

PRODUCT NAME:

Diamond 19TW

MEASURAMENT CONDITIONS:

Beam angle:

Med Zoom

Target:

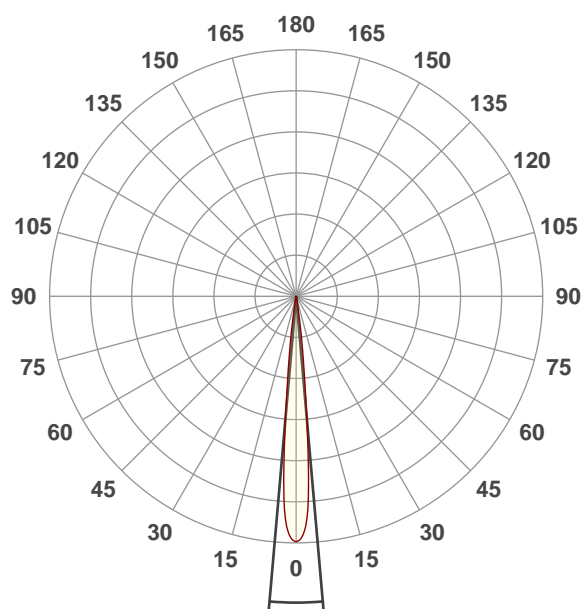
Cold White

Operator:

Paolo Carvone

Date and time:

26/10/2020 13:13:44

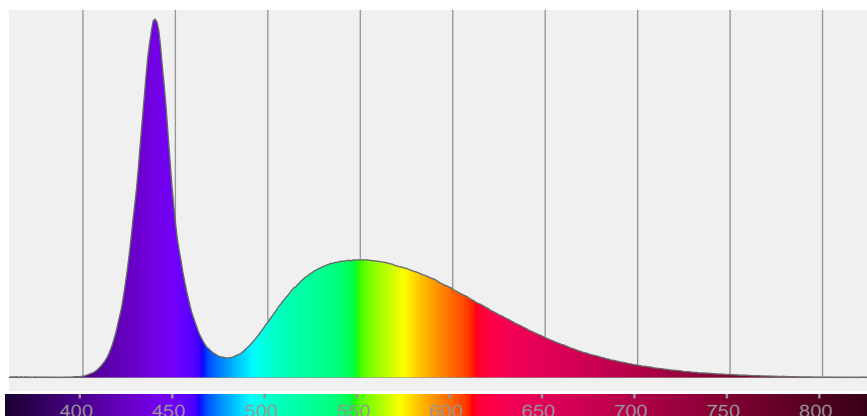


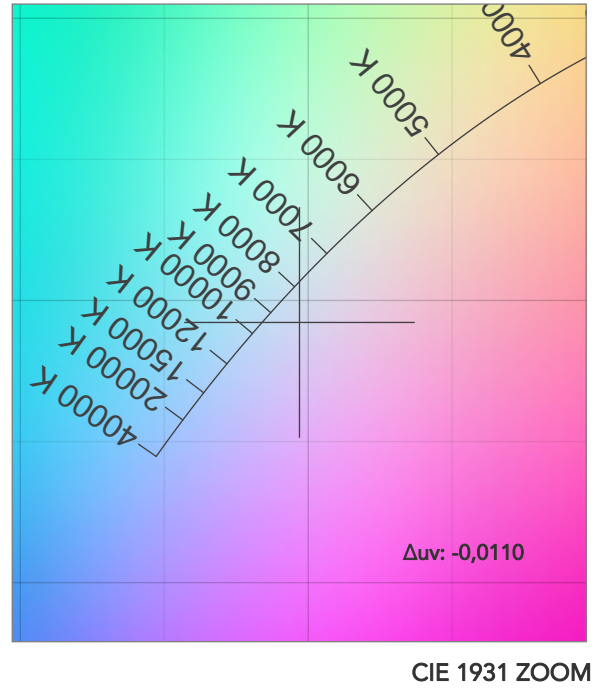
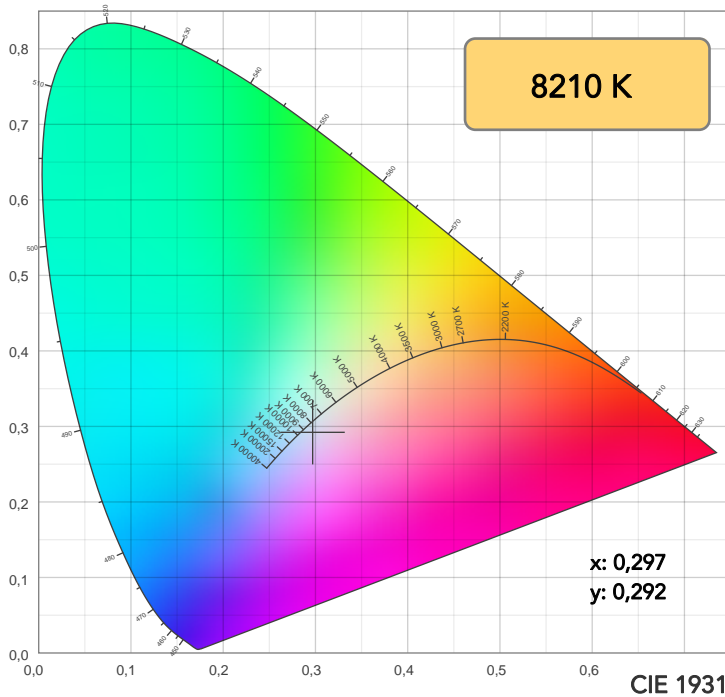
Beam angle 50%: 10°

Field angle 10%: 16,5°

Cut off angle 2.5%: 19,1°

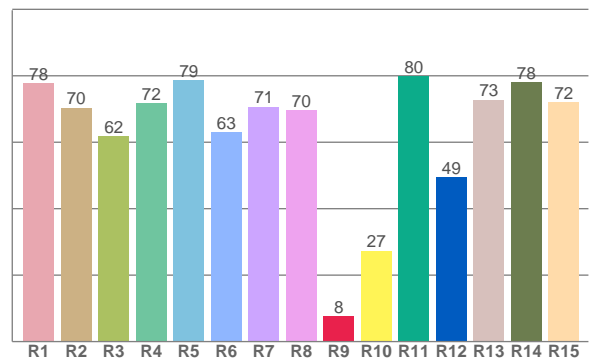
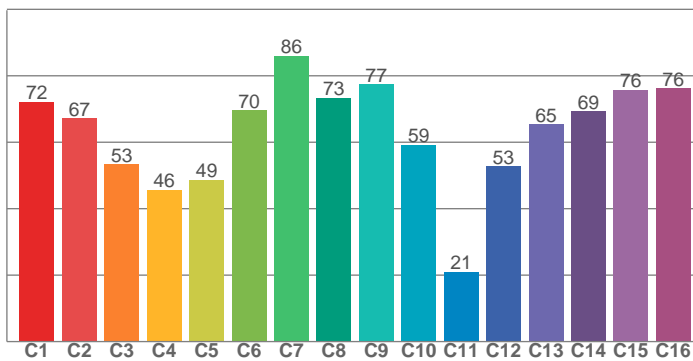
Spectra





TM30: 62,2

CRI: 70,5 (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
77,7	70,3	61,8	71,8	78,7	63,0	70,7	69,6	7,7	27,3	79,8	49,5	72,7	78,0	72,0

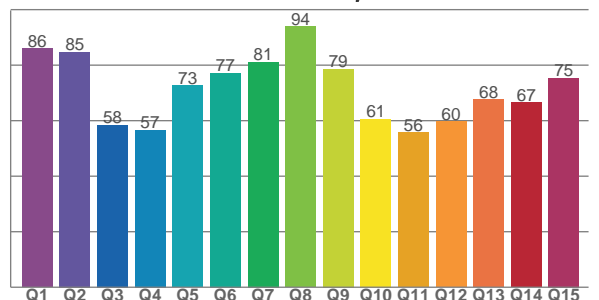
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
72,2	67,1	53,4	45,7	48,6	69,6	86,0	73,3	77,4	59,2	20,9	52,7	65,4	69,2	75,7	76,3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
85,9	84,8	58,4	56,7	72,7	77,1	81,1	93,9	78,5	60,7	55,7	59,7	67,6	66,6	75,4

CQS: 69,4



COLOR PARAMETERS

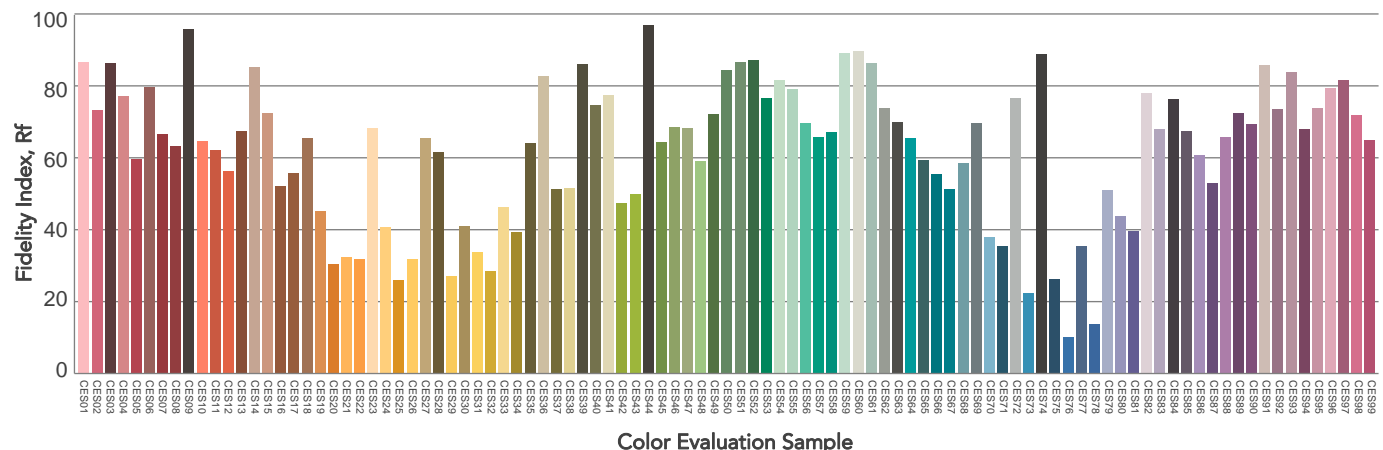
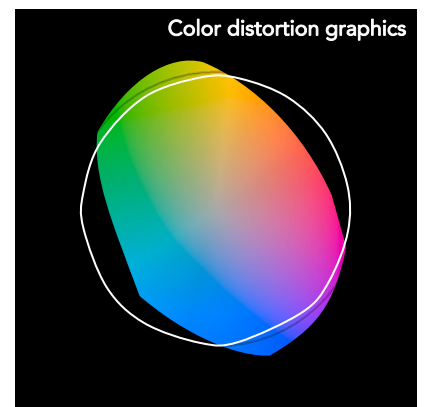
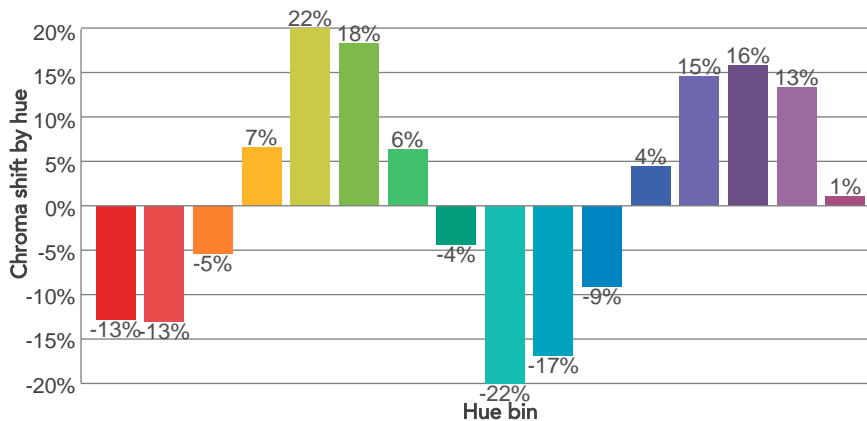
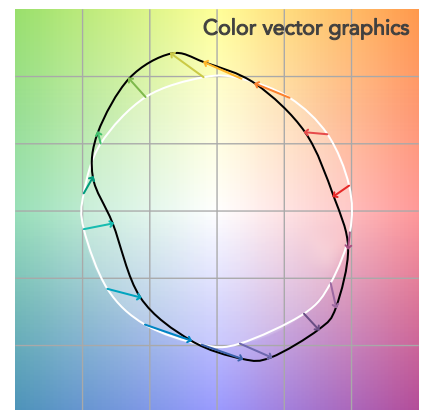
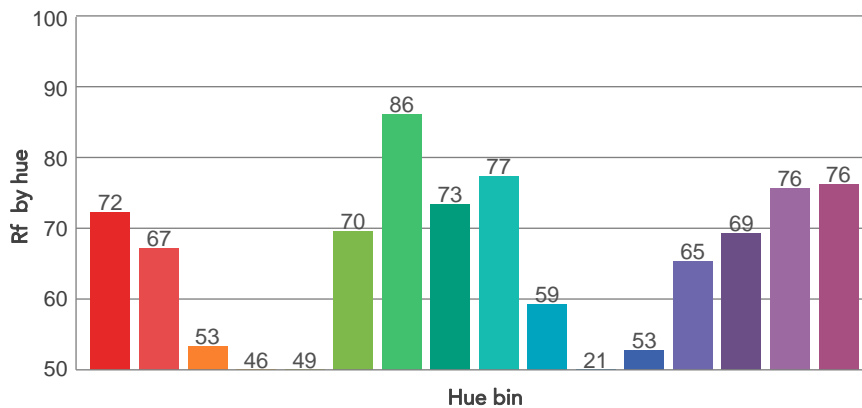
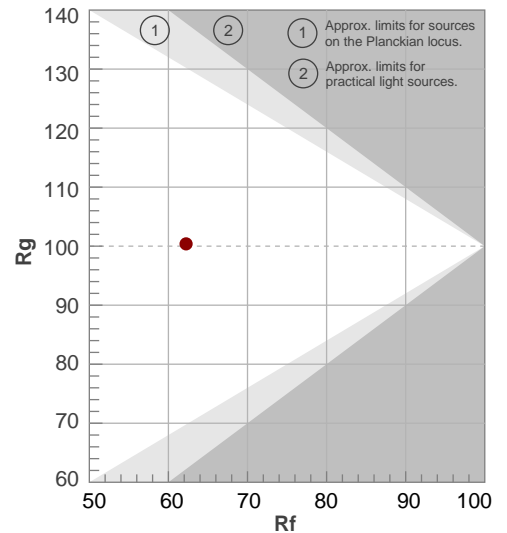
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
8210 K	70,5	7,7	62,2	100,4	69,4	48	0,297	0,292	-0,0110

TM30 DETAILS

Rf 62,2
Fidelity index Rf

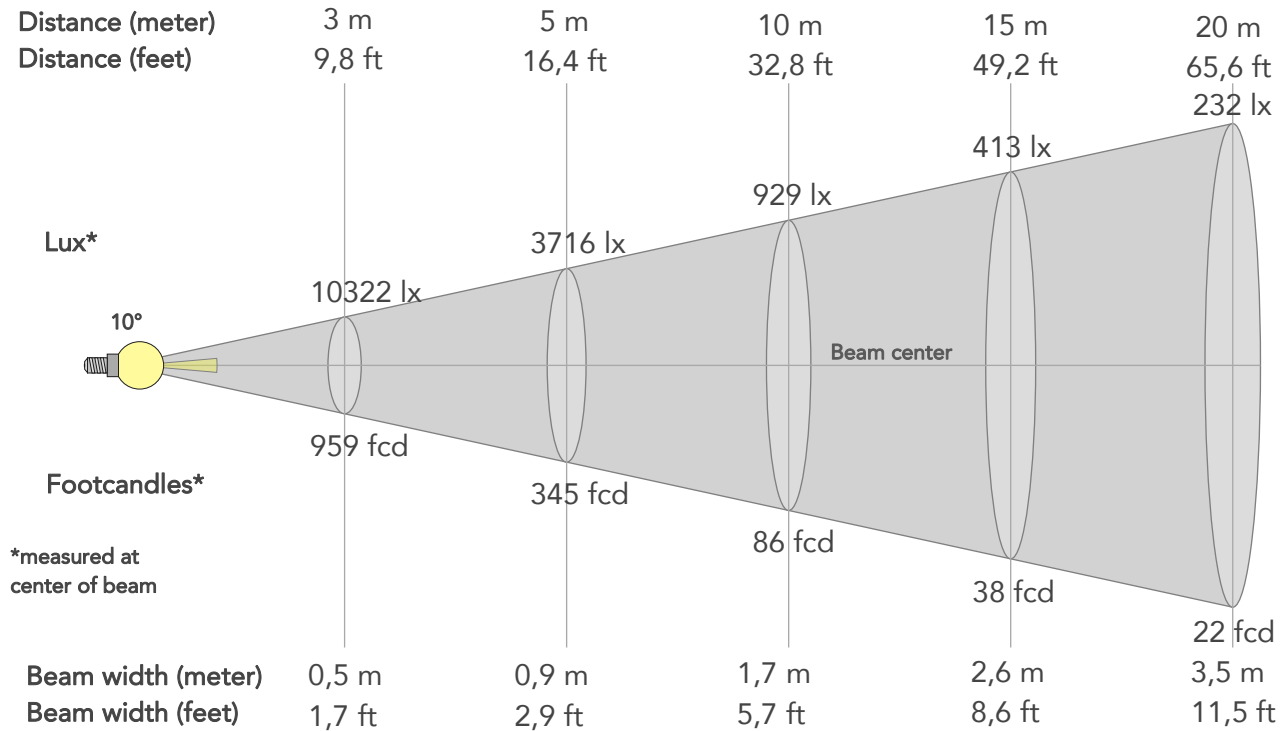
Rg 100,4
Gammut index

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	72	-13%	-6%
2	67	-13%	11%
3	53	-5%	27%
4	46	7%	29%
5	49	22%	20%
6	70	18%	3%
7	86	6%	-6%
8	73	-4%	-13%
9	77	-22%	0%
10	59	-17%	19%
11	21	-9%	35%
12	53	4%	31%
13	65	15%	21%
14	69	16%	3%
15	76	13%	-13%
16	76	1%	-12%



BEAM DETAILS

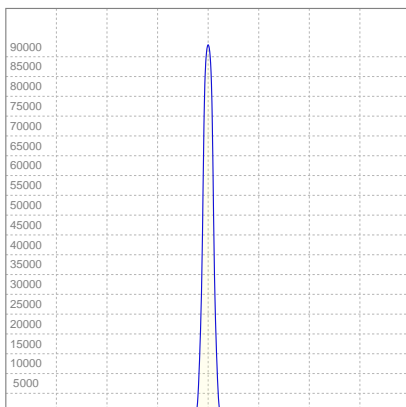
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
10°	16,5°	19,1°	100,0%	100,0%



BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	92901lx	23225lx	10322lx	5806lx	3716lx	1652lx	929lx	413lx	232lx	149lx	103lx	58lx	37lx
Footcand.	8631fcd	2158fcd	959fcd	539fcd	345fcd	153fcd	86fcd	38fcd	22fcd	14fcd	10fcd	5fcd	3fcd
Beam wid.	0,2m	0,3m	0,5m	0,7m	0,9m	1,3m	1,7m	2,6m	3,5m	4,4m	5,2m	7m	8,7m
Beam wid.	0,6ft	1,2ft	1,7ft	2,3ft	2,9ft	4,3ft	5,7ft	8,6ft	11,5ft	14,3ft	17,2ft	22,9ft	28,6ft

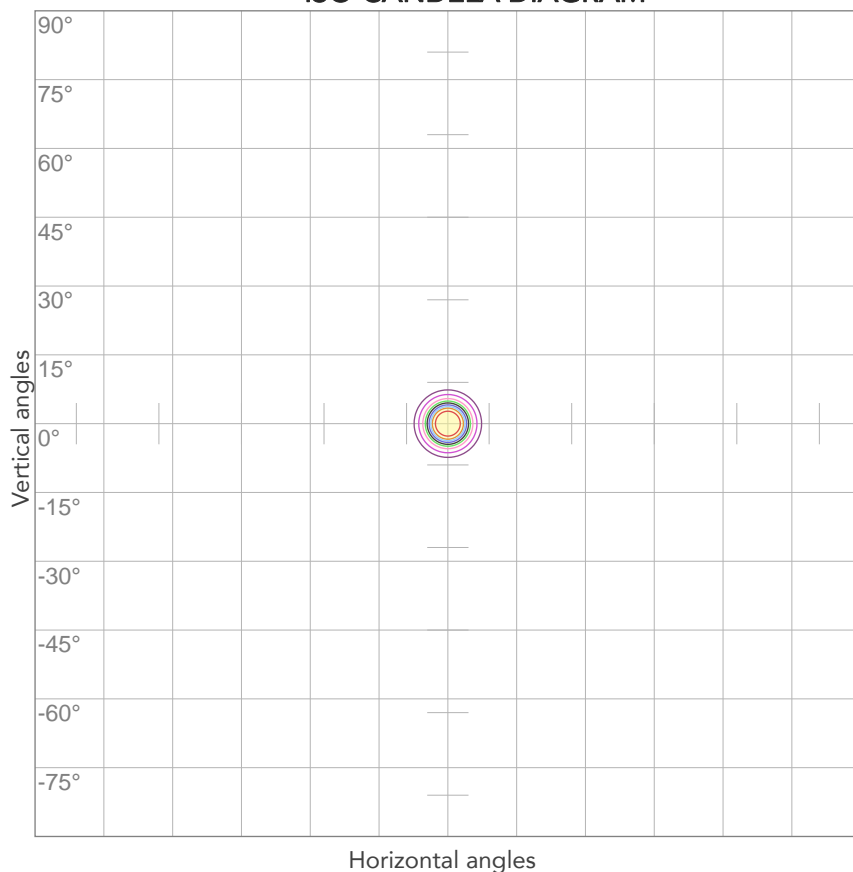
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
224V	0,710A	143,3W	20lm/W

ISO CANDELA DIAGRAM



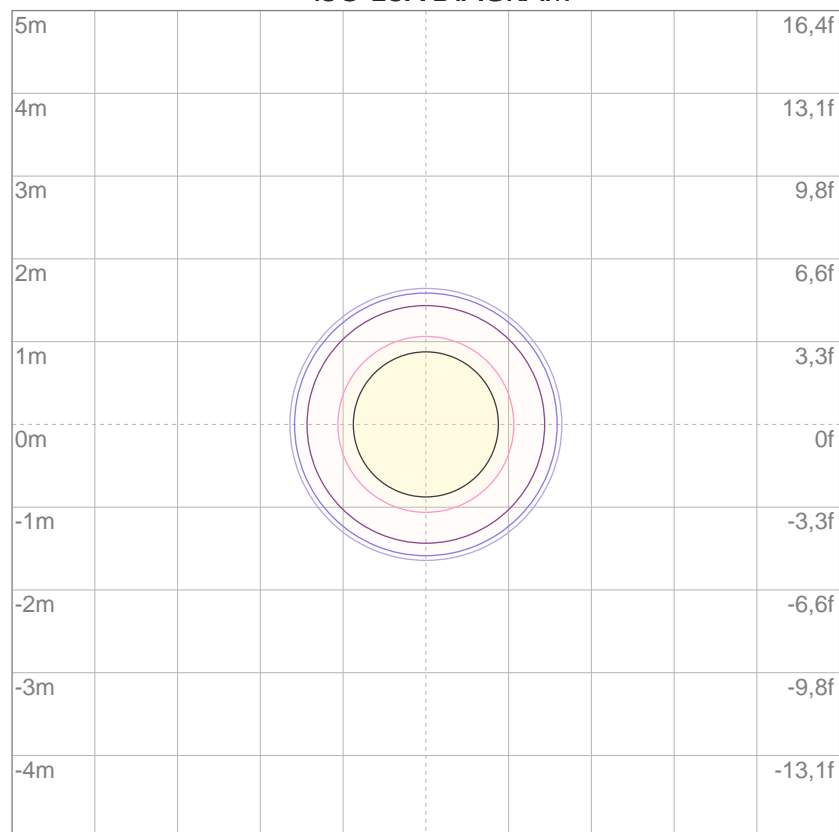
10%	9290 cd
20%	18580 cd
30%	27870 cd
40%	37160 cd
50%	46450 cd
60%	55740 cd
70%	65030 cd
80%	74321 cd

Conditions:

Number of c-planes: 2

Candela at center: 92901 cd

ISO LUX DIAGRAM



3%	27,9 lx
5%	46,5 lx
10%	92,9 lx
30%	279 lx
50%	465 lx

Conditions:

Number of c-planes: 2

Lux at center: 929 lx

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



Total lumen output:

2061 lm

Peak candela output:

98006 cd

Light quality:

CRI: 70,6

Color temperature:

7975 K

PRODUCT NAME:

Diamond 19TW

MEASURAMENT CONDITIONS:

Beam angle:

Min Zoom

Target:

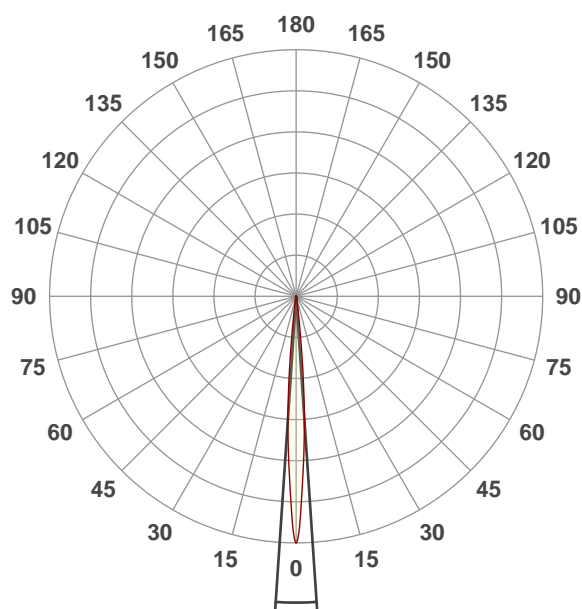
Cold White

Operator:

Paolo Carvone

Date and time:

26/10/2020 13:06:41

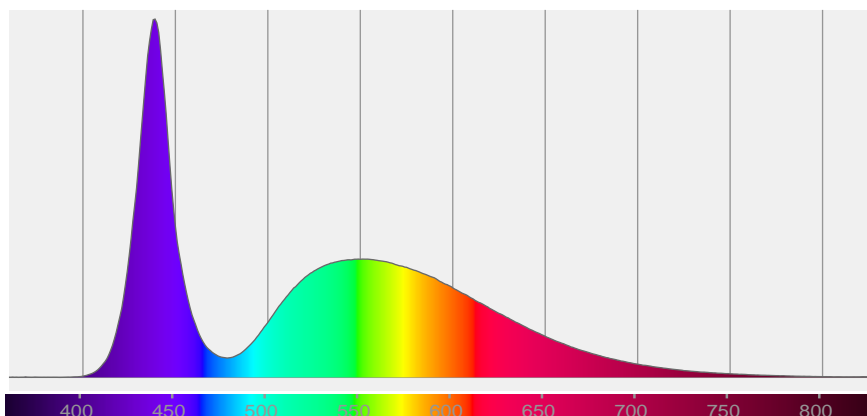


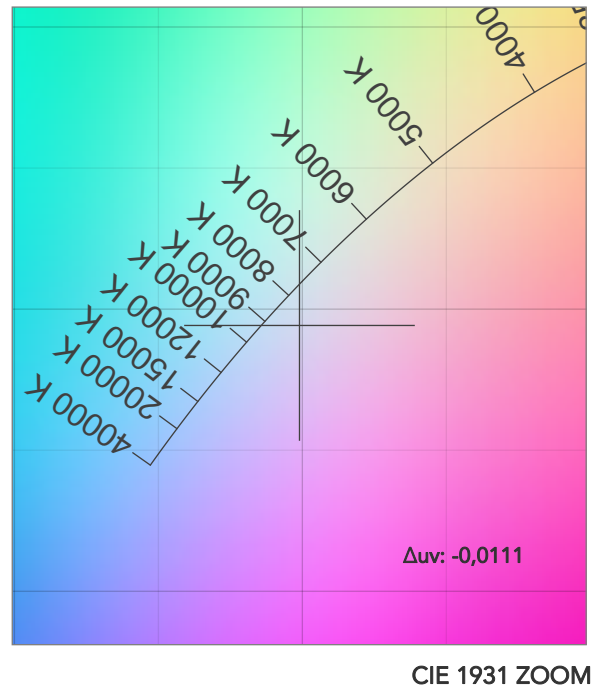
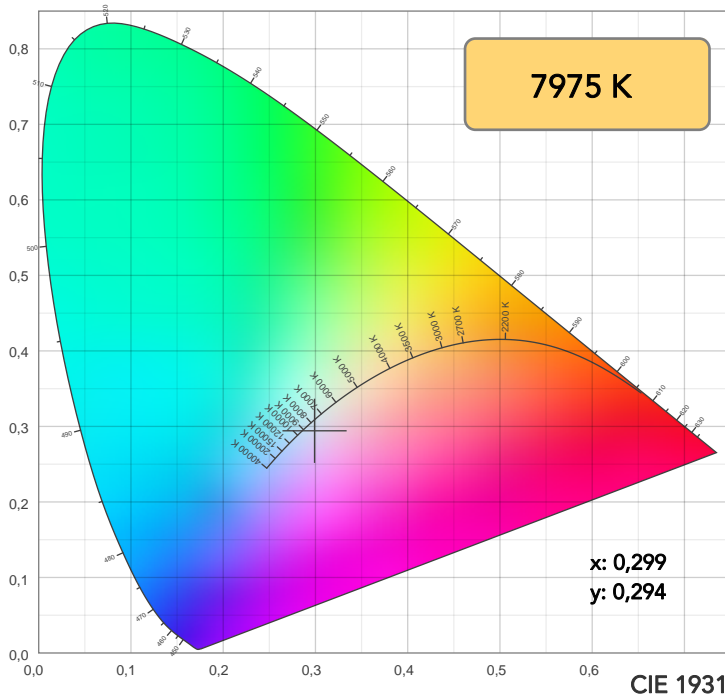
Beam angle 50%: 7,7°

Field angle 10%: 14°

Cut off angle 2.5%: 19°

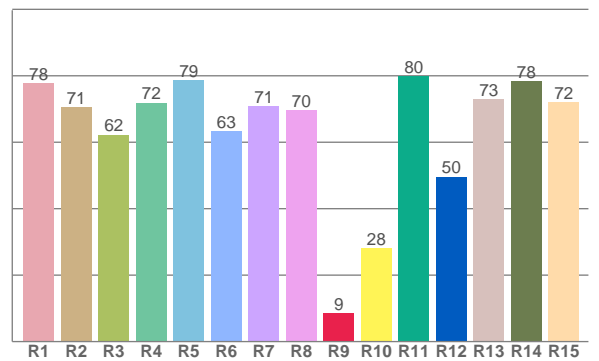
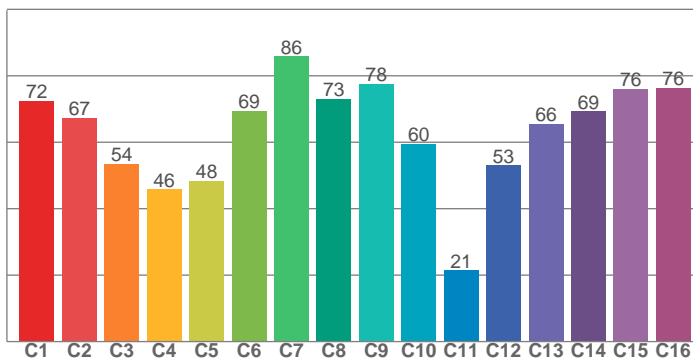
Spectra





TM30: 62,4

CRI: 70,6 (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
77,8	70,6	62,3	71,9	78,8	63,3	70,8	69,6	8,6	28,0	79,9	49,7	72,9	78,3	72,1

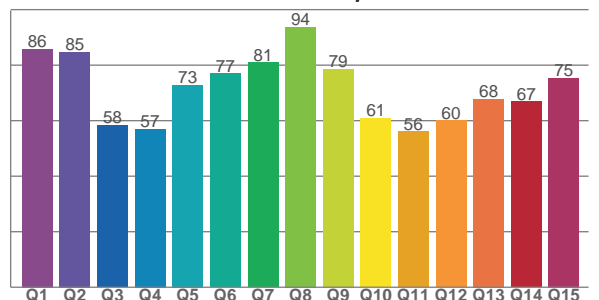
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
72,5	67,4	53,5	45,8	48,4	69,4	85,8	73,1	77,5	59,6	21,5	53,0	65,6	69,3	76,0	76,3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
85,8	84,7	58,3	57,0	72,8	77,0	80,9	93,8	78,7	60,8	56,0	60,0	67,8	66,8	75,4

CQS: 69,5



COLOR PARAMETERS

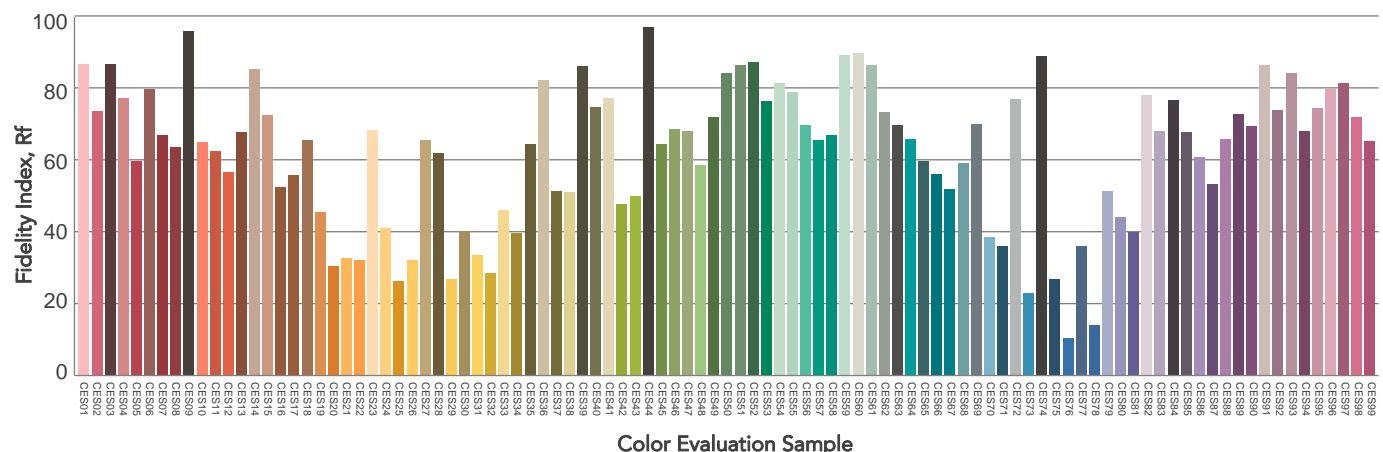
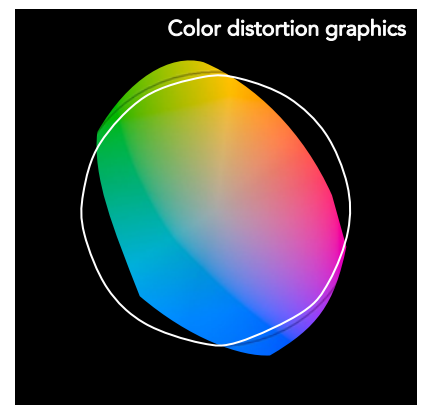
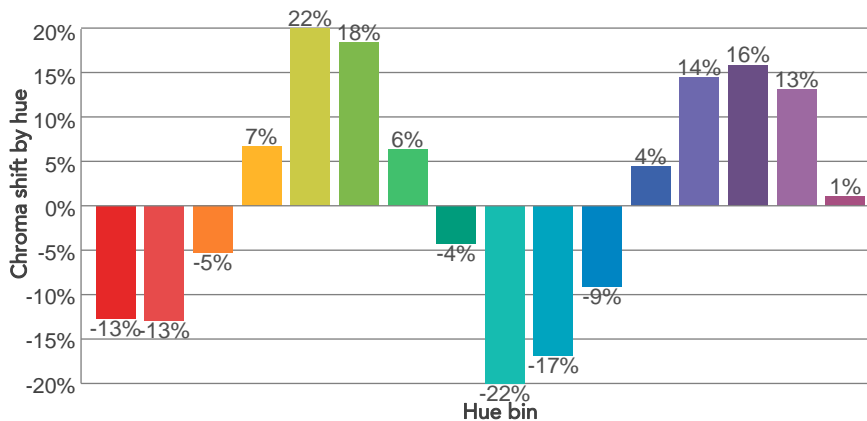
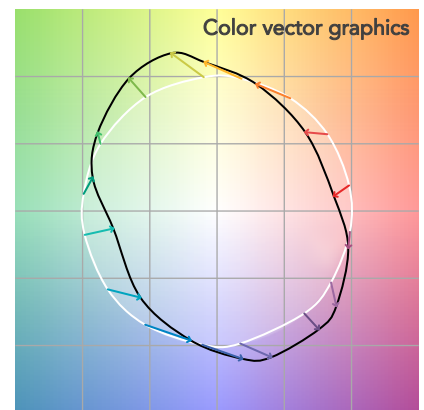
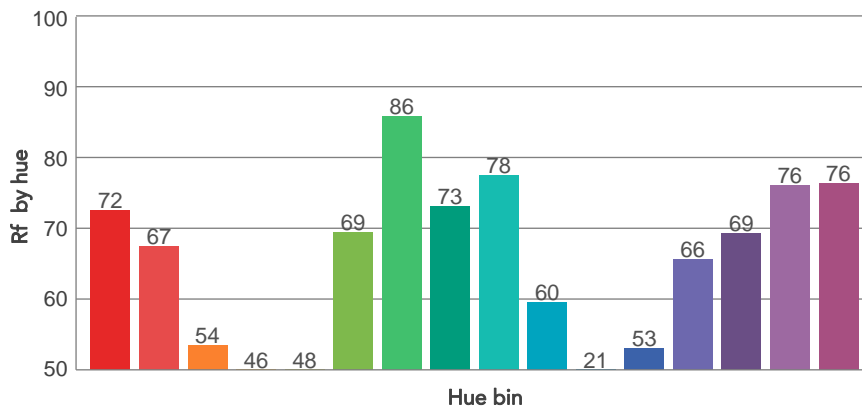
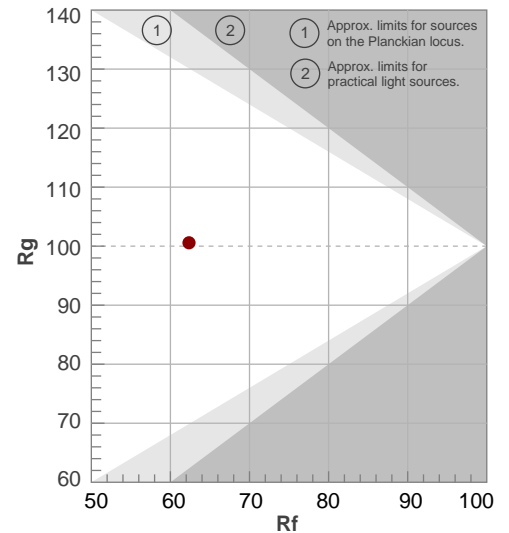
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
7975 K	70,6	8,6	62,4	100,6	69,5	48	0,299	0,294	-0,0111

TM30 DETAILS

Rf 62,4
Fidelity index Rf

Rg 100,6
Gammut index

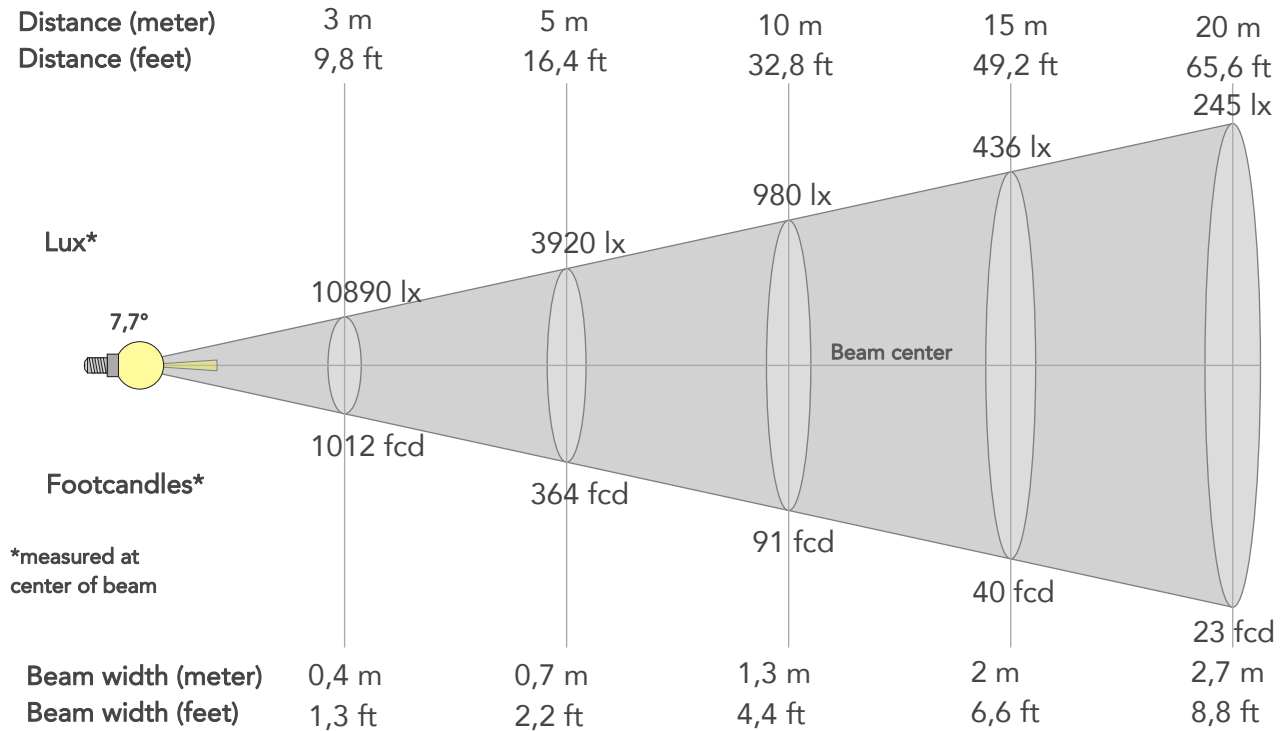
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	72	-13%	-6%
2	67	-13%	10%
3	54	-5%	27%
4	46	7%	29%
5	48	22%	20%
6	69	18%	3%
7	86	6%	-6%
8	73	-4%	-13%
9	78	-22%	0%
10	60	-17%	19%
11	21	-9%	34%
12	53	4%	31%
13	66	14%	21%
14	69	16%	2%
15	76	13%	-12%
16	76	1%	-12%



BEAM DETAILS



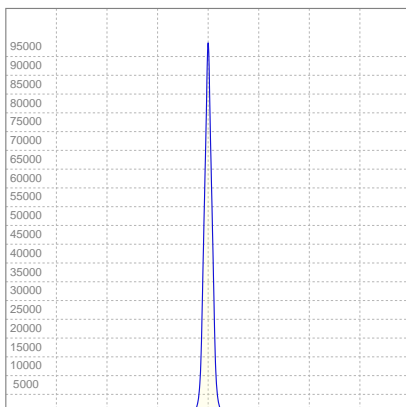
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
7,7°	14°	19°	100,0%	99,9%



BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	9800lx	2450lx	10890lx	6125lx	3920lx	1742lx	980lx	436lx	245lx	157lx	109lx	61lx	39lx
Footcand.	9105fcd	2276fcd	1012fcd	569fcd	364fcd	162fcd	91fcd	40fcd	23fcd	15fcd	10fcd	6fcd	4fcd
Beam wid.	0,1m	0,3m	0,4m	0,5m	0,7m	1m	1,3m	2m	2,7m	3,3m	4m	5,4m	6,7m
Beam wid.	0,4ft	0,9ft	1,3ft	1,8ft	2,2ft	3,3ft	4,4ft	6,6ft	8,8ft	11ft	13,2ft	17,6ft	21,9ft

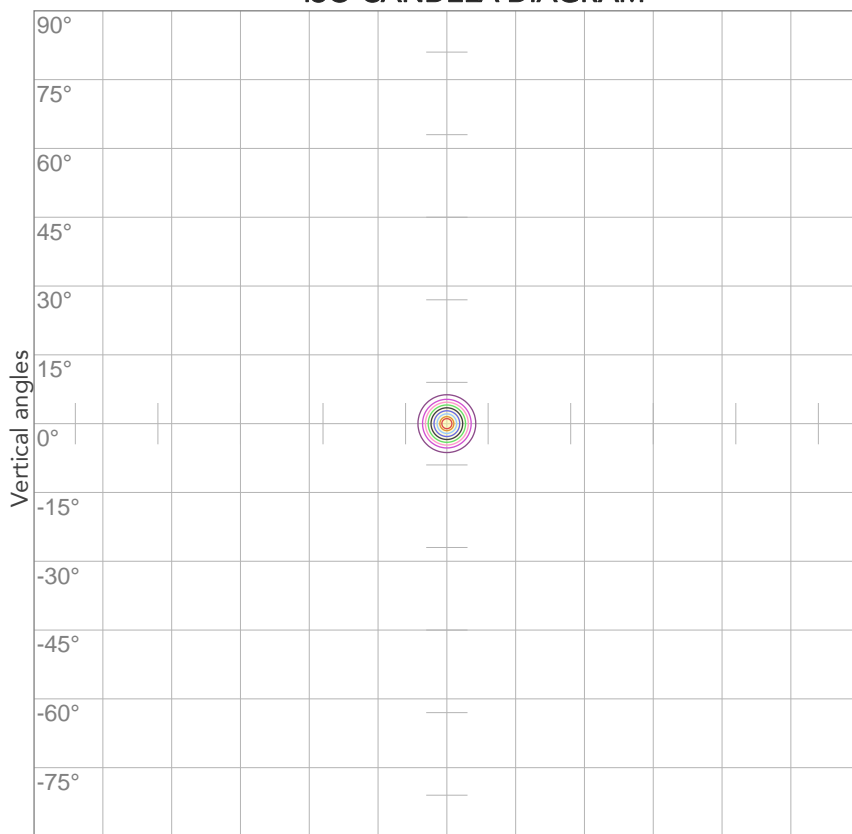
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,709A	143,8W	14lm/W

ISO CANDELA DIAGRAM



Horizontal angles

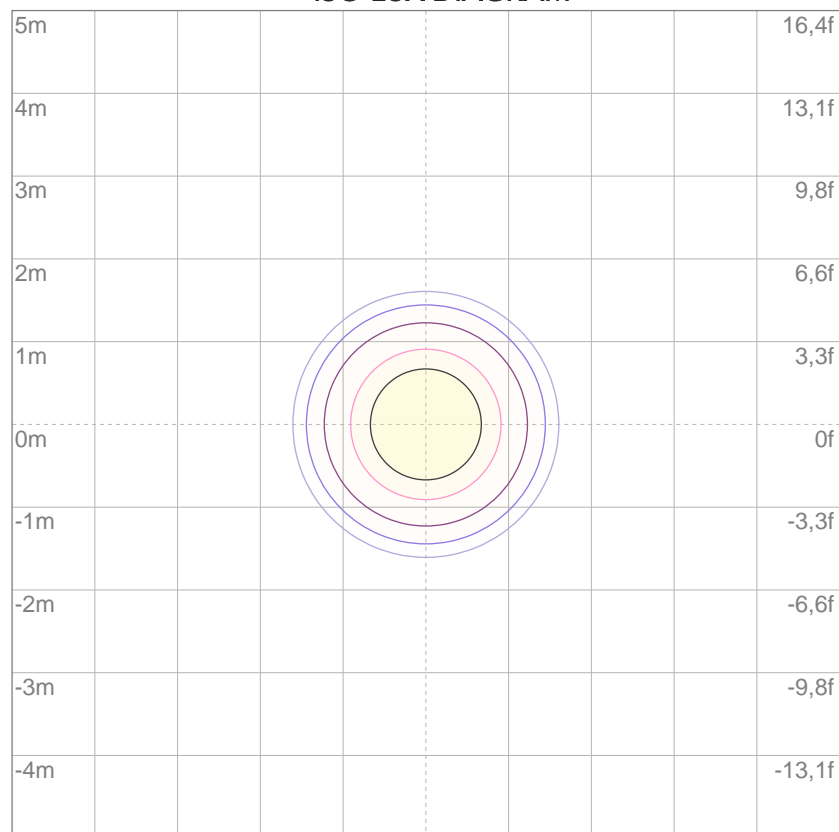
10%	9801 cd
20%	19601 cd
30%	29402 cd
40%	39202 cd
50%	49003 cd
60%	58803 cd
70%	68604 cd
80%	78404 cd

Conditions:

Number of c-planes: 2

Candela at center: 98006 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	29,4 lx
5%	49,0 lx
10%	98,0 lx
30%	294 lx
50%	490 lx

Conditions:

Number of c-planes: 2

Lux at center: 980 lx

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



Total lumen output:

1819 lm

Peak candela output:

10456 cd

Light quality:

CRI: 97,0

Color temperature:

2636 K

PRODUCT NAME:

Diamond 19TW

MEASURAMENT CONDITIONS:

Beam angle:

Max Zoom

Target:

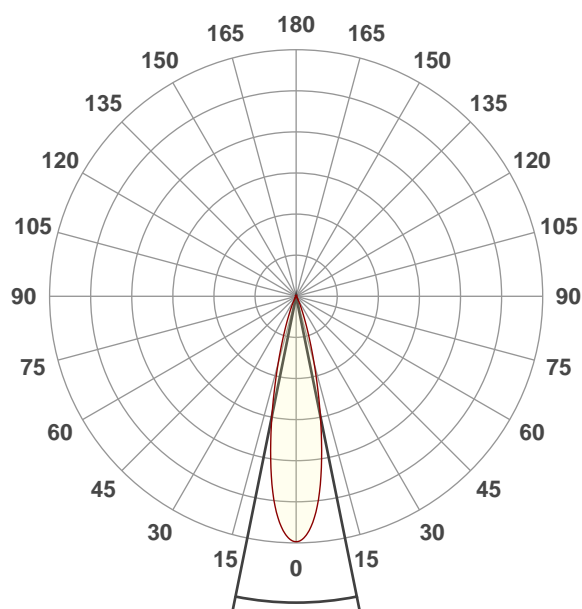
Warm White

Operator:

Paolo Carvone

Date and time:

26/10/2020 13:10:01

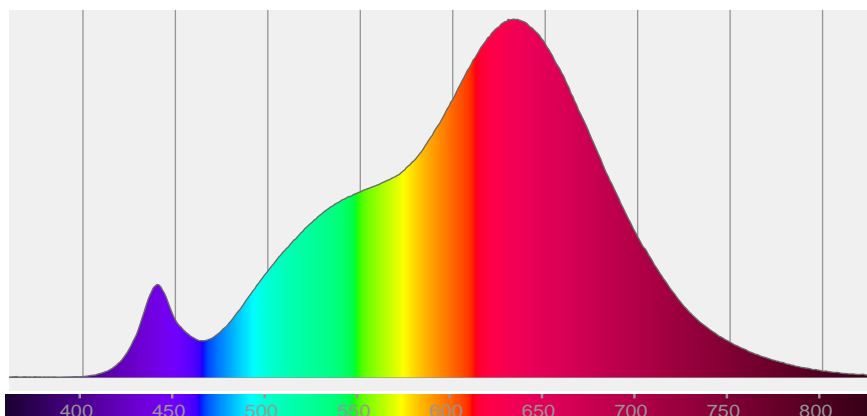


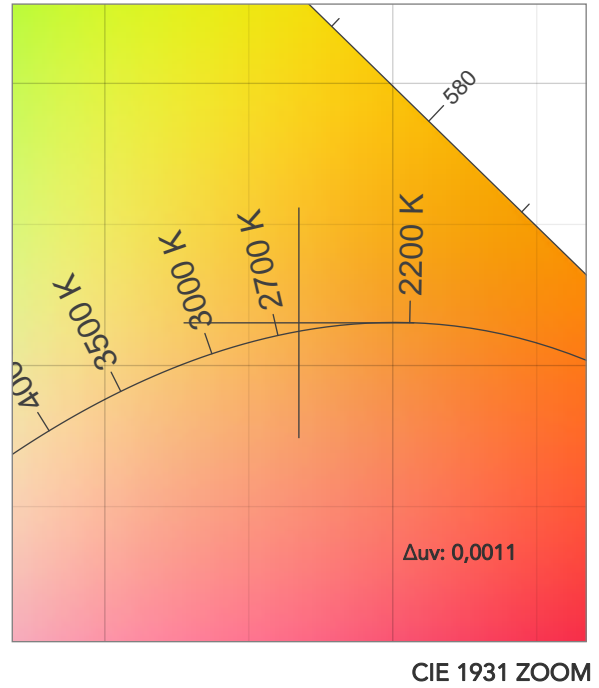
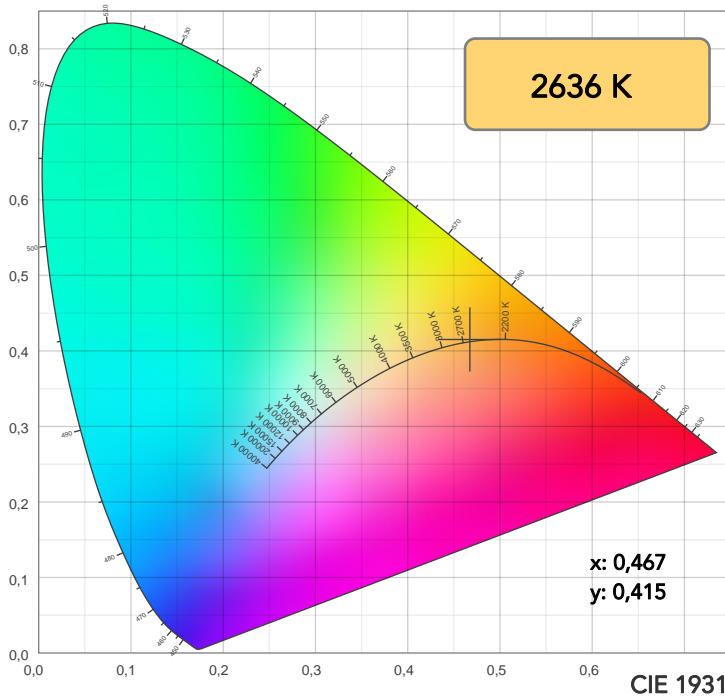
Beam angle 50%: 22,8°

Field angle 10%: 40,5°

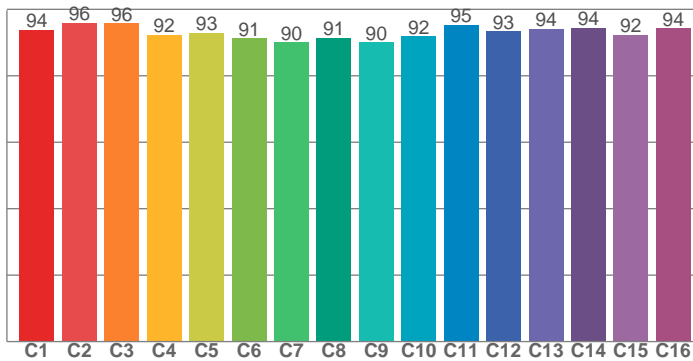
Cut off angle 2.5%: 53,6°

Spectra

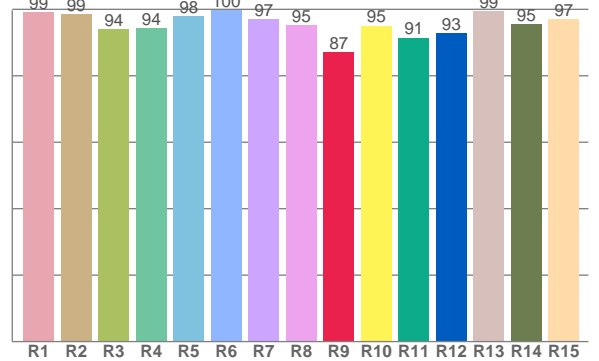




TM30: 93,2



CRI: 97,0 (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
99,0	98,5	94,0	94,3	97,9	99,7	97,0	95,3	87,0	95,1	91,5	92,8	99,5	95,4	97,0

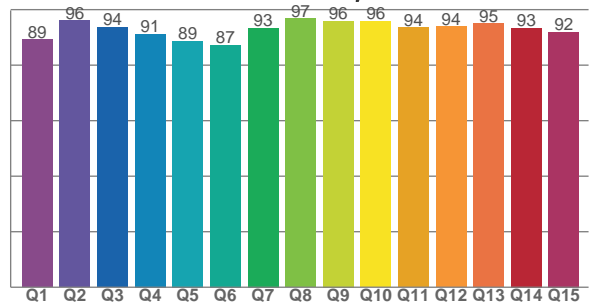
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
93,9	96,0	95,7	92,4	92,9	91,2	90,0	91,5	90,1	91,8	95,3	93,4	94,2	94,5	92,4	94,3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89,2	96,1	93,6	91,2	88,6	87,3	93,4	96,7	95,9	95,8	93,5	93,9	95,0	93,4	91,9

CQS: 92,2

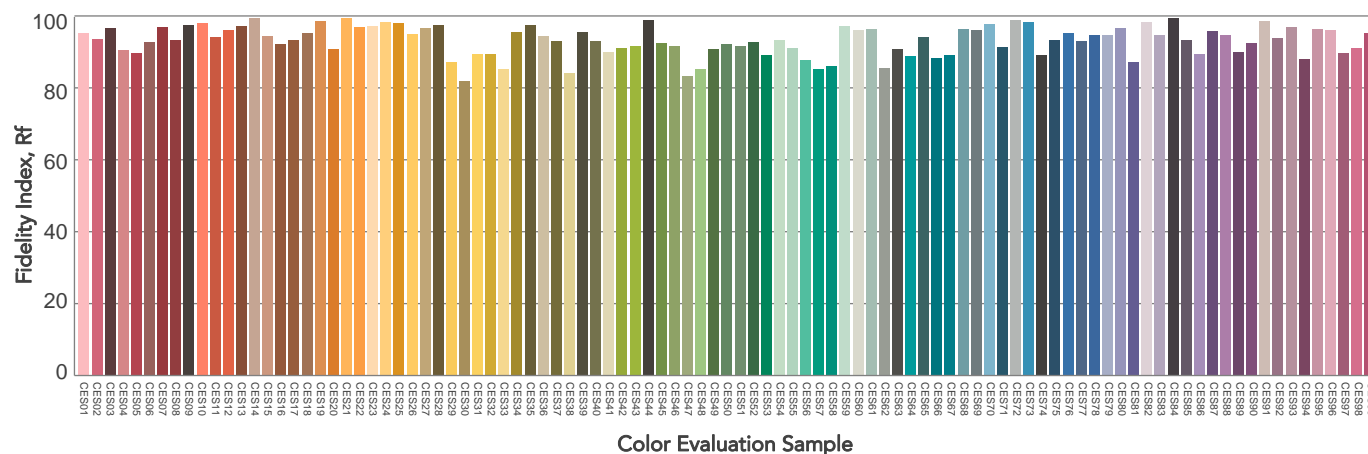
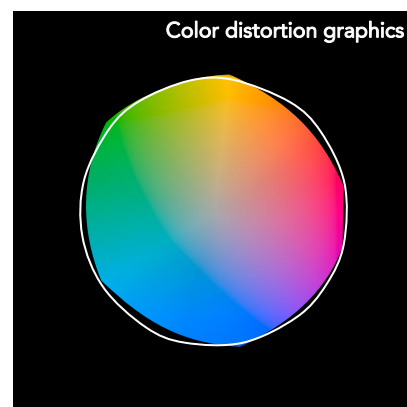
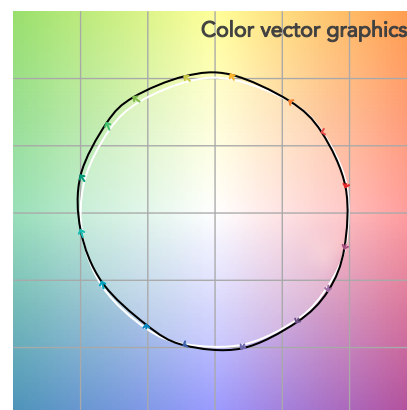
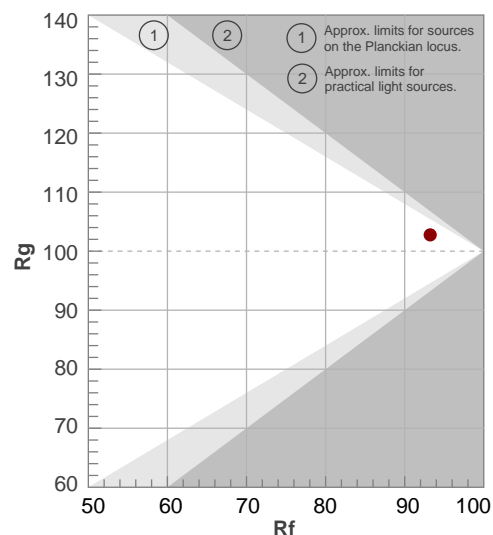


COLOR PARAMETERS

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
2636 K	97,0	87,0	93,2	102,8	92,2	94	0,467	0,415	0,0011

Gammut index

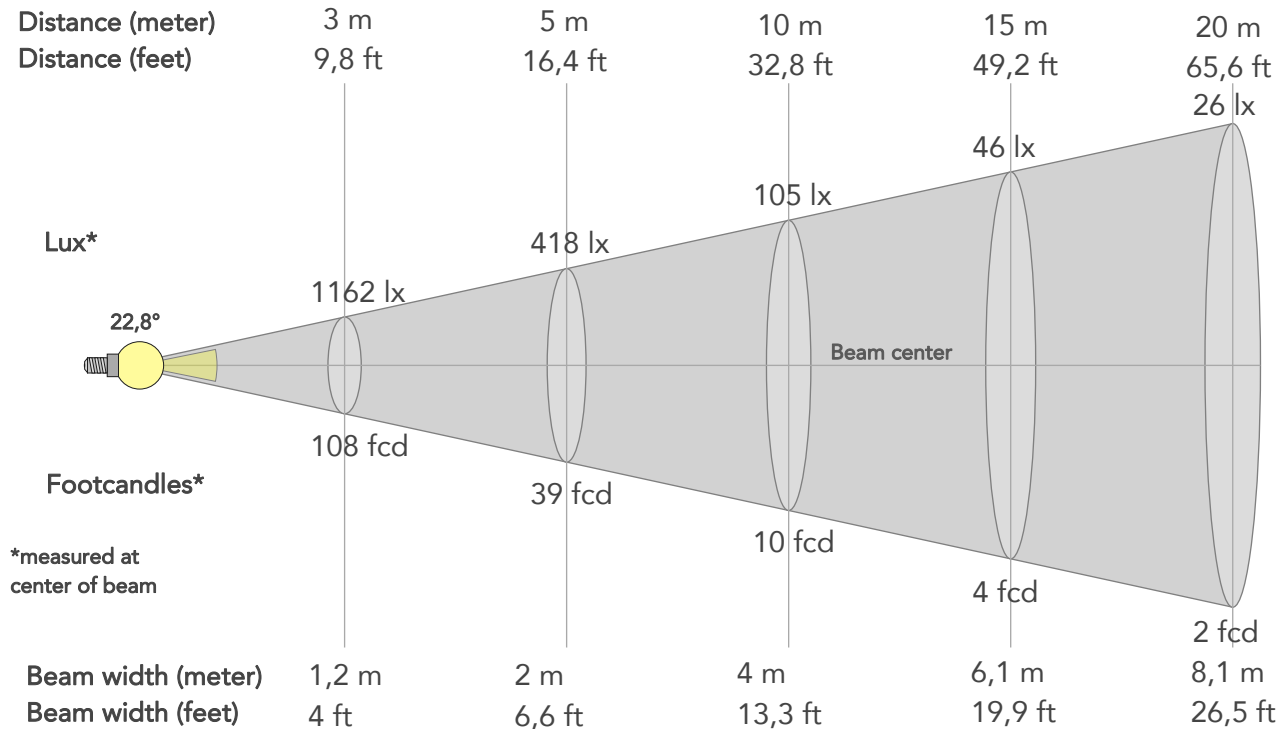
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	94	-1%	-2%
2	96	-1%	0%
3	96	0%	2%
4	92	3%	3%
5	93	4%	3%
6	91	5%	2%
7	90	5%	-3%
8	91	4%	-4%
9	90	1%	-5%
10	92	-2%	-5%
11	95	-2%	-2%
12	93	1%	-1%
13	94	3%	-3%
14	94	2%	-3%
15	92	2%	-4%
16	94	-1%	-3%



BEAM DETAILS



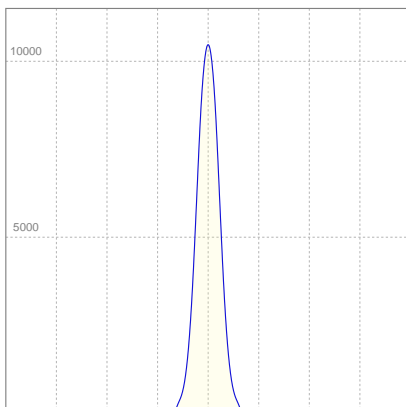
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
22,8°	40,5°	53,6°	100,0%	99,9%



BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	10456lx	2614lx	1162lx	653lx	418lx	186lx	105lx	46lx	26lx	17lx	12lx	7lx	4lx
Footcand.	971fcd	243fcd	108fcd	61fcd	39fcd	17fcd	10fcd	4fcd	2fcd	2fcd	1fcd	1fcd	0fcd
Beam wid.	0,4m	0,8m	1,2m	1,6m	2m	3m	4m	6,1m	8,1m	10,1m	12,1m	16,2m	20,2m
Beam wid.	1,3ft	2,7ft	4ft	5,3ft	6,6ft	9,9ft	13,3ft	19,9ft	26,5ft	33,1ft	39,8ft	53ft	66,3ft

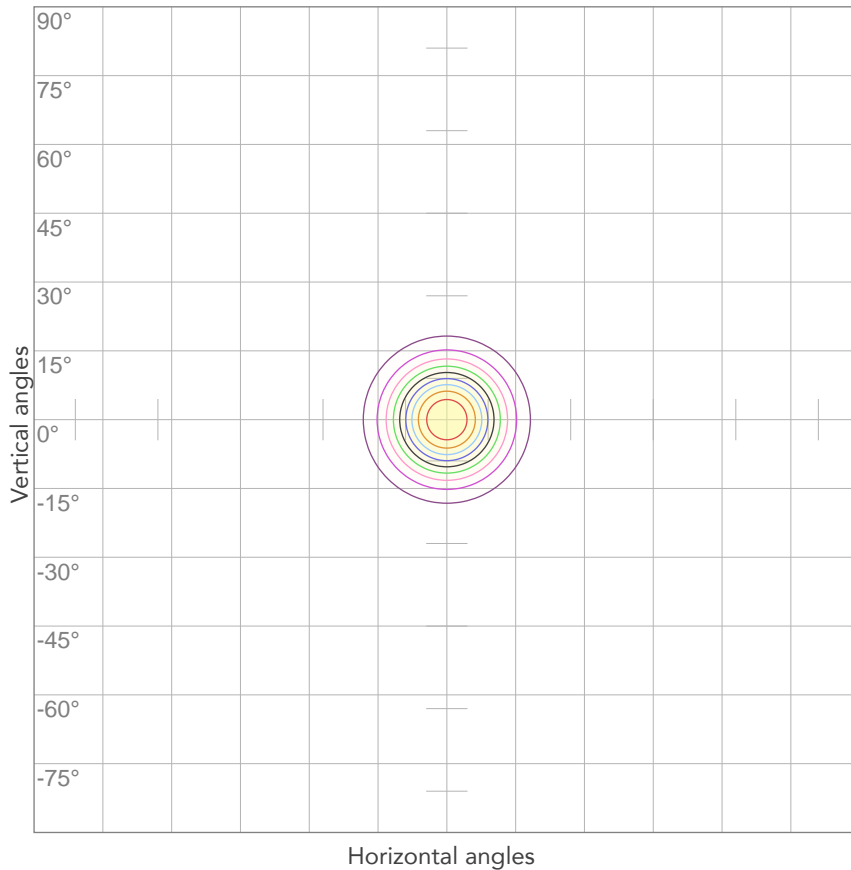
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,713A	144,4W	13lm/W

ISO CANDELA DIAGRAM



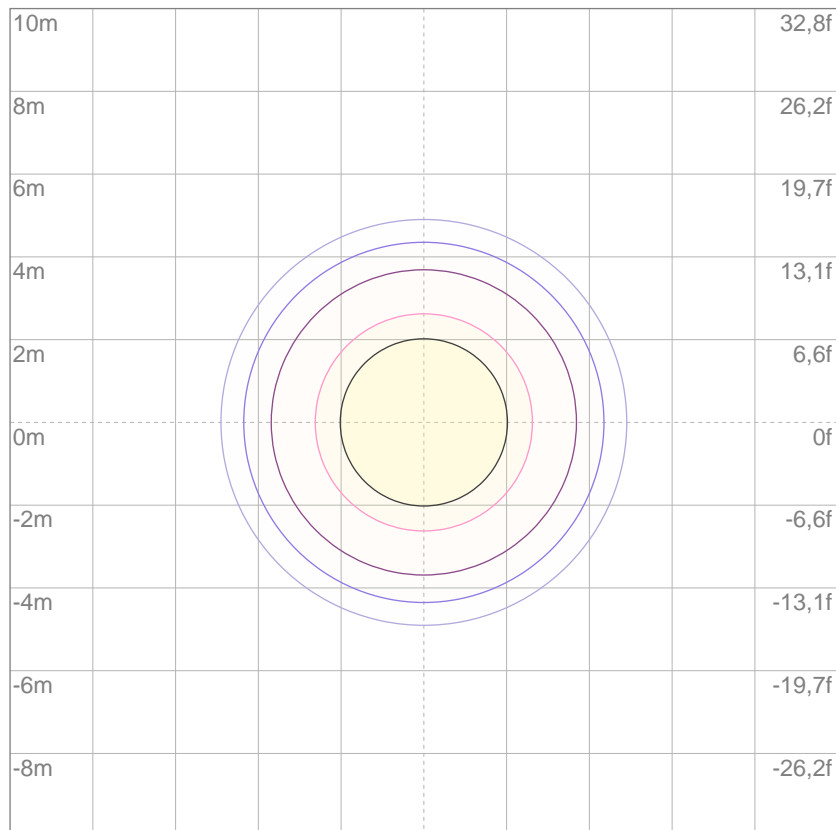
10%	1046 cd
20%	2091 cd
30%	3137 cd
40%	4182 cd
50%	5228 cd
60%	6274 cd
70%	7319 cd
80%	8365 cd

Conditions:

Number of c-planes: 2

Candela at center: 10456 cd

ISO LUX DIAGRAM



3%	3,14 lx
5%	5,23 lx
10%	10,5 lx
30%	31,4 lx
50%	52,3 lx

Conditions:

Number of c-planes: 2

Lux at center: 105 lx

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



Total lumen output:

1624 lm

Peak candela output:

53653 cd

Light quality:

CRI: 97,0

Color temperature:

2638 K

PRODUCT NAME:

Diamond 19TW

MEASURAMENT CONDITIONS:

Beam angle:

Med Zoom

Target:

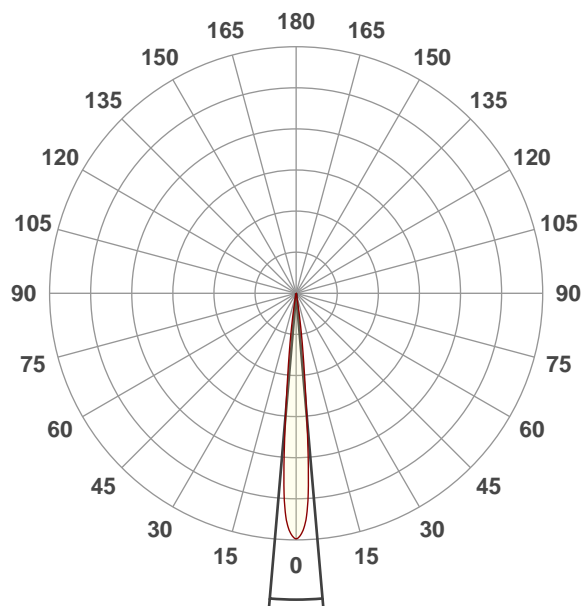
Warm White

Operator:

Paolo Carvone

Date and time:

26/10/2020 13:17:02

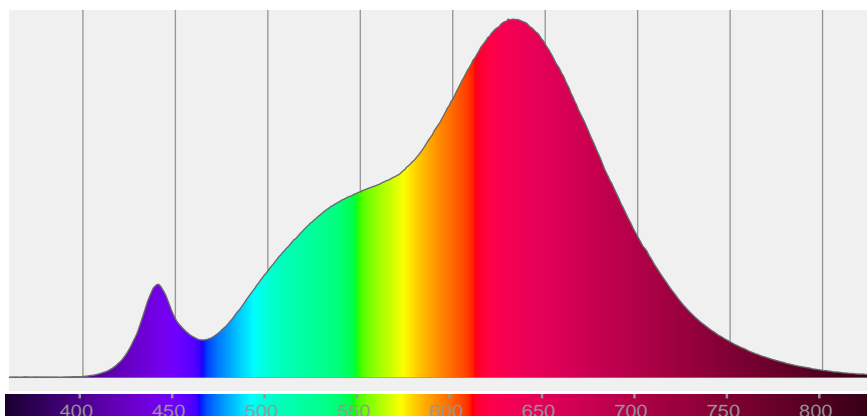


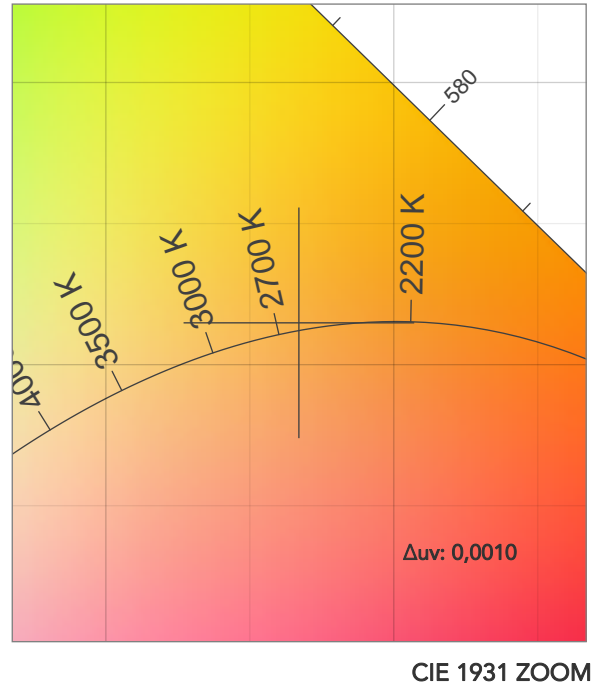
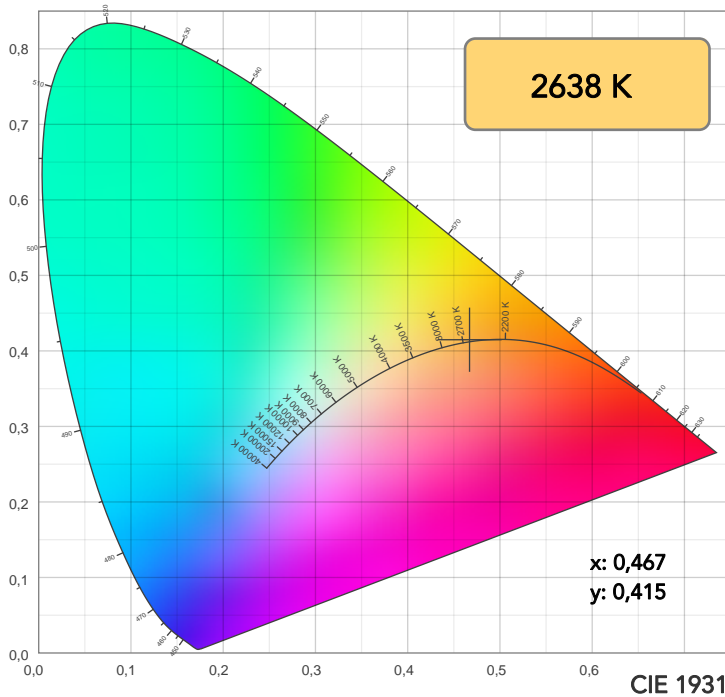
Beam angle 50%: 9,9°

Field angle 10%: 16,5°

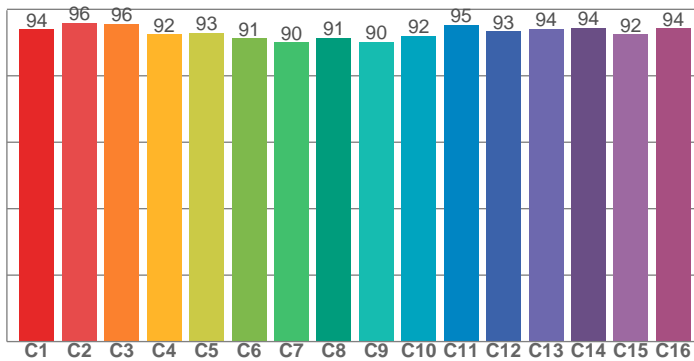
Cut off angle 2.5%: 19,3°

Spectra

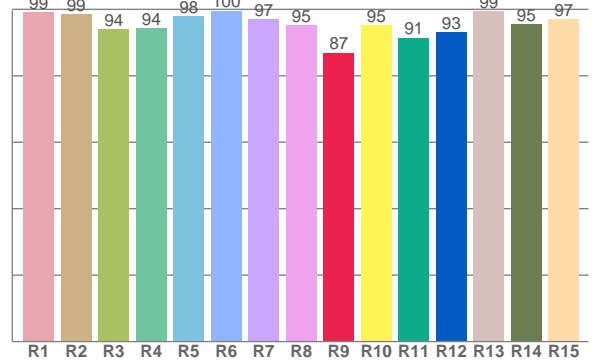




TM30: 93,3



CRI: 97,0 (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
99,0	98,6	94,1	94,3	97,9	99,6	97,0	95,2	87,0	95,2	91,5	93,1	99,4	95,5	97,0

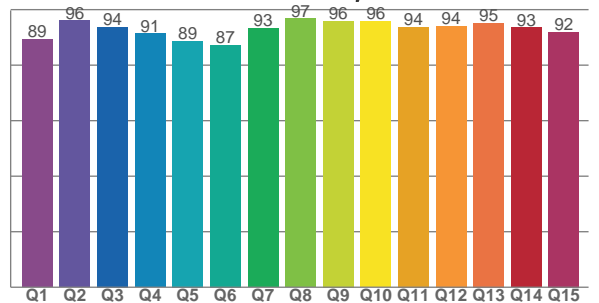
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
93,9	96,0	95,7	92,5	92,9	91,2	90,1	91,5	90,2	92,0	95,4	93,3	94,2	94,4	92,4	94,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89,3	96,1	93,8	91,4	88,8	87,3	93,3	96,8	96,0	95,8	93,8	94,1	95,1	93,5	91,9

CQS: 92,3



COLOR PARAMETERS

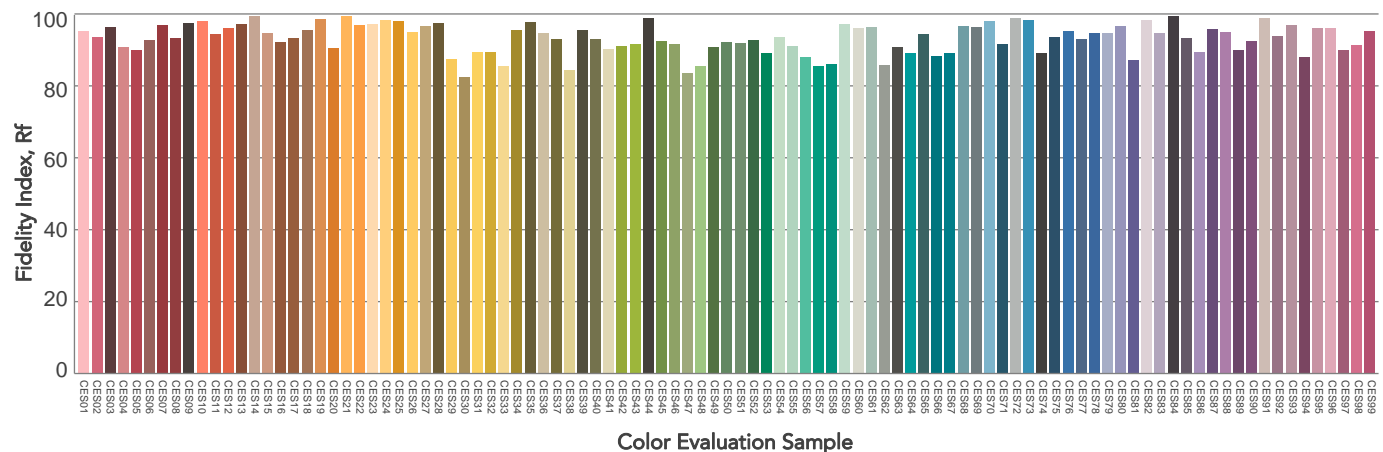
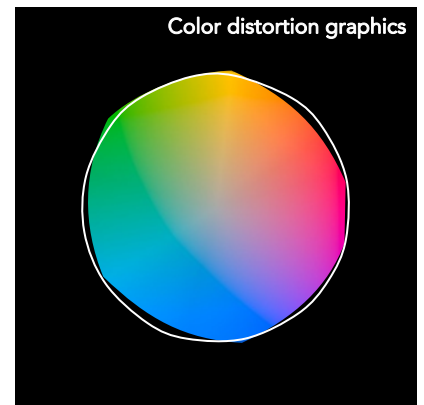
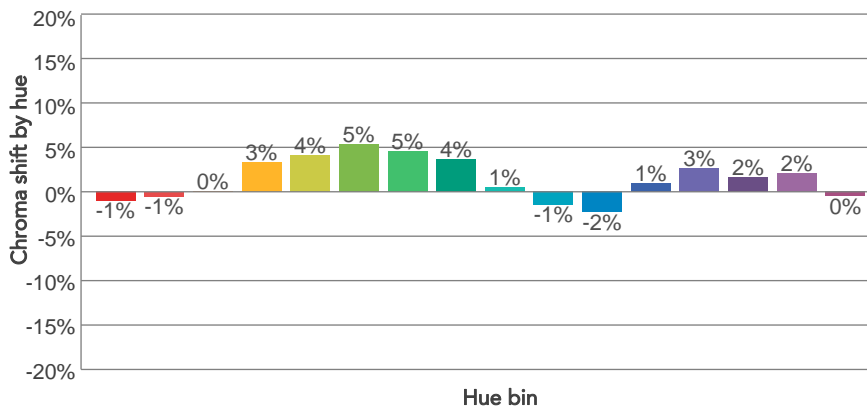
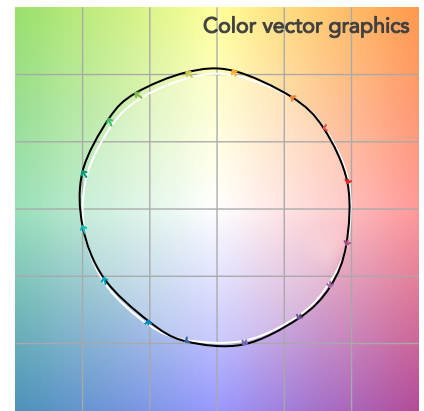
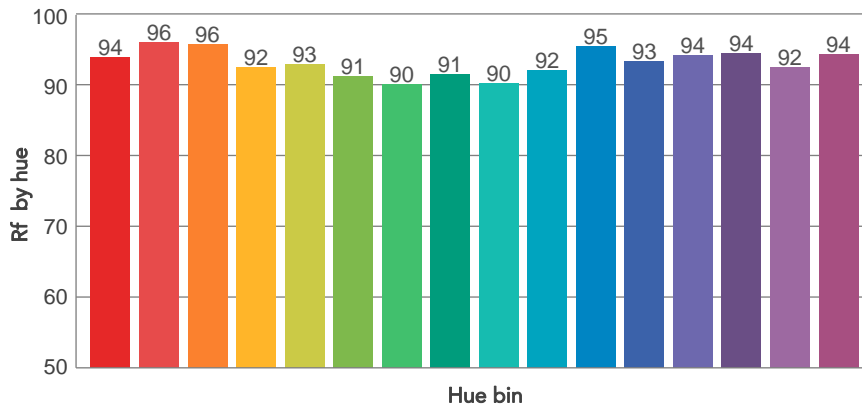
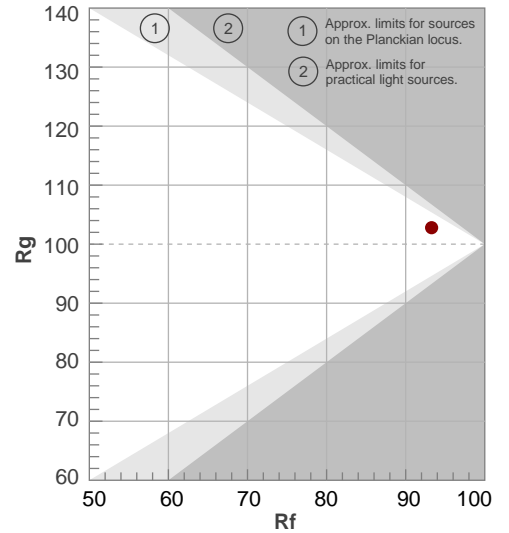
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
2638 K	97,0	87,0	93,3	102,8	92,3	94	0,467	0,415	0,0010

TM30 DETAILS

Rf 93,3
Fidelity index Rf

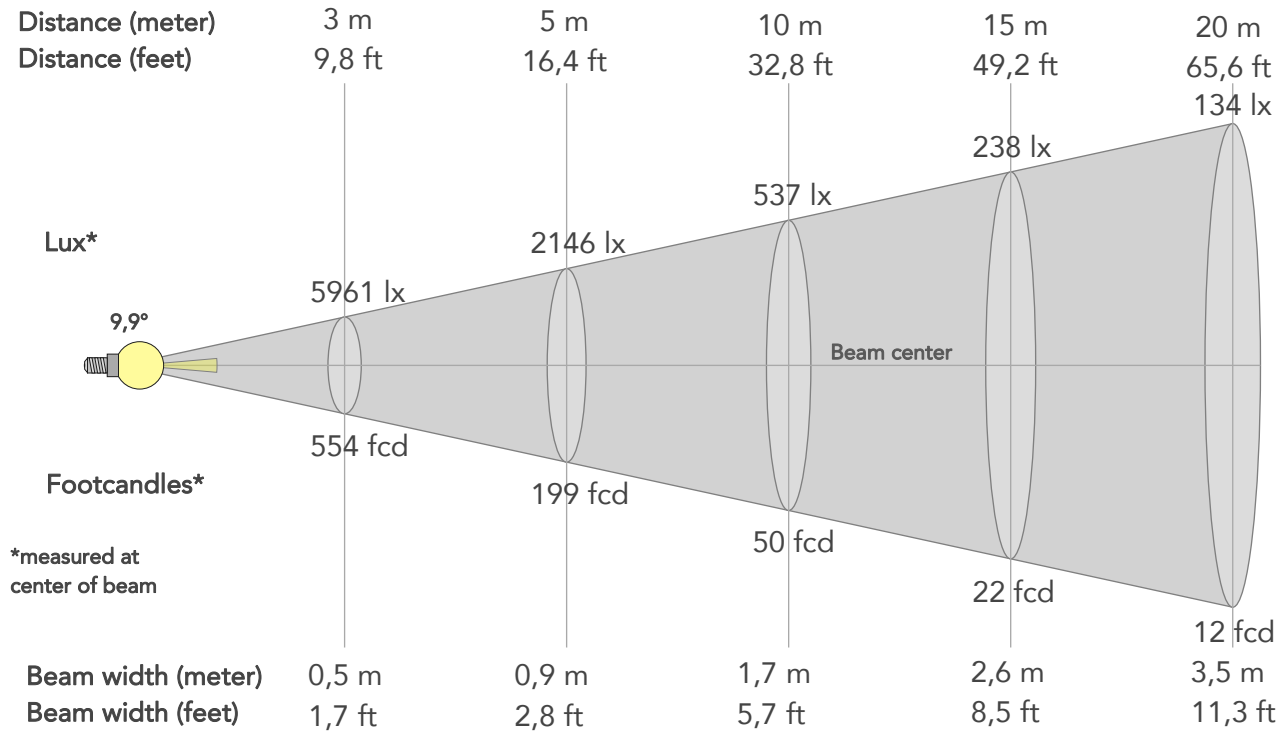
Rg 102,8
Gammut index

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



BEAM DETAILS

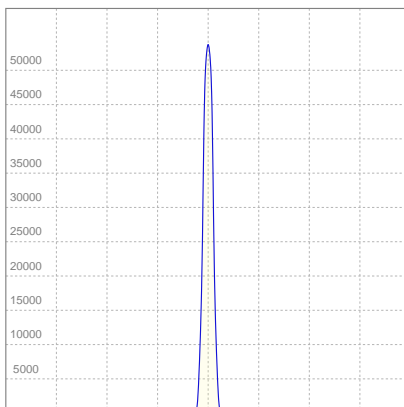
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
9,9°	16,5°	19,3°	100,0%	100,0%



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	53653lx	13413lx	5961lx	3353lx	2146lx	954lx	537lx	238lx	134lx	86lx	60lx	34lx	21lx
Footcand.	4985fcd	1246fcd	554fcd	312fcd	199fcd	89fcd	50fcd	22fcd	12fcd	8fcd	6fcd	3fcd	2fcd
Beam wid.	0,2m	0,3m	0,5m	0,7m	0,9m	1,3m	1,7m	2,6m	3,5m	4,3m	5,2m	6,9m	8,6m
Beam wid.	0,6ft	1,1ft	1,7ft	2,3ft	2,8ft	4,3ft	5,7ft	8,5ft	11,3ft	14,2ft	17ft	22,7ft	28,4ft

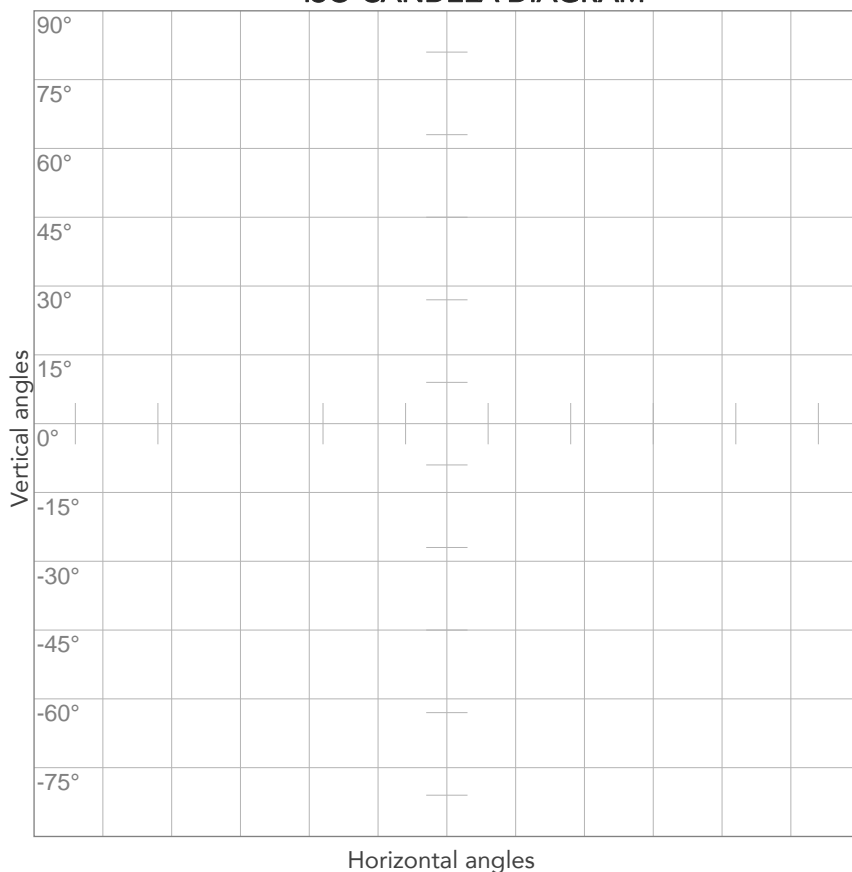
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,712A	144,2W	11lm/W

ISO CANDELA DIAGRAM



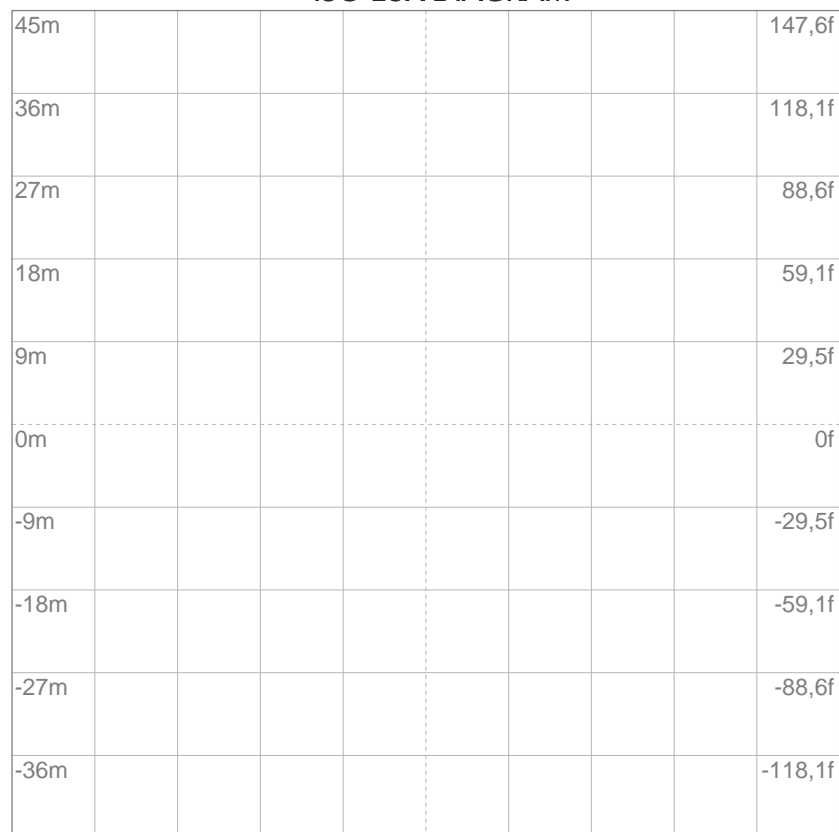
10%	5365 cd
20%	10731 cd
30%	16096 cd
40%	21461 cd
50%	26827 cd
60%	32192 cd
70%	37557 cd
80%	42923 cd

Conditions:

Number of c-planes: 2

Candela at center: 53653 cd

ISO LUX DIAGRAM



3%	16,1 lx
5%	26,8 lx
10%	53,7 lx
30%	161 lx
50%	268 lx

Conditions:

Number of c-planes: 2

Lux at center: 537 lx

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



Total lumen output:

1176 lm

Peak candela output:

55067 cd

Light quality:

CRI: 97,0

Color temperature:

2617 K

PRODUCT NAME:

Diamond 19TW

MEASURAMENT CONDITIONS:

Beam angle:

Min Zoom

Target:

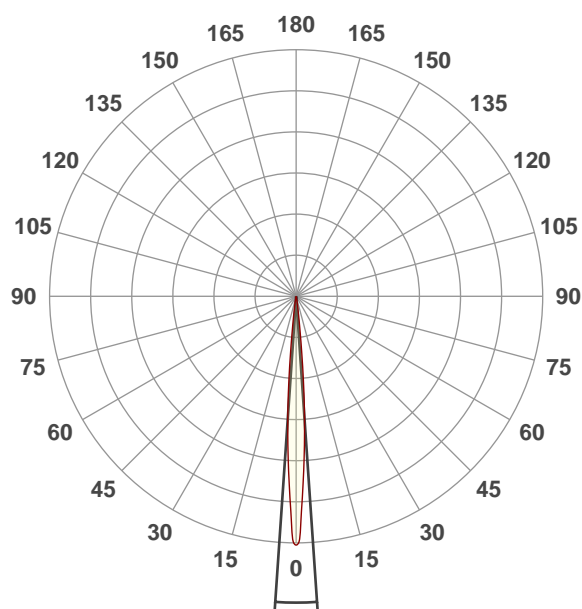
Warm White

Operator:

Paolo Carvone

Date and time:

26/10/2020 13:08:14

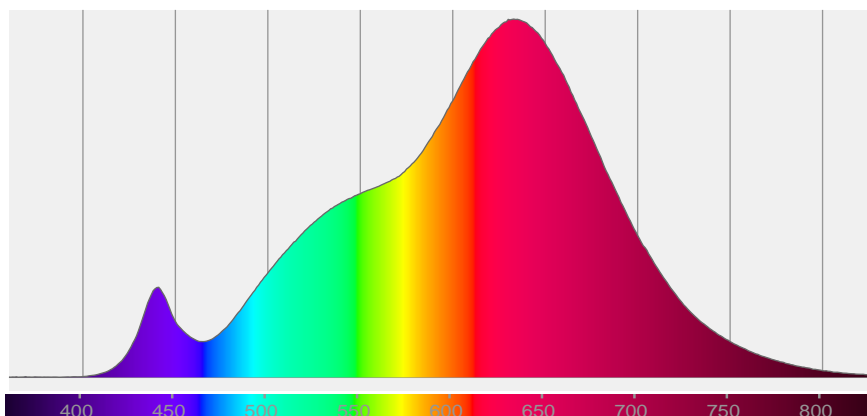


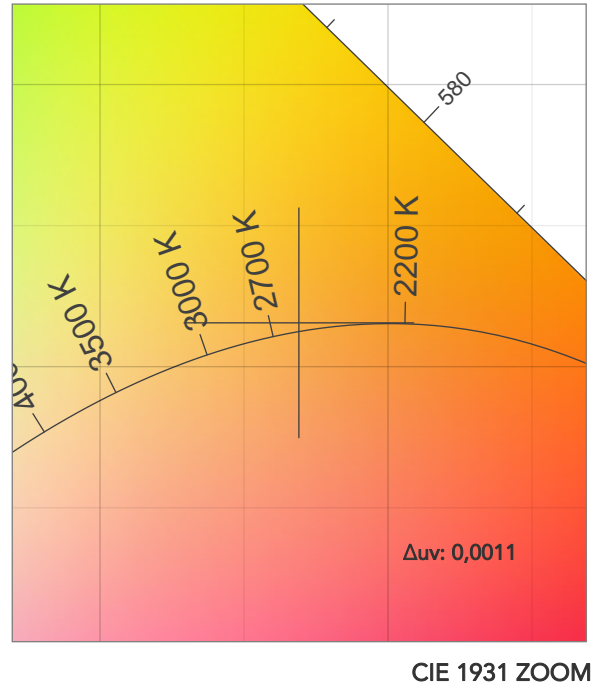
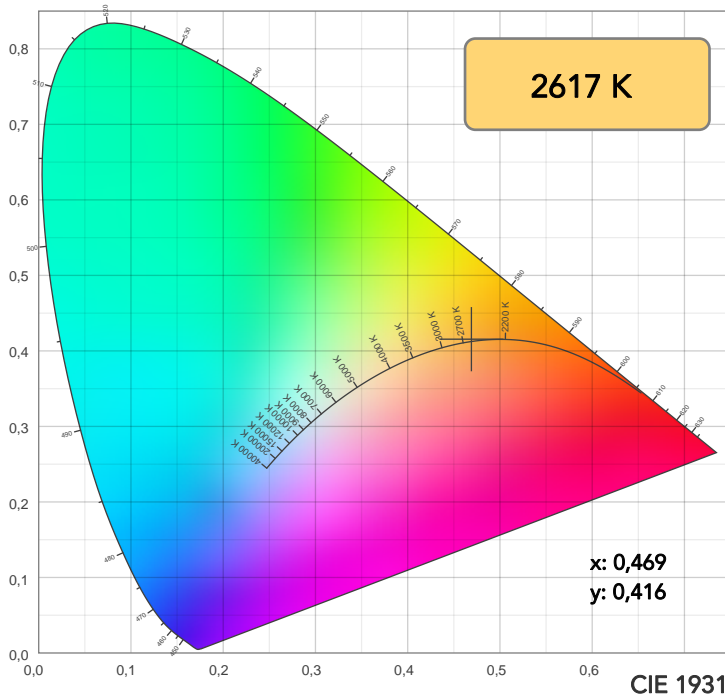
Beam angle 50%: 7,8°

Field angle 10%: 14°

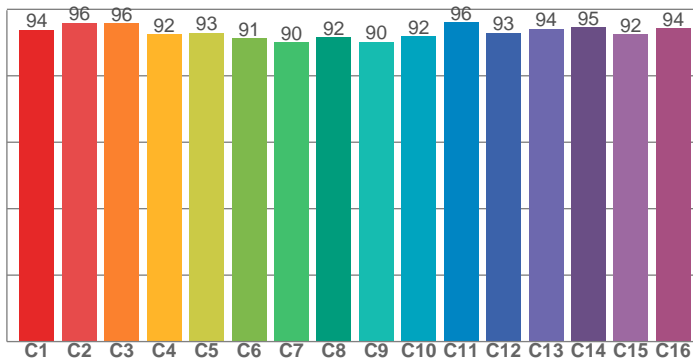
Cut off angle 2.5%: 18,9°

Spectra

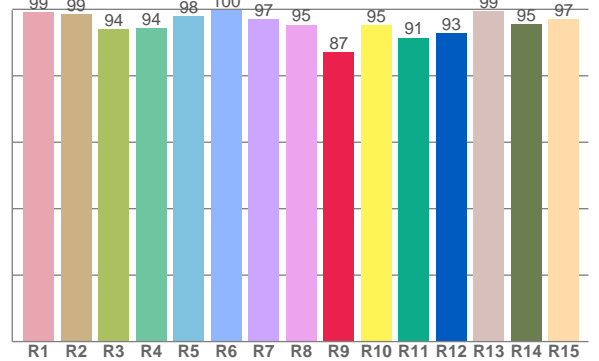




TM30: 93,3



CRI: 97,0 (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
99,0	98,6	94,0	94,3	97,9	99,7	97,1	95,3	87,1	95,2	91,4	92,9	99,5	95,4	97,0

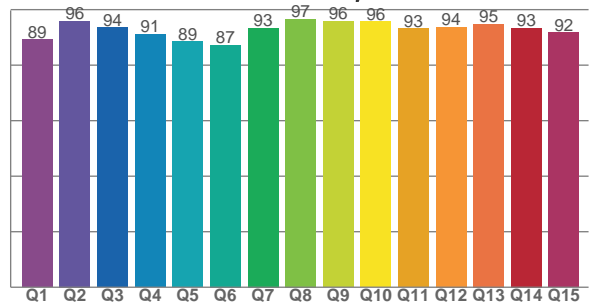
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
93,9	96,0	95,8	92,5	92,9	91,3	90,1	91,5	90,2	91,8	96,0	92,9	94,2	94,5	92,4	94,3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89,2	95,9	93,5	91,1	88,5	87,2	93,3	96,6	95,8	95,8	93,2	93,7	94,8	93,3	91,8

CQS: 92,1



COLOR PARAMETERS

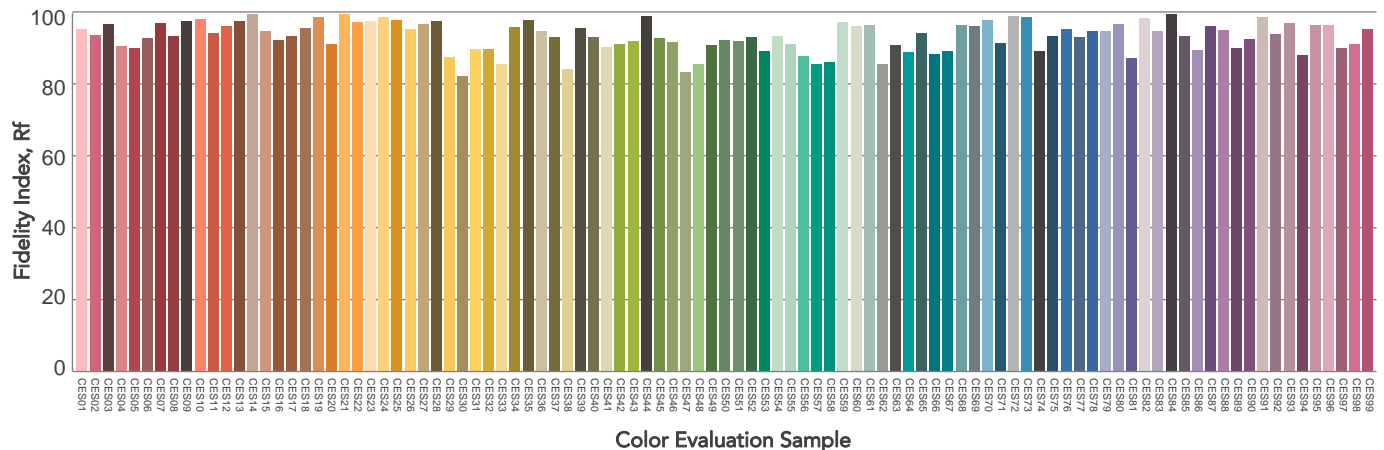
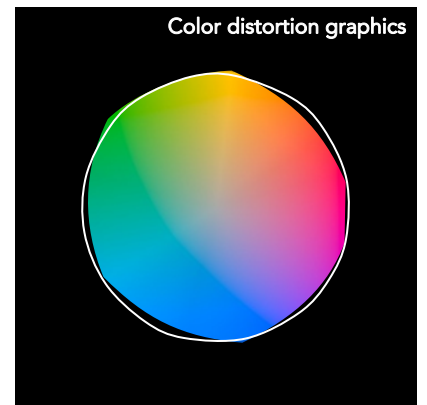
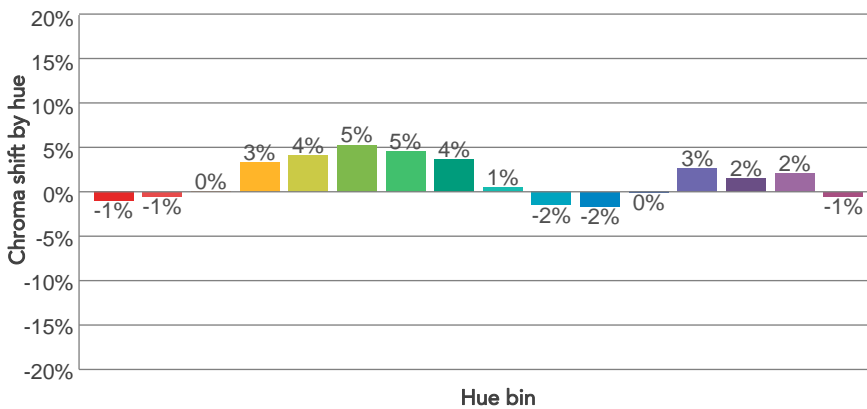
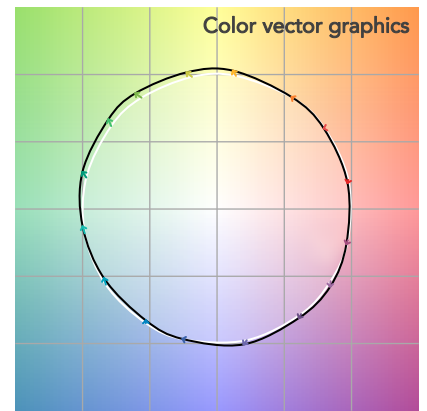
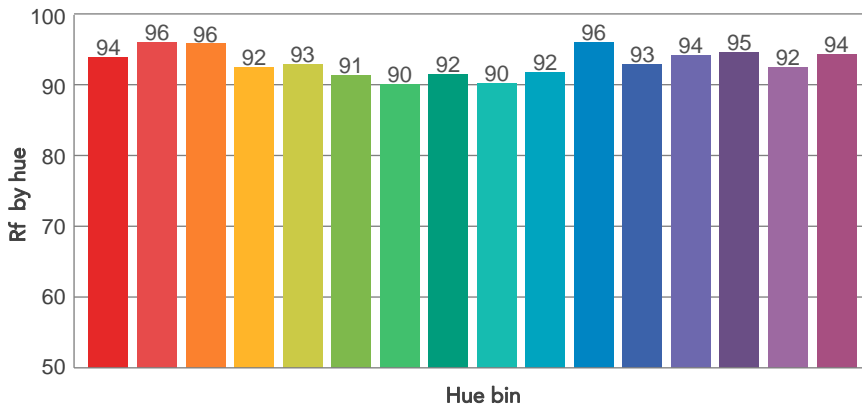
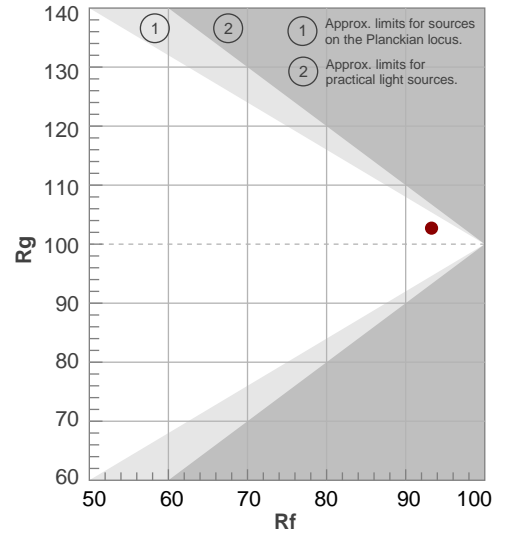
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
2617 K	97,0	87,1	93,3	102,7	92,1	94	0,469	0,416	0,0011

TM30 DETAILS

Rf 93,3
Fidelity index Rf

Rg 102,7
Gammut index

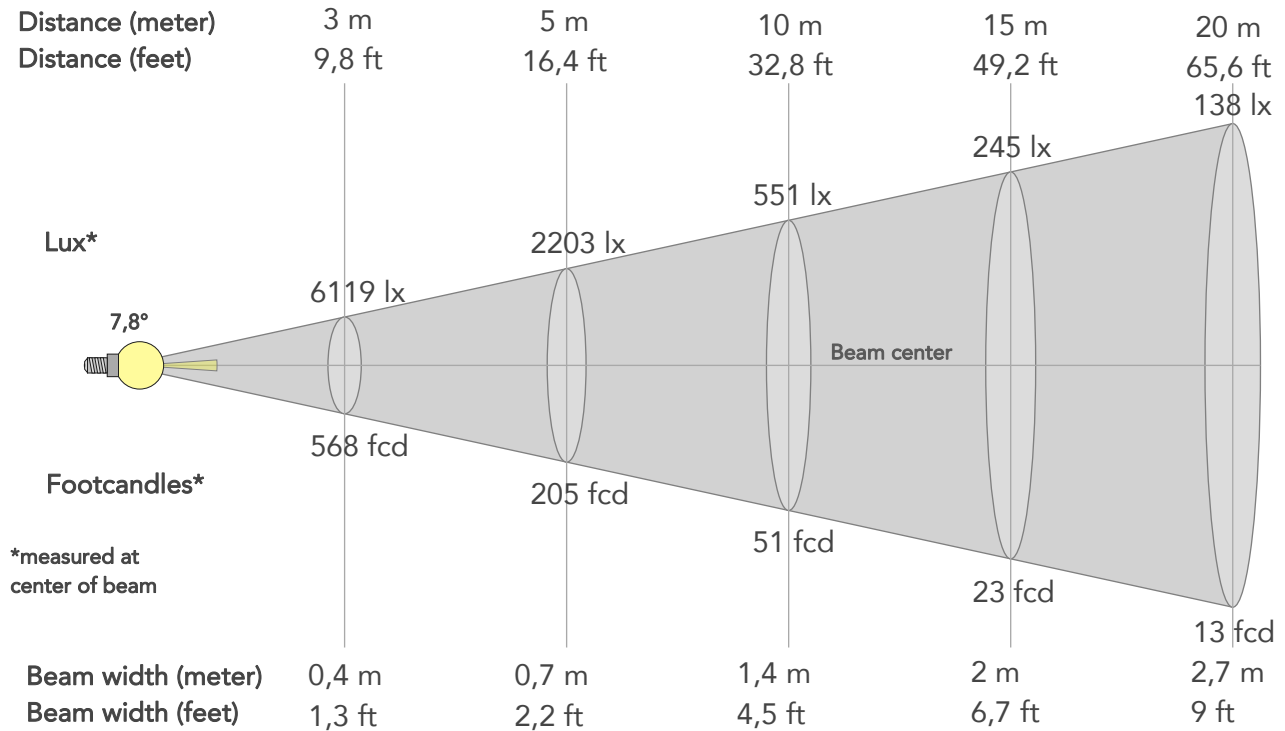
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	94	-1%	-2%
2	96	-1%	0%
3	96	0%	2%
4	92	3%	3%
5	93	4%	3%
6	91	5%	2%
7	90	5%	-3%
8	92	4%	-3%
9	90	1%	-5%
10	92	-2%	-5%
11	96	-2%	-1%
12	93	0%	-2%
13	94	3%	-3%
14	95	2%	-3%
15	92	2%	-4%
16	94	-1%	-3%



BEAM DETAILS



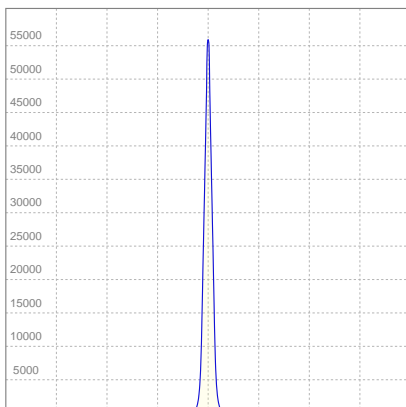
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
7,8°	14°	18,9°	100,0%	100,0%



BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	55067lx	13767lx	6119lx	3442lx	2203lx	979lx	551lx	245lx	138lx	88lx	61lx	34lx	22lx
Footcand.	5116fcd	1279fcd	568fcd	320fcd	205fcd	91fcd	51fcd	23fcd	13fcd	8fcd	6fcd	3fcd	2fcd
Beam wid.	0,1m	0,3m	0,4m	0,5m	0,7m	1m	1,4m	2m	2,7m	3,4m	4,1m	5,5m	6,8m
Beam wid.	0,5ft	0,9ft	1,3ft	1,8ft	2,2ft	3,4ft	4,5ft	6,7ft	9ft	11,2ft	13,4ft	17,9ft	22,4ft

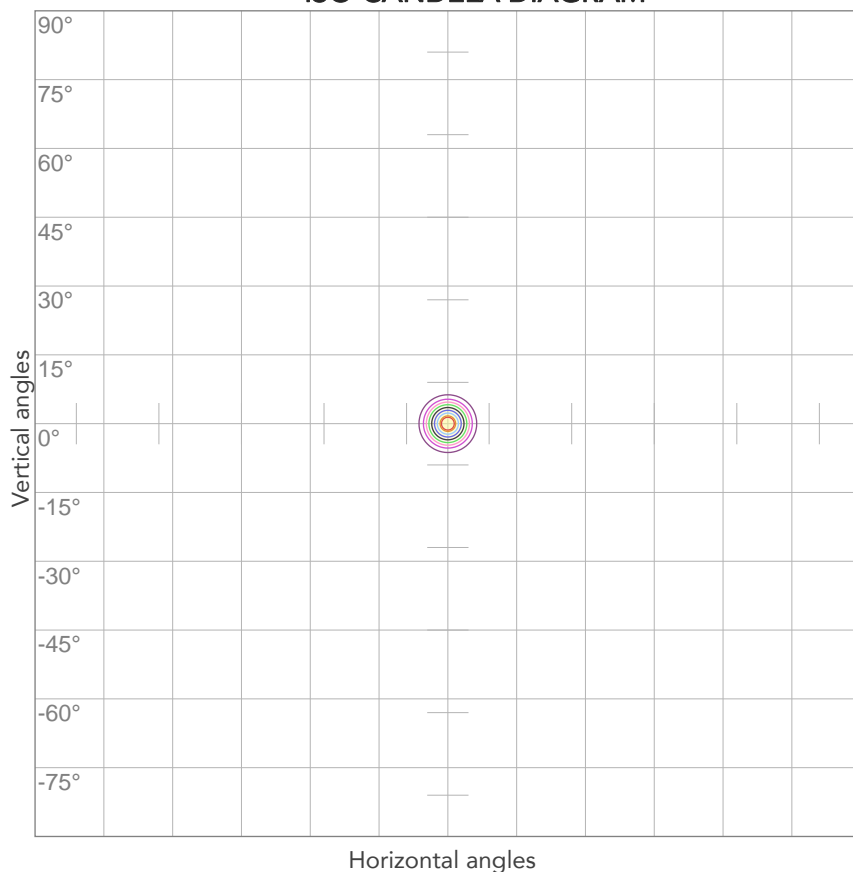
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,713A	144,7W	8lm/W

ISO CANDELA DIAGRAM



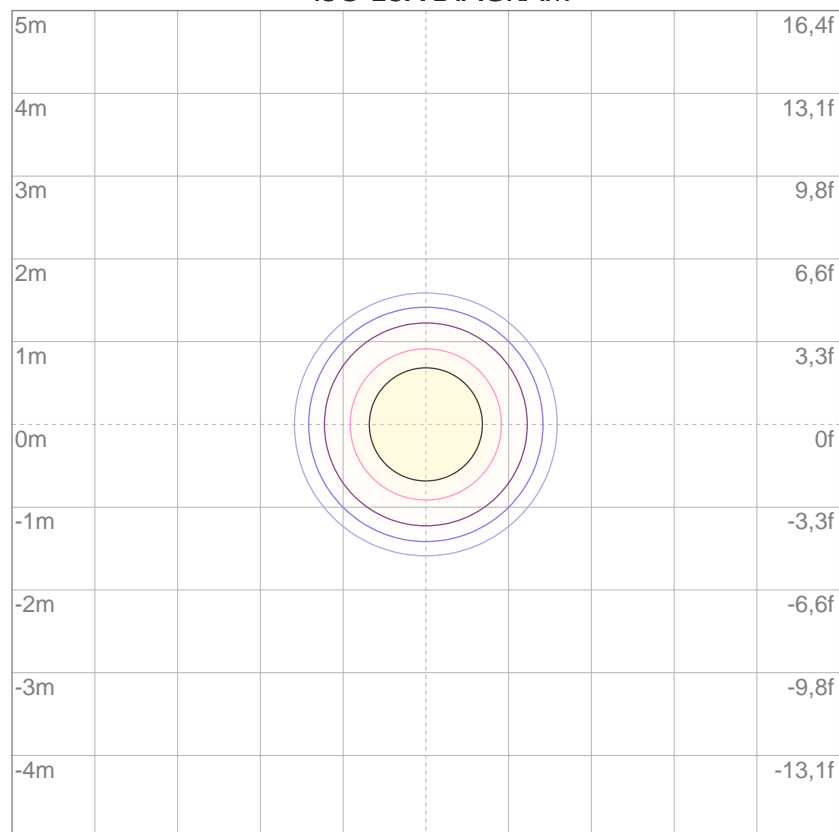
10%	5507 cd
20%	11013 cd
30%	16520 cd
40%	22027 cd
50%	27534 cd
60%	33040 cd
70%	38547 cd
80%	44054 cd

Conditions:

Number of c-planes: 2

Candela at center: 55067 cd

ISO LUX DIAGRAM



3%	16,5 lx
5%	27,5 lx
10%	55,1 lx
30%	165 lx
50%	275 lx

Conditions:

Number of c-planes: 2

Lux at center: 551 lx

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