



Photometric Test Report



RA2000PROFILEHB

540 W high-precision LED moving profile

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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:

18895 lm

Peak candela output:

34072 cd

Light quality:

CRI: 69

Color temperature:

6350 K

PRODUCT NAME:

RA2000PROFILEHB

MEASUREMENT CONDITIONS:

Beam angle:

Max Zoom

Target:

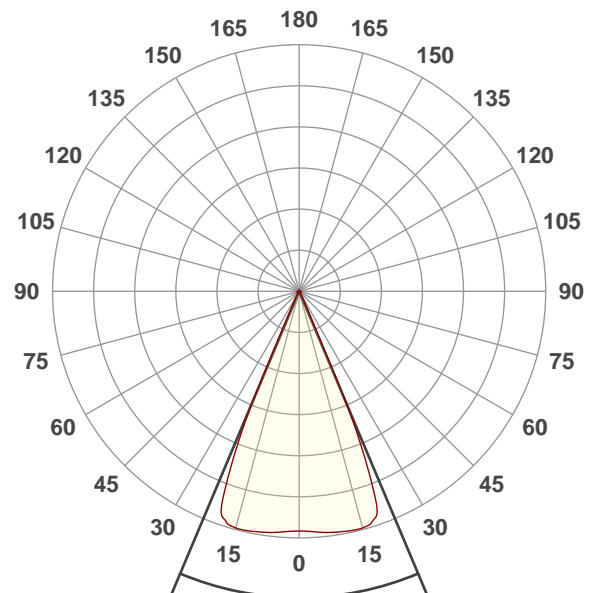
Full On

Operator:

Paolo Carvone

Date and time:

15/05/2020 11:52:56

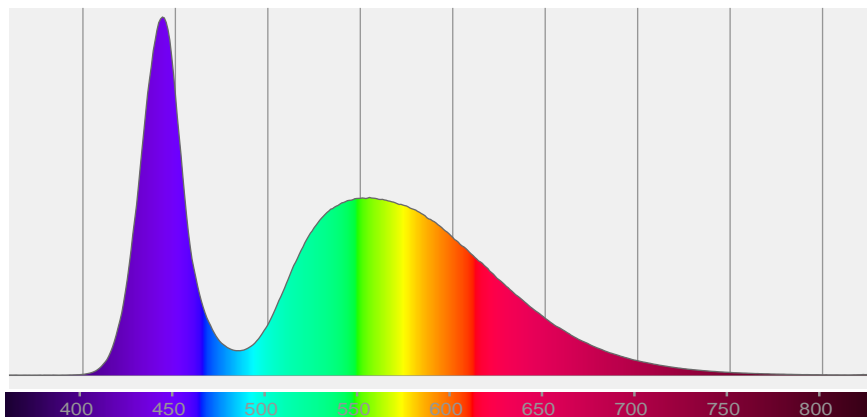


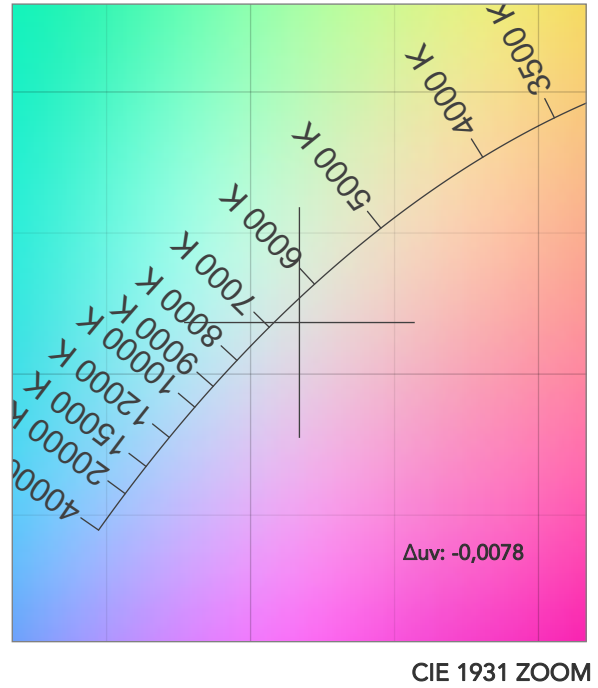
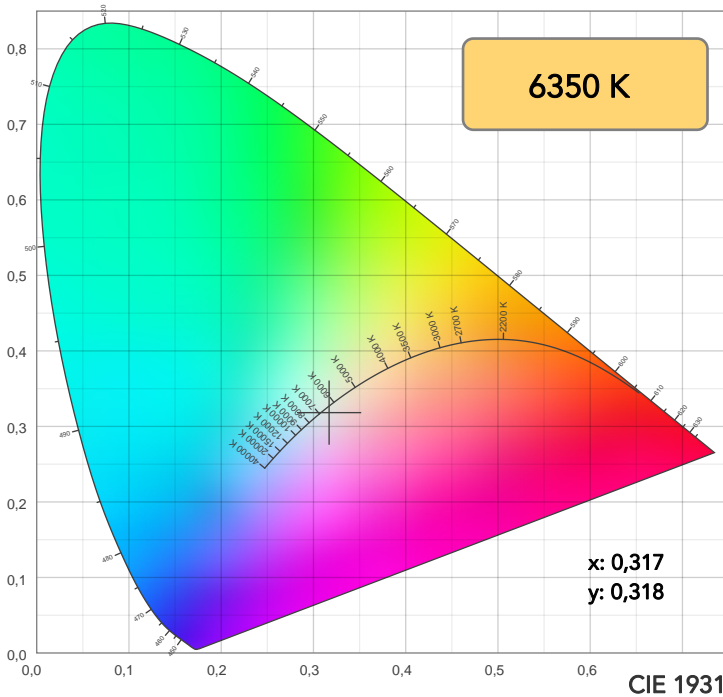
Beam angle 50%: 45,7°

Field angle 10%: 49,6°

Cut off angle 2.5%: 53,5°

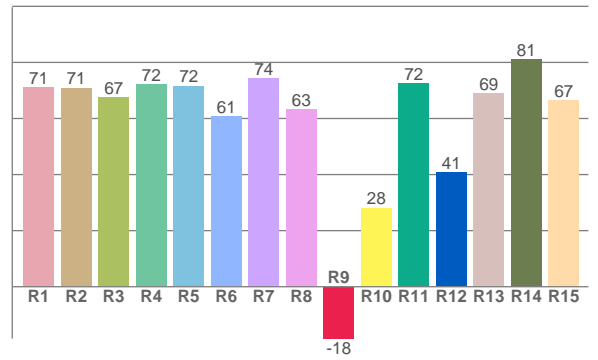
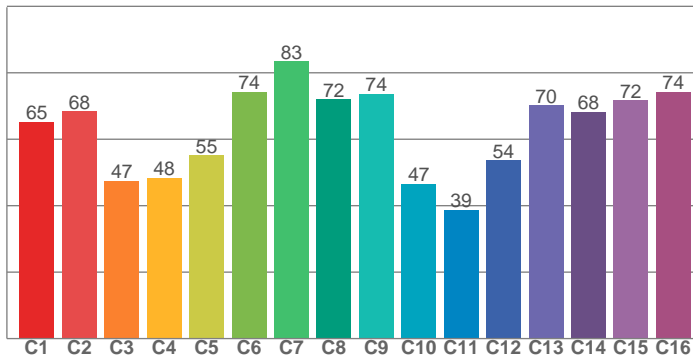
Spectra





TM30: 62,2

CRI: 69,0 (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
71,1	70,9	67,5	72,2	71,7	60,8	74,4	63,2	-18,5	28,1	72,5	40,9	69,0	81,1	66,6

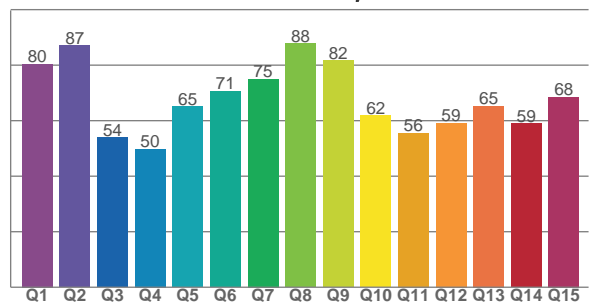
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
65,3	68,4	47,4	48,3	55,1	74,3	83,4	72,1	73,7	46,5	38,7	53,6	70,2	68,3	71,6	74,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
80,5	87,0	53,9	49,7	65,1	70,6	75,0	87,8	81,7	61,8	55,6	59,1	65,4	59,0	68,5

CQS: 65,9



COLOR PARAMETERS

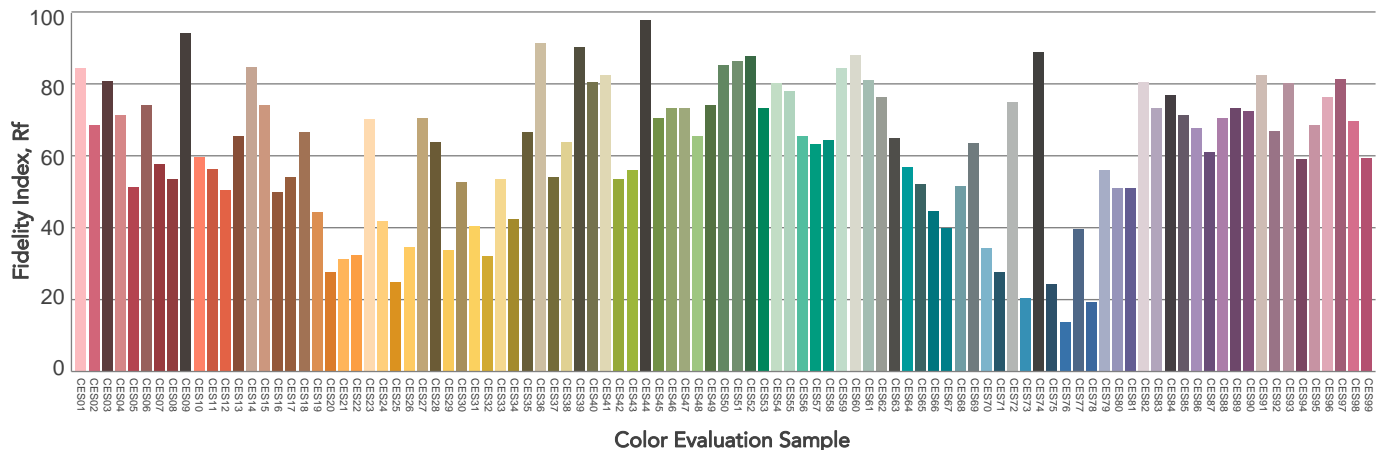
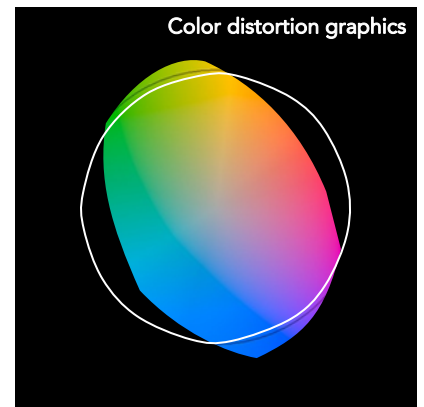
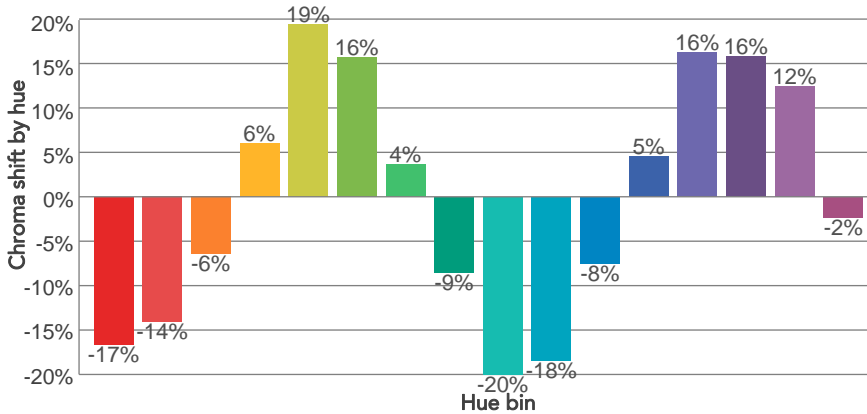
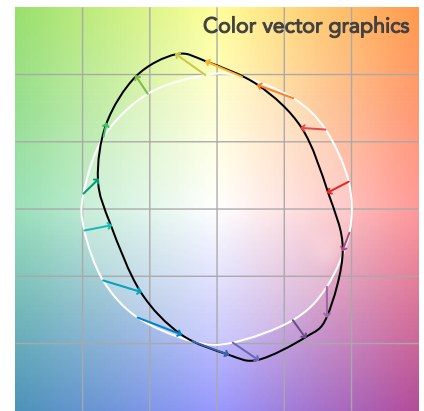
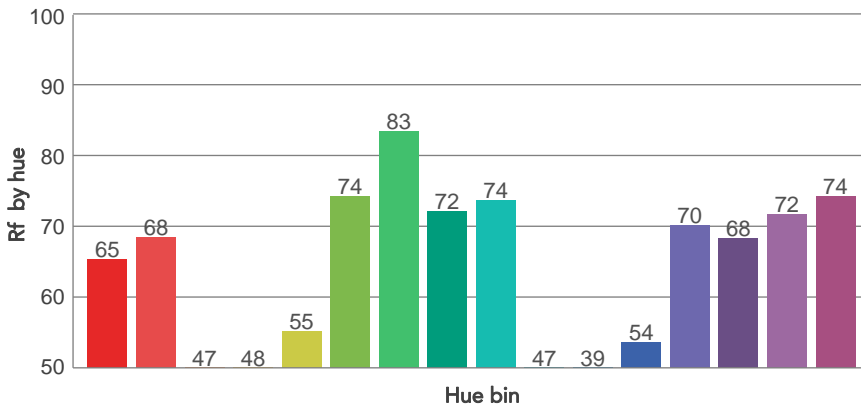
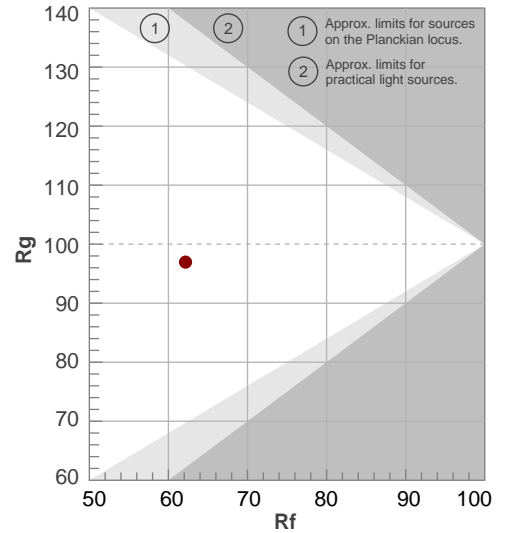
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
6350 K	69,0	-18,5	62,2	97,0	65,9	42	0,317	0,318	-0,0078

TM30 DETAILS

Rf 62,2
Fidelity index Rf

Rg 97,0
Gammut index

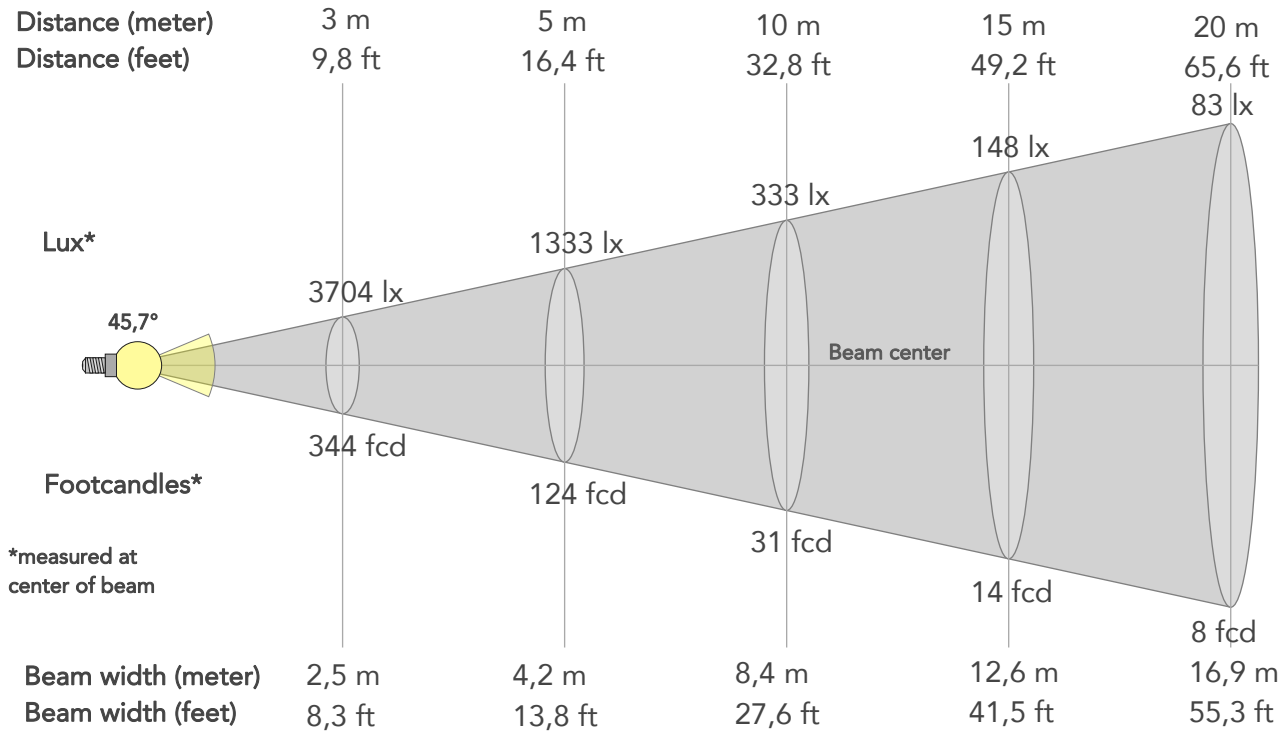
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	65	-17%	-5%
2	68	-14%	11%
3	47	-6%	27%
4	48	6%	28%
5	55	19%	18%
6	74	16%	0%
7	83	4%	-9%
8	72	-9%	-12%
9	74	-20%	0%
10	47	-18%	23%
11	39	-8%	34%
12	54	5%	28%
13	70	16%	16%
14	68	16%	1%
15	72	12%	-18%
16	74	-2%	-14%



BEAM DETAILS



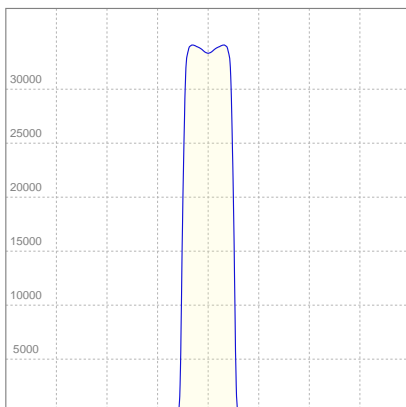
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
45,7°	49,6°	53,5°	90,0%	88,4%



BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	33337lx	8334lx	3704lx	2084lx	1333lx	593lx	333lx	148lx	83lx	53lx	37lx	21lx	13lx
Footcand.	3097fcd	774fcd	344fcd	194fcd	124fcd	55fcd	31fcd	14fcd	8fcd	5fcd	3fcd	2fcd	1fcd
Beam wid.	0,8m	1,7m	2,5m	3,4m	4,2m	6,3m	8,4m	12,6m	16,9m	21,1m	25,3m	33,7m	42,1m
Beam wid.	2,8ft	5,6ft	8,3ft	11ft	13,8ft	20,7ft	27,6ft	41,5ft	55,3ft	69,1ft	82,9ft	110,6ft	138,2ft

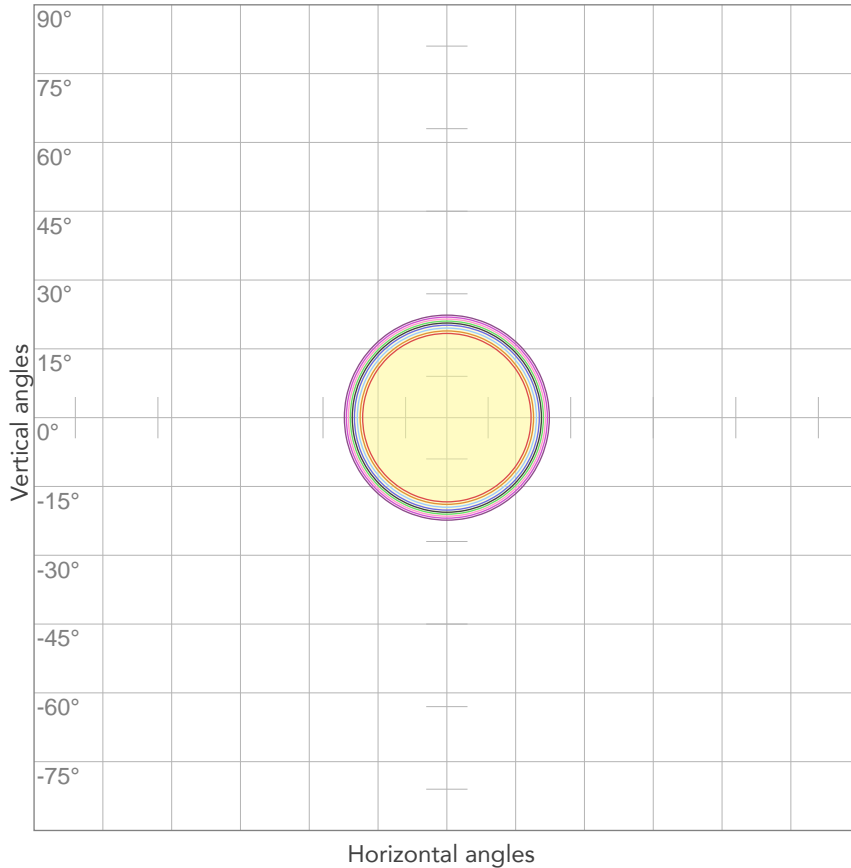
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
224V	2,94A	633,5W	30lm/W
Power FC			
0,96			

ISO CANDELA DIAGRAM



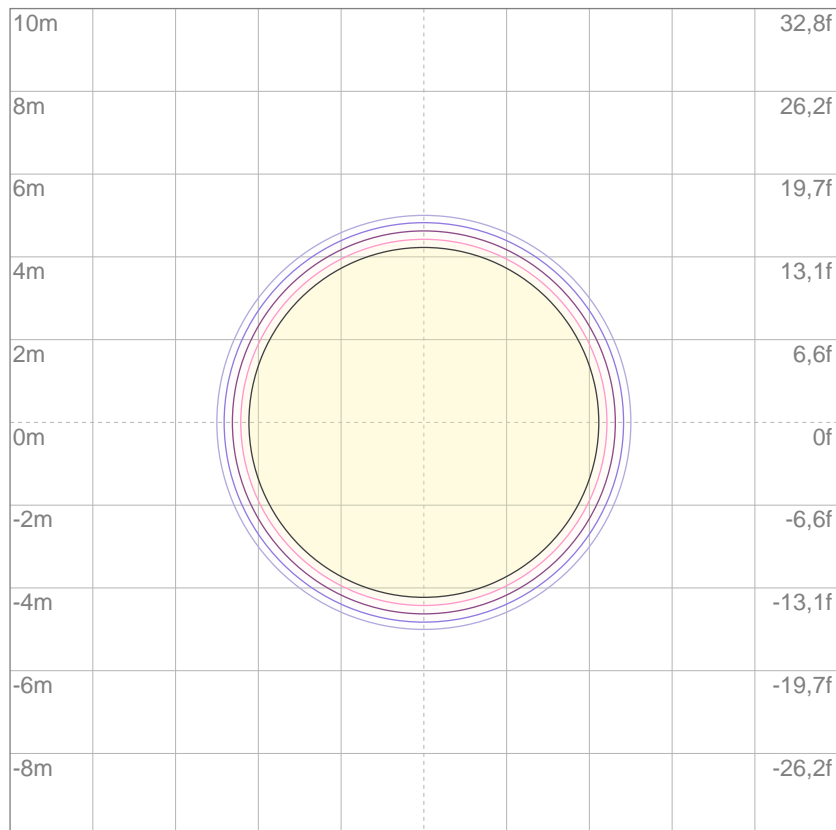
10%	3334 cd
20%	6667 cd
30%	10001 cd
40%	13335 cd
50%	16668 cd
60%	20002 cd
70%	23336 cd
80%	26670 cd

Conditions:

Number of c-planes: 2

Candela at center: 33337 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	10,0 lx
5%	16,7 lx
10%	33,3 lx
30%	100 lx
50%	167 lx

Conditions:

Number of c-planes: 2

Lux at center: 333 lx

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



Total lumen output:

16392 lm

Peak candela output:

200927 cd

Light quality:

CRI: 69

Color temperature:

6243 K

PRODUCT NAME:

RA2000PROFILEHB

MEASUREMENT CONDITIONS:

Beam angle:

Med Zoom

Target:

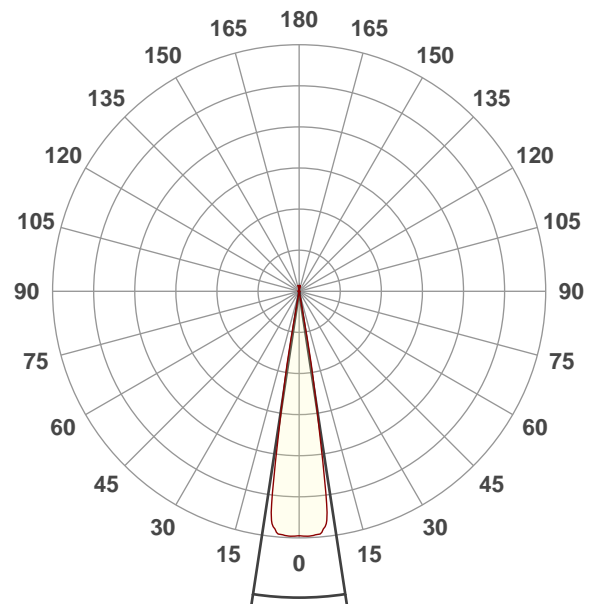
Full On

Operator:

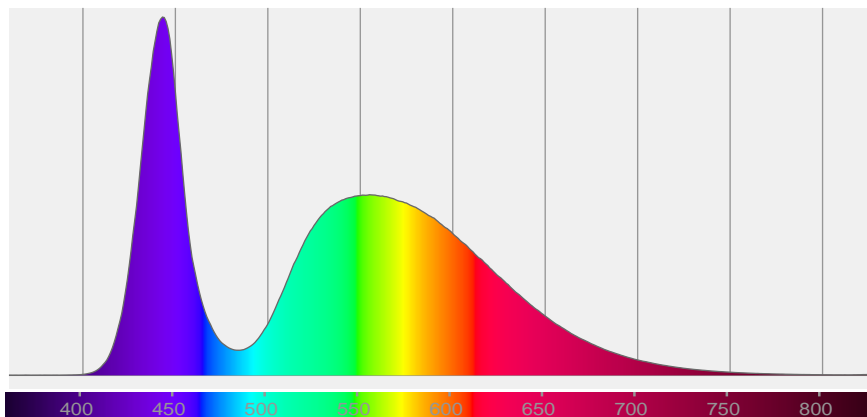
Paolo Carvone

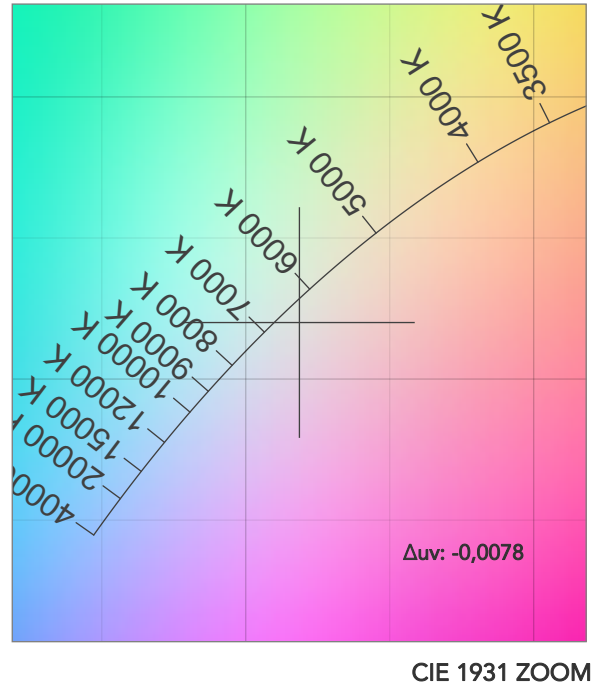
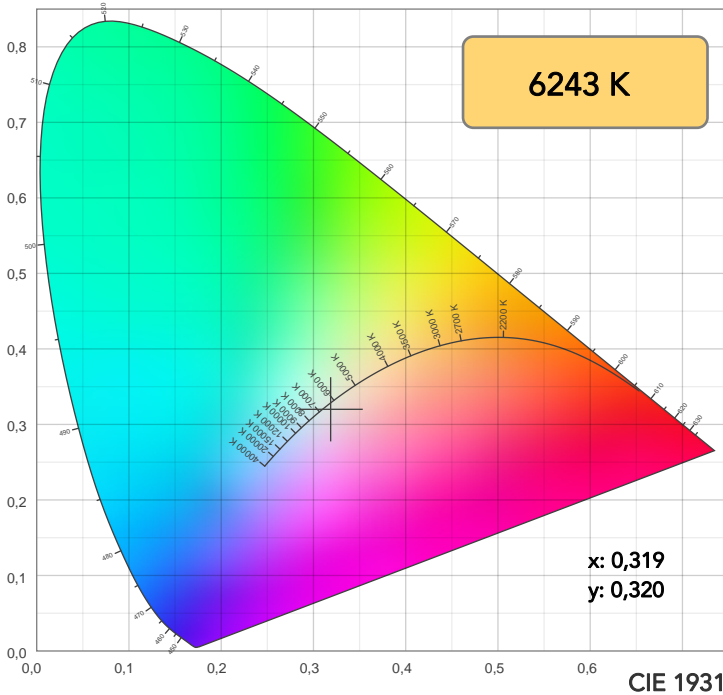
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15/05/2020 11:54:46



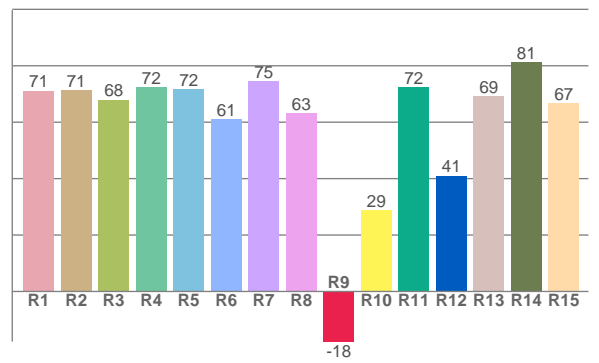
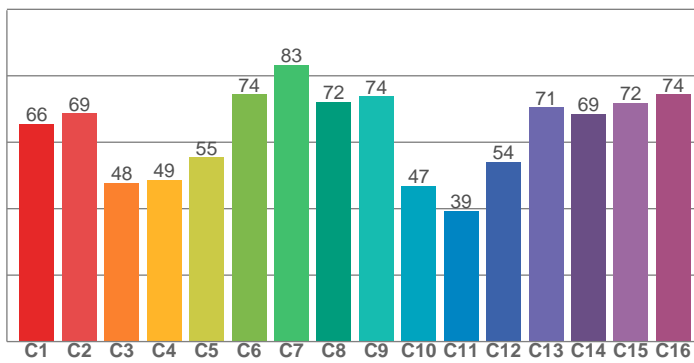
Spectra





TM30: 62,4

CRI: 69,2 (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
71,2	71,2	67,9	72,3	71,7	61,1	74,6	63,2	-17,8	28,8	72,4	41,1	69,2	81,3	66,8

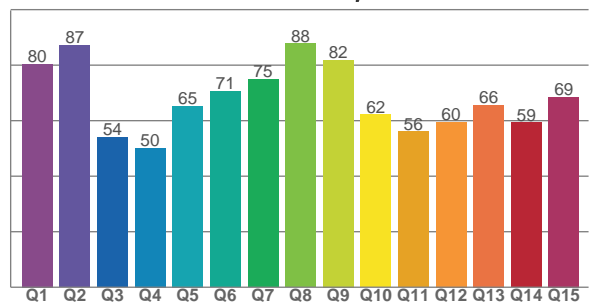
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
65,5	68,7	47,8	48,7	55,4	74,4	83,3	72,1	73,8	46,9	39,4	54,1	70,5	68,6	71,8	74,4

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
80,3	87,1	54,0	50,1	65,2	70,6	74,9	87,7	81,9	62,1	56,0	59,5	65,7	59,3	68,6

CQS: 66,2



COLOR PARAMETERS

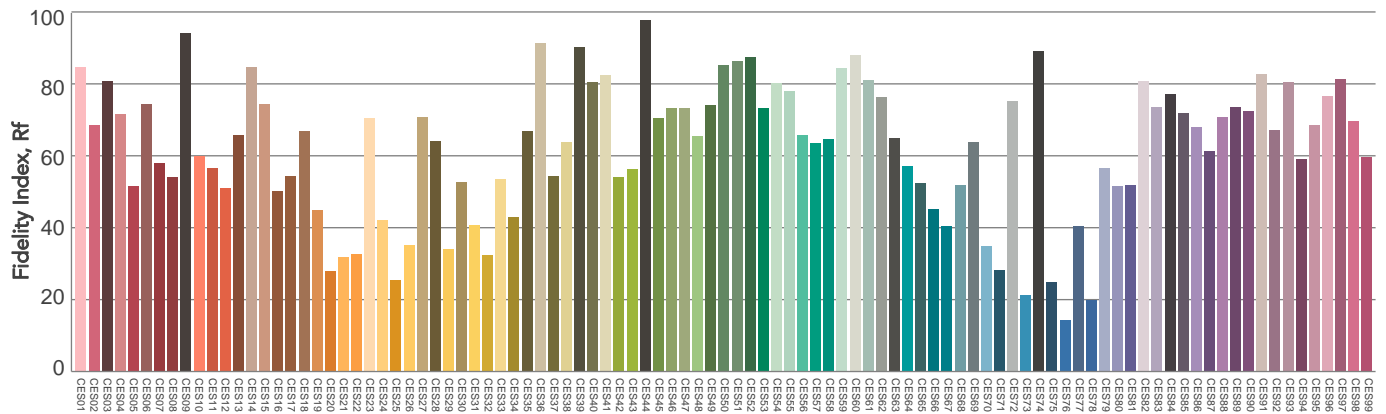
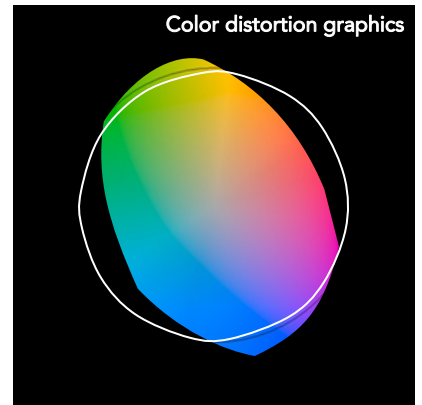
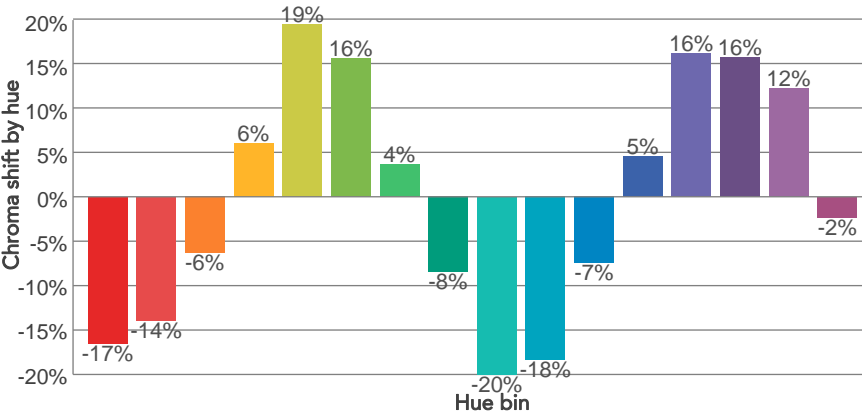
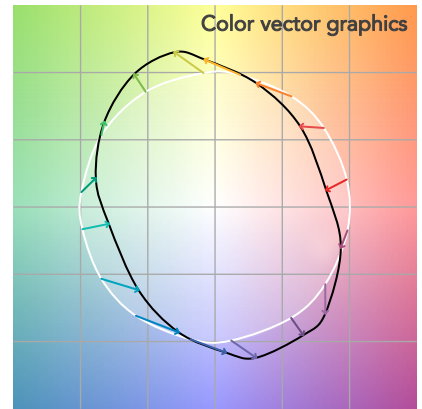
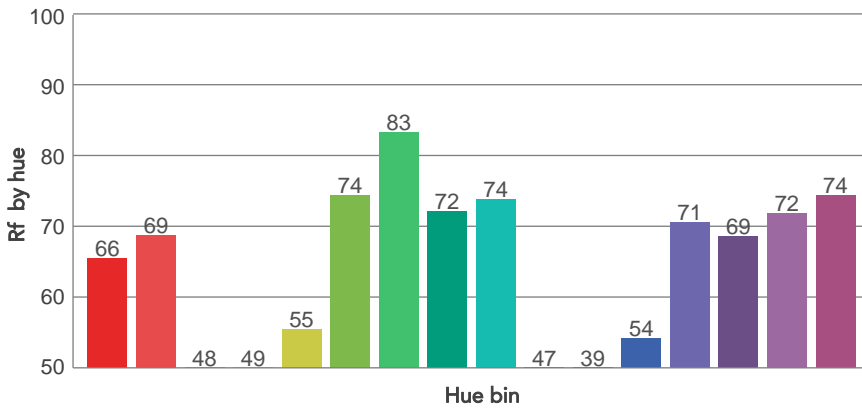
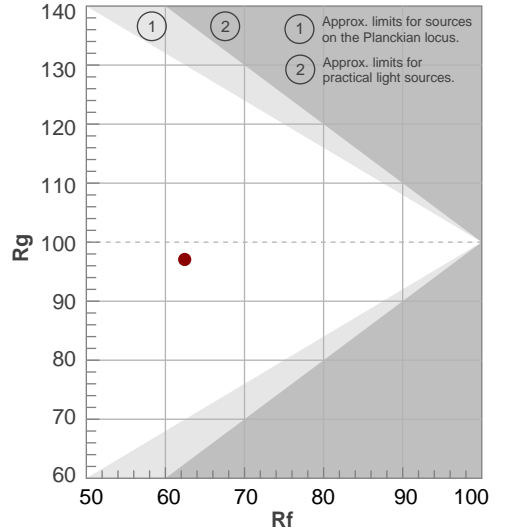
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
6243 K	69,2	-17,8	62,4	97,1	66,2	42	0,319	0,320	-0,0078

TM30 DETAILS

Rf 62,4
Fidelity index Rf

Rg 97,1
Gammut index

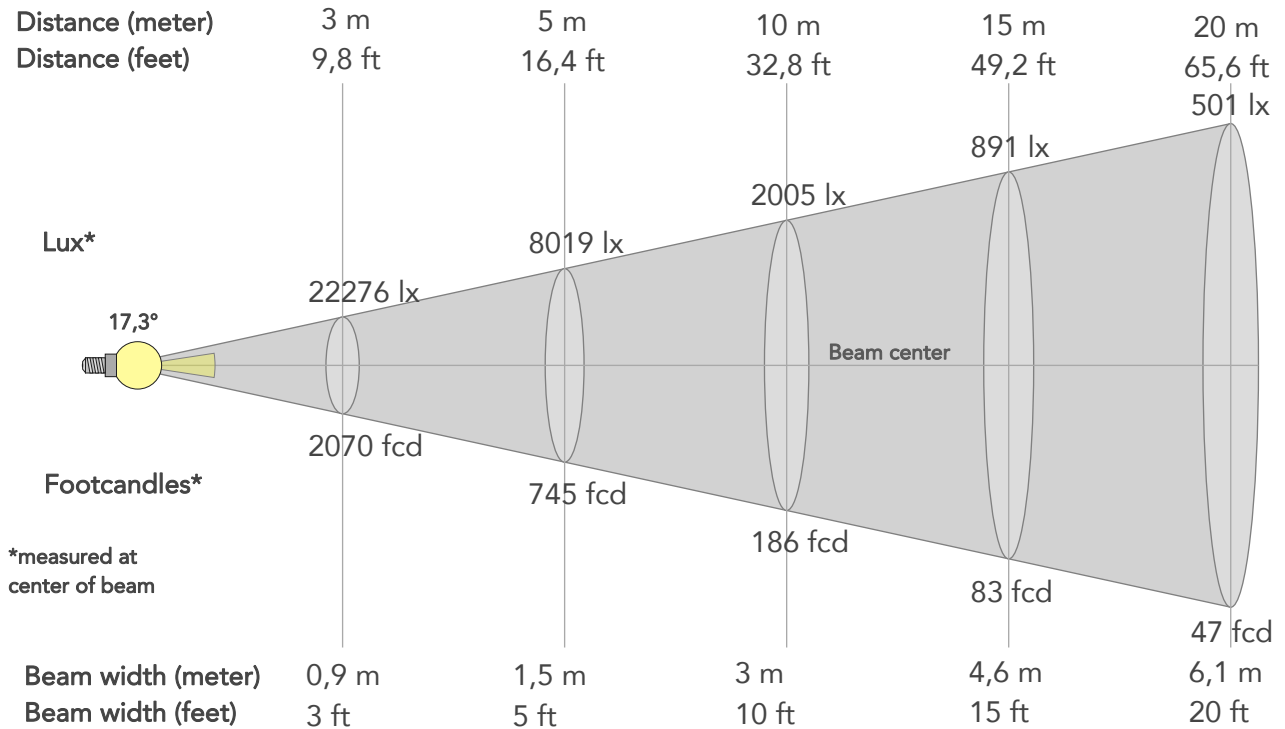
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	66	-17%	-5%
2	69	-14%	11%
3	48	-6%	27%
4	49	6%	28%
5	55	19%	18%
6	74	16%	0%
7	83	4%	-9%
8	72	-8%	-12%
9	74	-20%	0%
10	47	-18%	22%
11	39	-7%	33%
12	54	5%	28%
13	71	16%	16%
14	69	16%	0%
15	72	12%	-18%
16	74	-2%	-14%



BEAM DETAILS



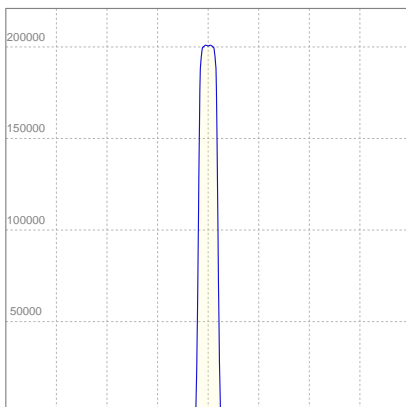
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
17,3°	20,9°	21,7°	91,2%	90,6%



BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	200486lx	50122lx	22276lx	12530lx	8019lx	3564lx	2005lx	891lx	501lx	321lx	223lx	125lx	80lx
Footcand.	18626fcd	4656fcd	2070fcd	1164fcd	745fcd	331fcd	186fcd	83fcd	47fcd	30fcd	21fcd	12fcd	7fcd
Beam wid.	0,3m	0,6m	0,9m	1,2m	1,5m	2,3m	3m	4,6m	6,1m	7,6m	9,1m	12,2m	15,2m
Beam wid.	1ft	2ft	3ft	4ft	5ft	7,5ft	10ft	15ft	20ft	25ft	30ft	40ft	50ft

LINEAR DISTRIBUTION DIAGRAM

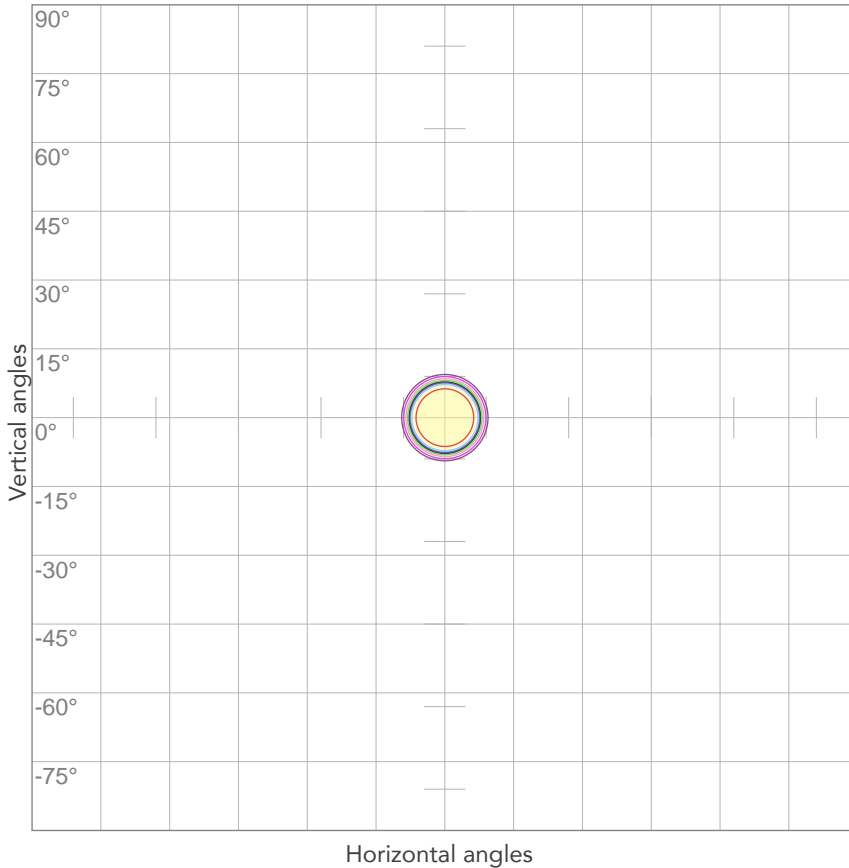


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
224V	2,94A	633,7W	26lm/W

Power FC
0,96

ISO CANDELA DIAGRAM



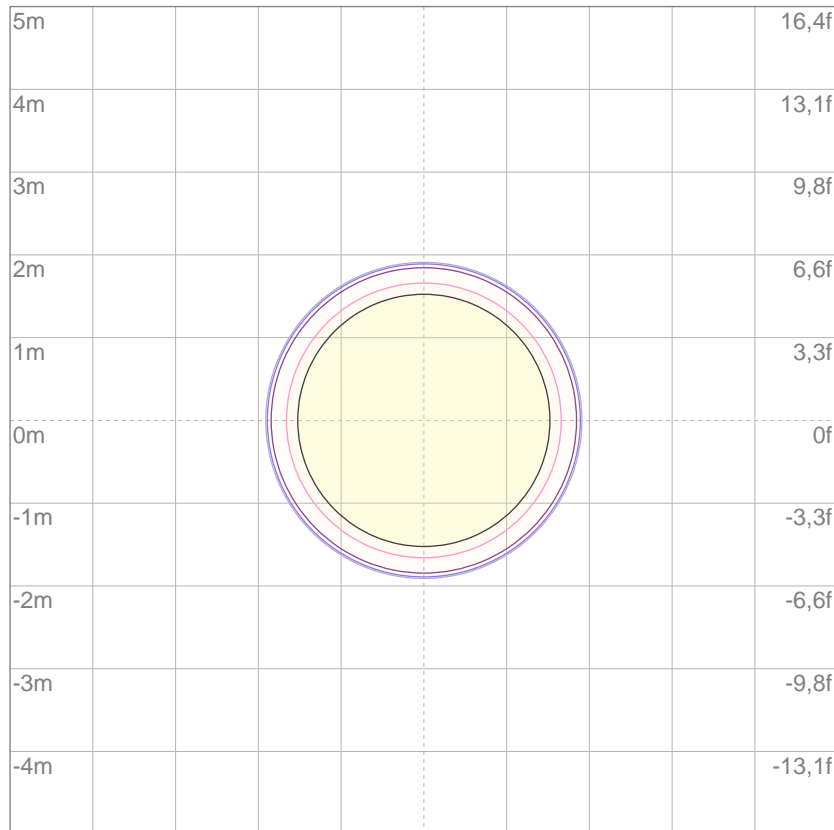
10%	20049 cd
20%	40097 cd
30%	60146 cd
40%	80195 cd
50%	100243 cd
60%	120292 cd
70%	140340 cd
80%	160389 cd

Conditions:

Number of c-planes: 2

Candela at center: 200486 cd

ISO LUX DIAGRAM



3%	60,1 lx
5%	100 lx
10%	200 lx
30%	601 lx
50%	1002 lx

Conditions:

Number of c-planes: 2

Lux at center: 2005 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:

12087 lm

Peak candela output:

962719 cd

Light quality:

CRI: 69

Color temperature:

6196 K

PRODUCT NAME:

RA2000PROFILEHB

MEASUREMENT CONDITIONS:

Beam angle:

Min Zoom

Target:

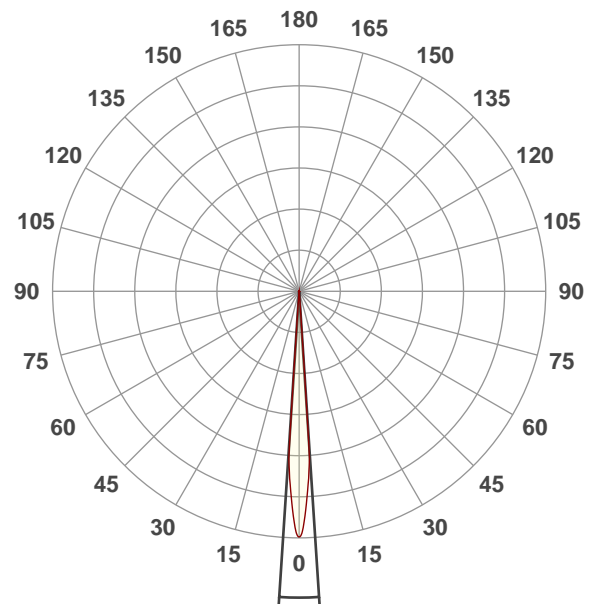
Full On

Operator:

Paolo Carvone

Date and time:

15/05/2020 11:50:52

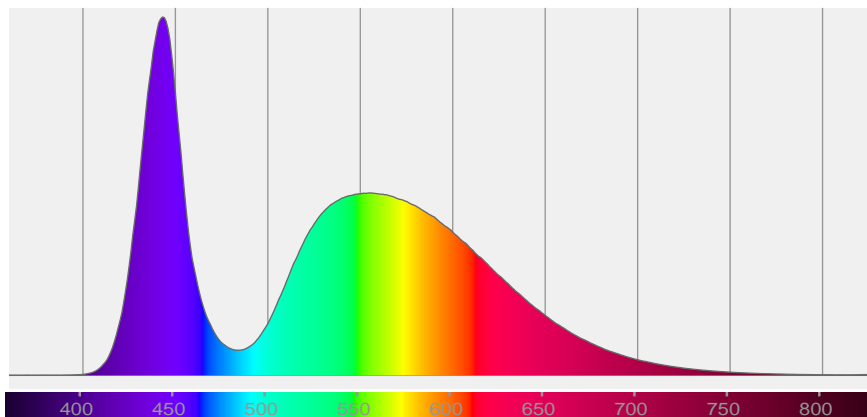


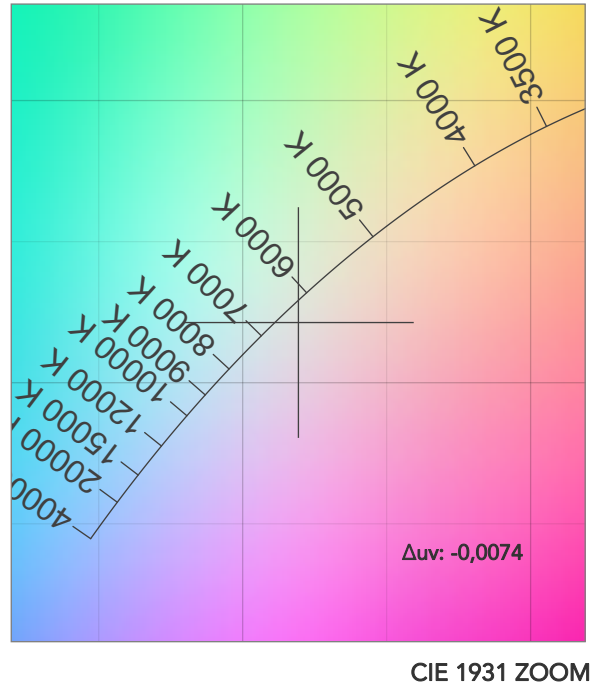
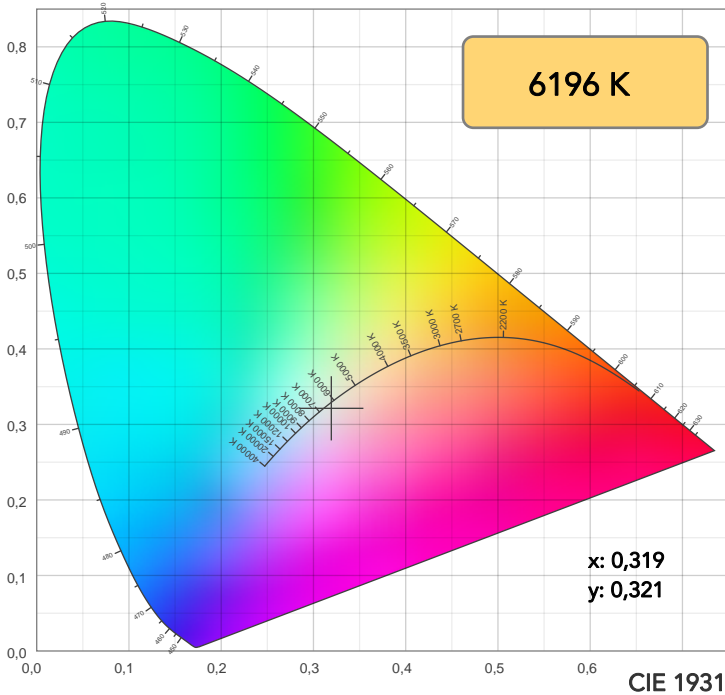
Beam angle 50%: 7,5°

Field angle 10%: 8,2°

Cut off angle 2.5%: 8,9°

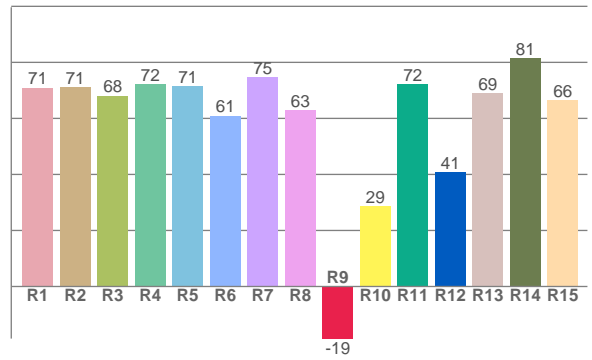
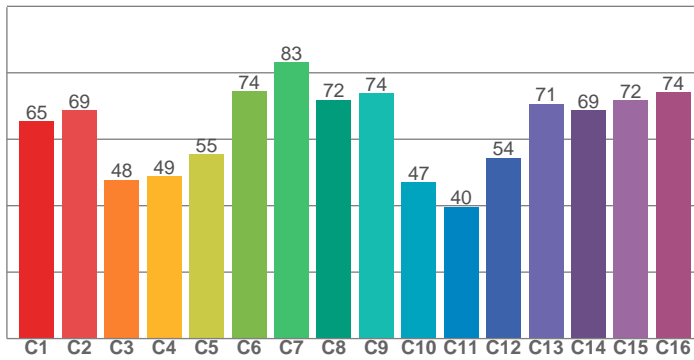
Spectra





TM30: 62,5

CRI: 69,0 (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
70,9	71,2	68,0	72,1	71,4	61,0	74,6	62,9	-18,6	28,7	72,1	40,9	69,0	81,4	66,4

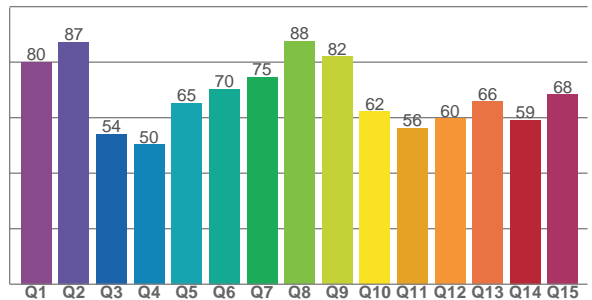
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
65,3	68,7	47,8	48,8	55,5	74,4	83,1	71,8	73,8	47,1	39,6	54,4	70,7	68,6	71,8	74,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
80,1	87,2	54,1	50,3	65,2	70,4	74,7	87,5	82,1	62,3	56,2	59,7	65,8	59,1	68,3

CQS: 66,2



COLOR PARAMETERS

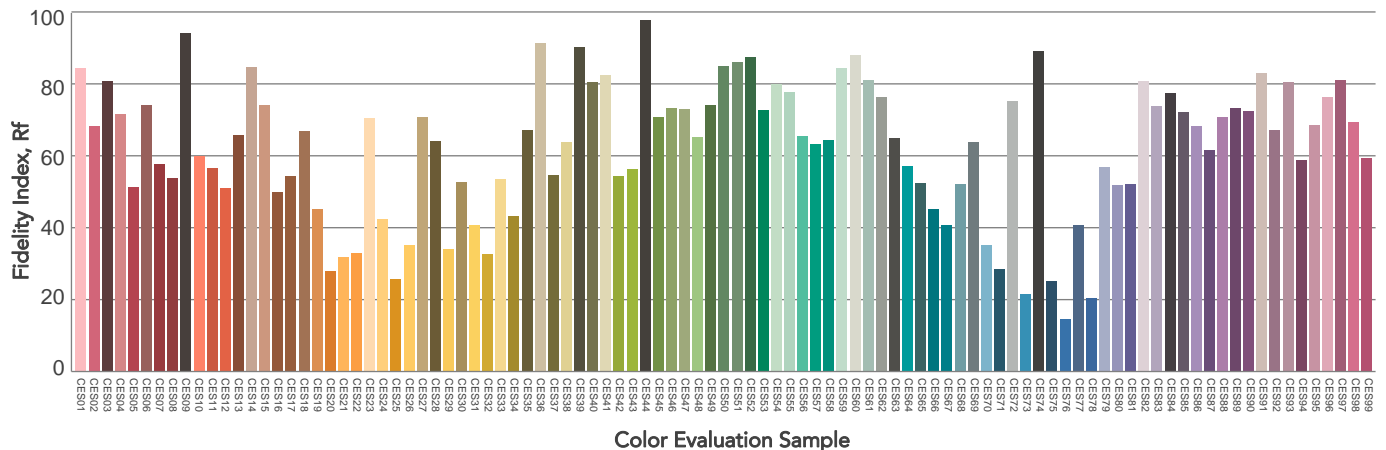
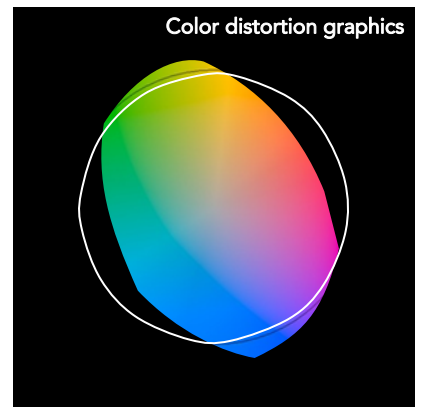
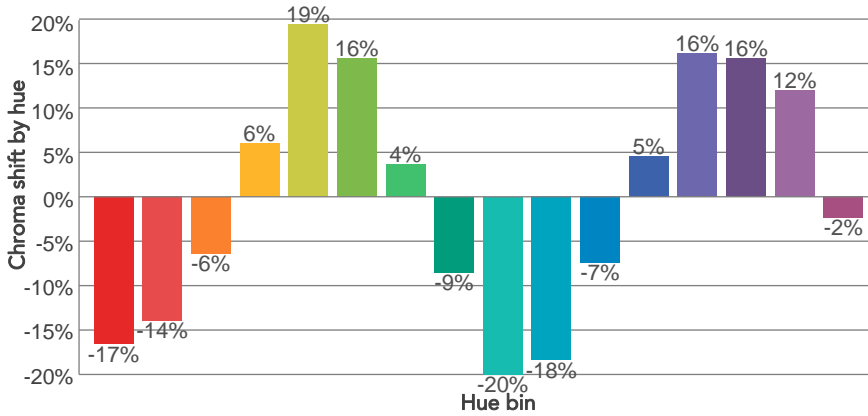
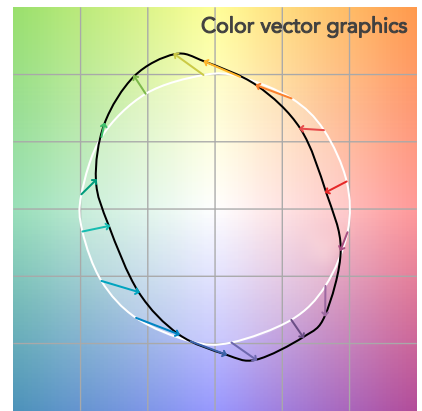
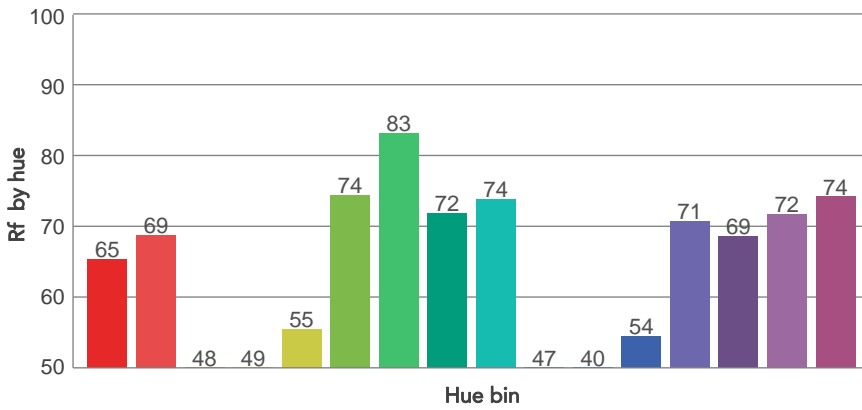
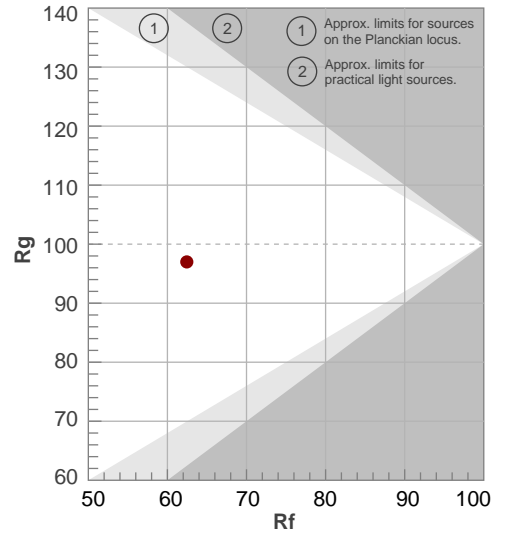
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
6196 K	69,0	-18,6	62,5	97,0	66,2	42	0,319	0,321	-0,0074

TM30 DETAILS

Rf 62,5
Fidelity index Rf

Rg 97,0
Gammut index

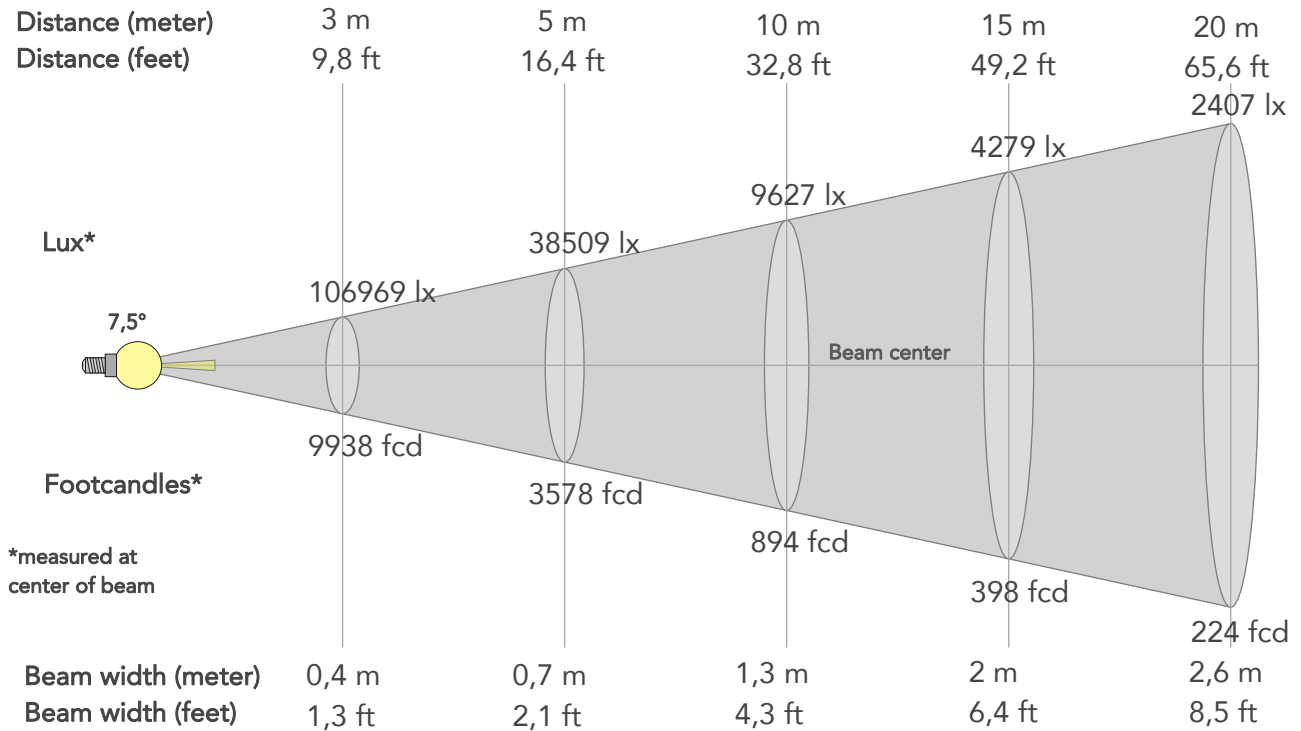
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	65	-17%	-5%
2	69	-14%	11%
3	48	-6%	27%
4	49	6%	28%
5	55	19%	18%
6	74	16%	0%
7	83	4%	-9%
8	72	-9%	-13%
9	74	-20%	0%
10	47	-18%	22%
11	40	-7%	33%
12	54	5%	27%
13	71	16%	15%
14	69	16%	0%
15	72	12%	-18%
16	74	-2%	-14%



BEAM DETAILS



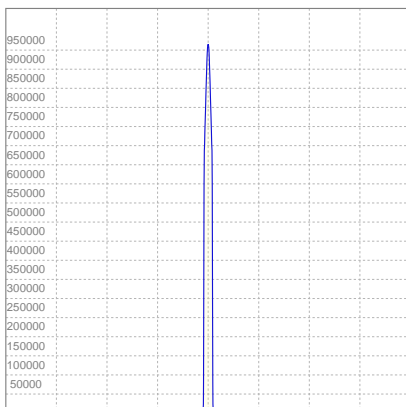
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
7,5°	8,2°	8,9°	92,2%	92,2%



BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	962718lx	240680lx	106969lx	60170lx	38509lx	17115lx	9627lx	4279lx	2407lx	1540lx	1070lx	602lx	385lx
Footcand.	89439fcd	22360fcd	9938fcd	5590fcd	3578fcd	1590fcd	894fcd	398fcd	224fcd	143fcd	99fcd	56fcd	36fcd
Beam wid.	0,1m	0,3m	0,4m	0,5m	0,7m	1m	1,3m	2m	2,6m	3,3m	3,9m	5,2m	6,5m
Beam wid.	0,4ft	0,9ft	1,3ft	1,7ft	2,1ft	3,2ft	4,3ft	6,4ft	8,5ft	10,7ft	12,8ft	17,1ft	21,4ft

LINEAR DISTRIBUTION DIAGRAM

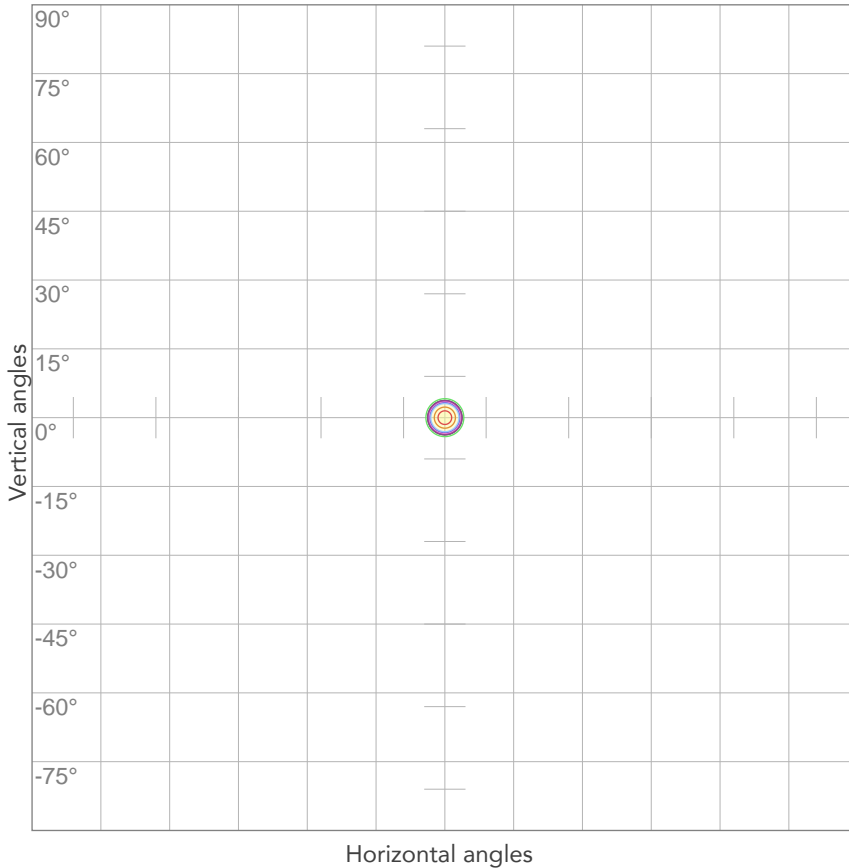


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Efficiency
223V	2,95A	634,4W	19lm/W

Power FC
0,96

ISO CANDELA DIAGRAM



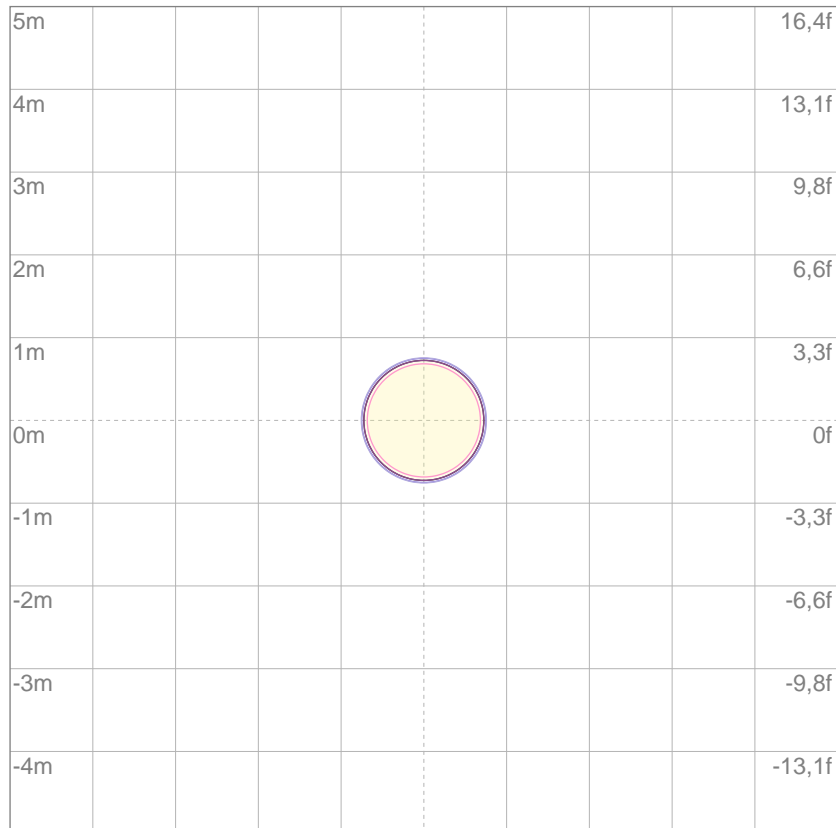
10%	96272 cd
20%	192544 cd
30%	288816 cd
40%	385087 cd
50%	481359 cd
60%	577631 cd
70%	673903 cd
80%	770175 cd

Conditions:

Number of c-planes: 2

Candela at center: 962718 cd

ISO LUX DIAGRAM



3%	289 lx
5%	481 lx
10%	963 lx
30%	2888 lx
50%	4814 lx

Conditions:

Number of c-planes: 2

Lux at center: 9627 lx

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