



Photometric Test Report



RA2000PROFILE

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:

13900 lm

Peak candela output:

25347 cd

Light quality:

CRI: 93,3

Color temperature:

6513 K

PRODUCT NAME:

RA2000PROFILE

MEASURAMENT CONDITIONS:

Beam angle:

Max Zoom

Target:

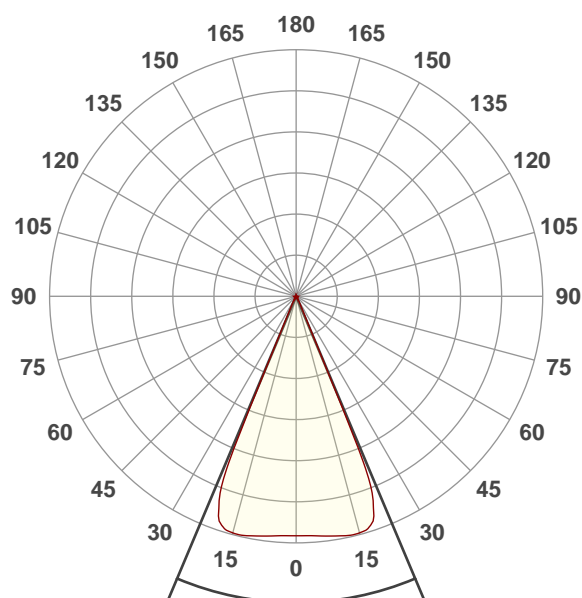
Full On

Operator:

Paolo Carvone

Date and time:

15/05/2020 11:30:22

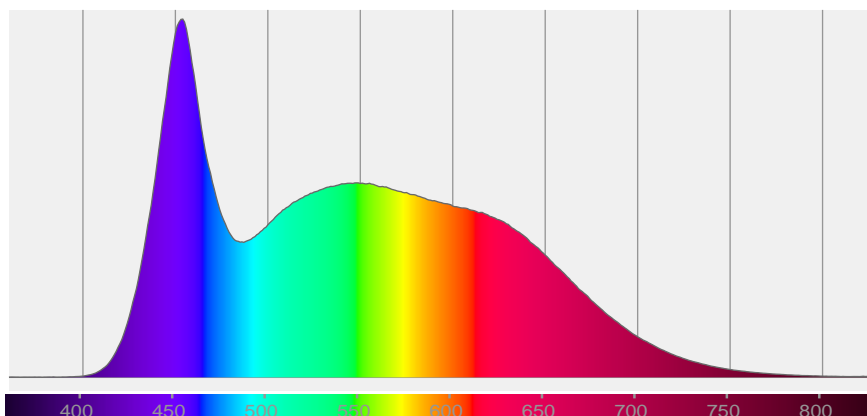


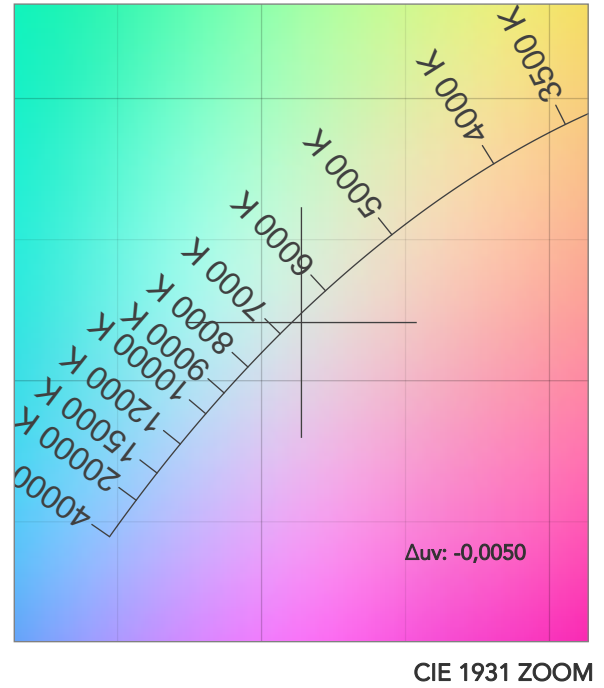
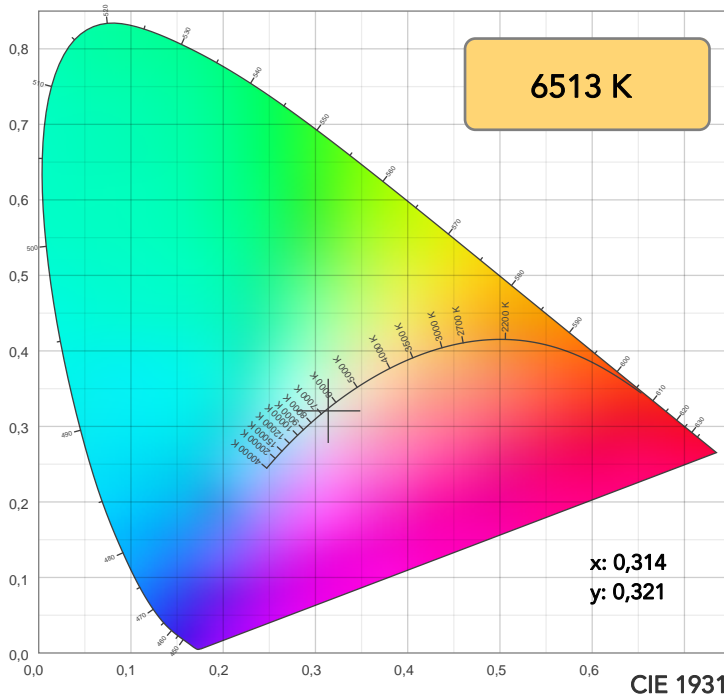
Beam angle 50%: 45,7°

Field angle 10%: 48,6°

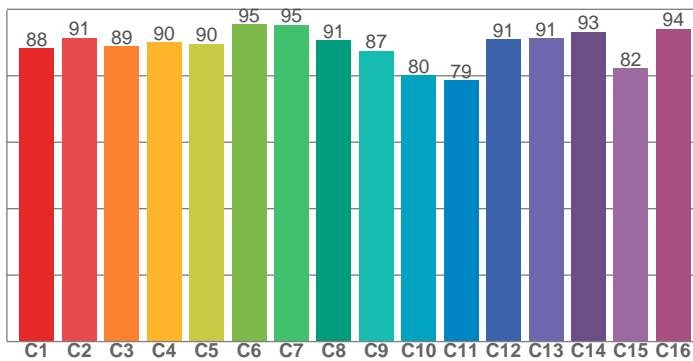
Cut off angle 2.5%: 52°

Spectra

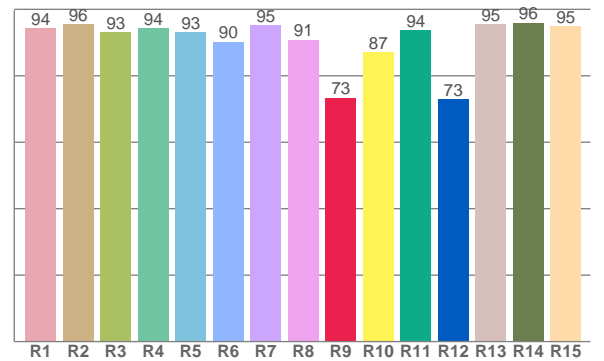




TM30: 88,9



CRI: 93,3 (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
94,4	95,5	93,1	94,2	93,2	90,2	95,2	90,9	73,4	87,0	93,7	72,9	95,5	96,0	94,9

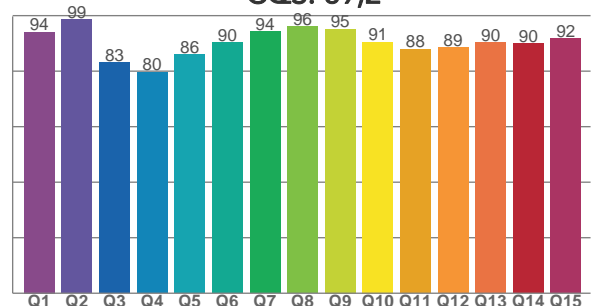
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
88,3	91,4	88,8	90,1	89,7	95,5	95,3	90,6	87,5	80,1	78,6	91,0	91,2	93,2	82,3	94,1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
94,2	98,5	83,1	79,6	86,0	90,2	94,3	96,1	95,3	90,5	87,9	88,5	90,2	90,0	91,7

CQS: 89,2



COLOR PARAMETERS

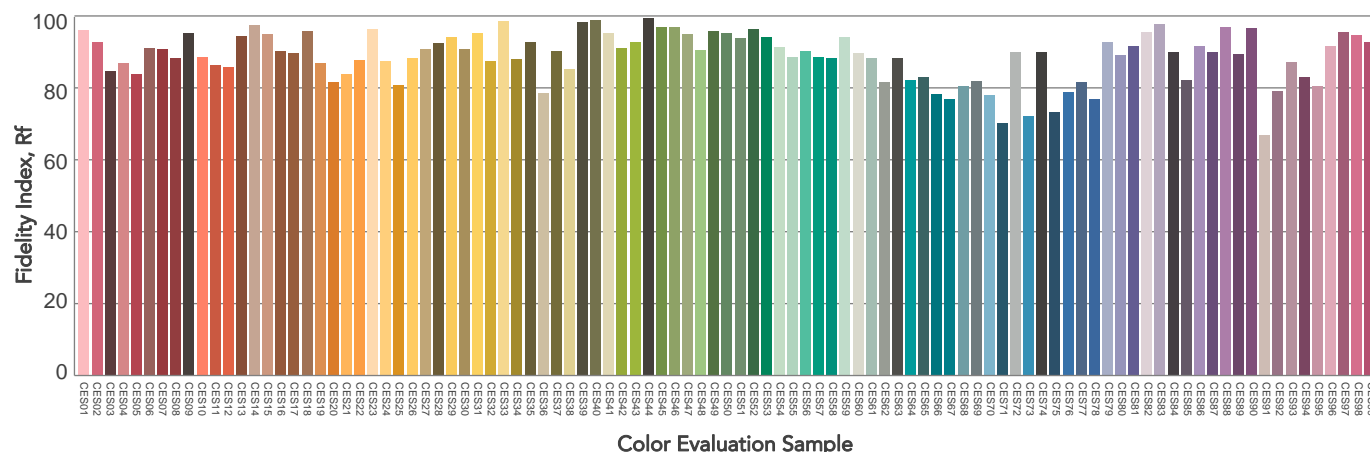
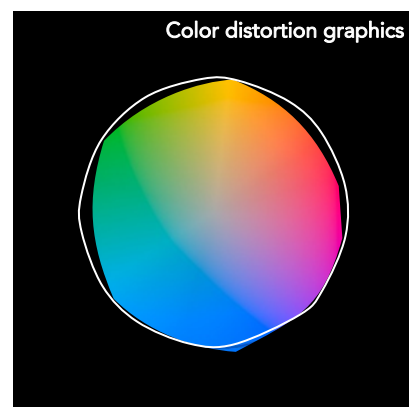
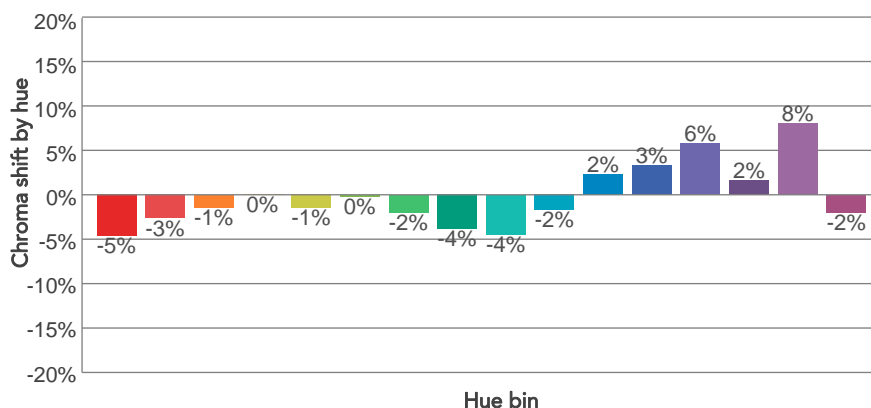
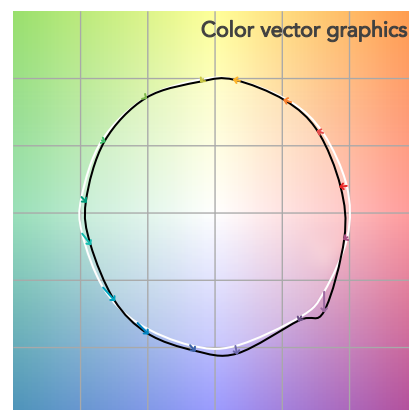
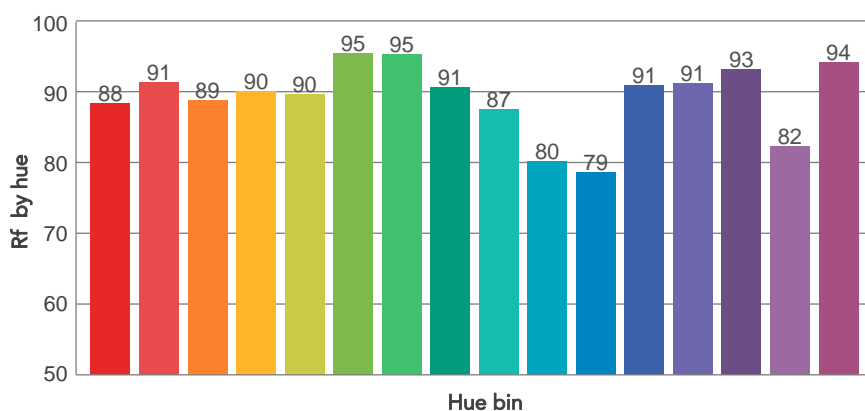
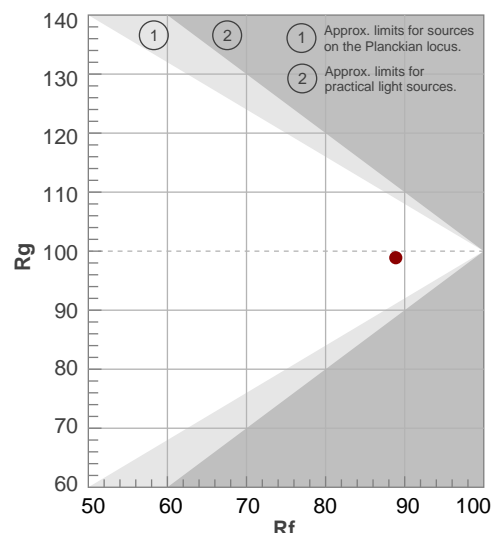
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
6513 K	93,3	73,4	88,9	98,9	89,2	92	0,314	0,321	-0,0050

TM30 DETAILS

Rf 88,9
Fidelity index Rf

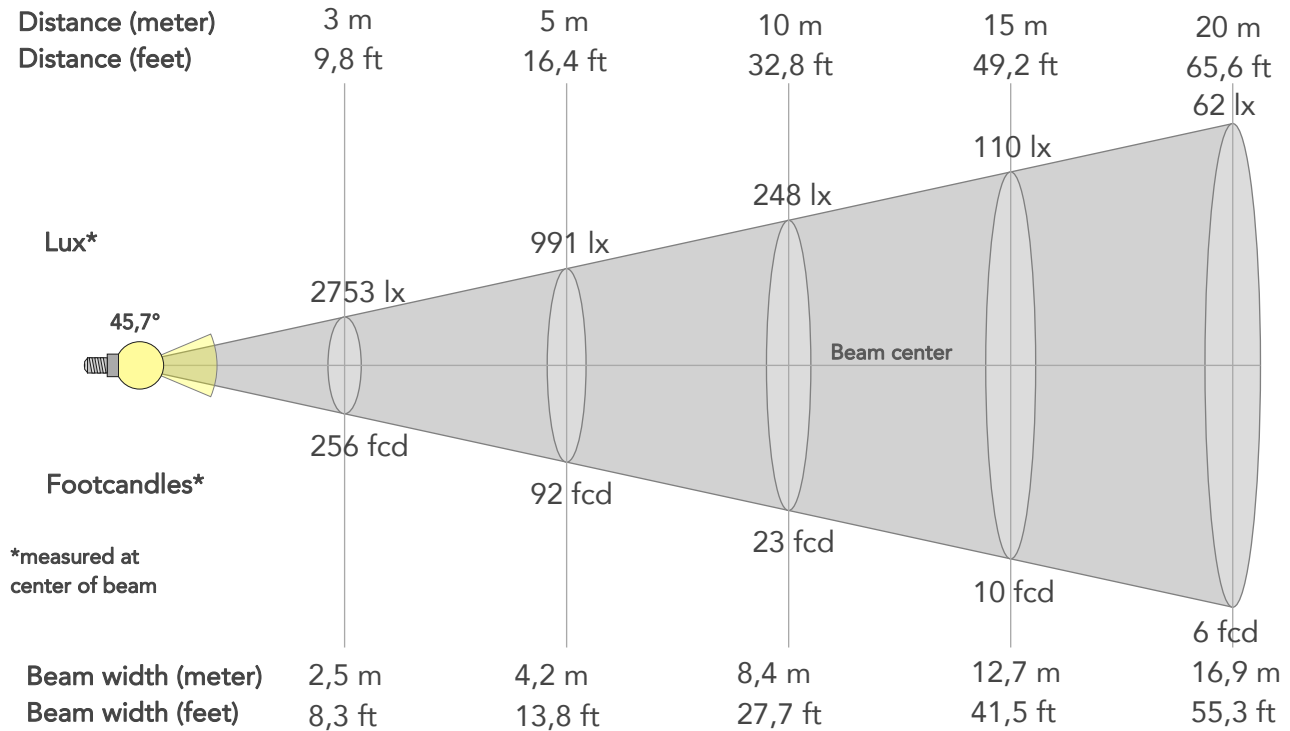
Rg 98,9
Gammut index

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	88	-5%	0%
2	91	-3%	3%
3	89	-1%	5%
4	90	0%	4%
5	90	-1%	2%
6	95	0%	0%
7	95	-2%	0%
8	91	-4%	3%
9	87	-4%	9%
10	80	-2%	12%
11	79	2%	11%
12	91	3%	4%
13	91	6%	0%
14	93	2%	-3%
15	82	8%	-12%
16	94	-2%	-2%



BEAM DETAILS

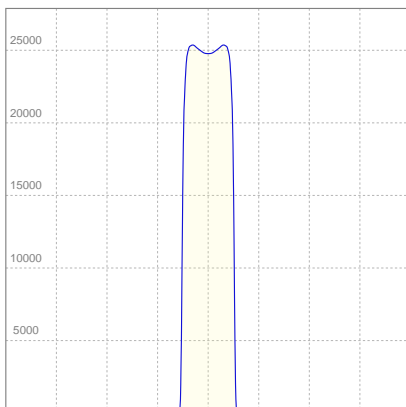
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
45,7°	48,6°	52°	90,0%	88,6%



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	24775lx	6194lx	2753lx	1548lx	991lx	440lx	248lx	110lx	62lx	40lx	28lx	15lx	10lx
Footcand.	2302fcd	575fcd	256fcd	144fcd	92fcd	41fcd	23fcd	10fcd	6fcd	4fcd	3fcd	1fcd	1fcd
Beam wid.	0,8m	1,7m	2,5m	3,4m	4,2m	6,3m	8,4m	12,7m	16,9m	21,1m	25,3m	33,7m	42,2m
Beam wid.	2,8ft	5,6ft	8,3ft	11ft	13,8ft	20,7ft	27,7ft	41,5ft	55,3ft	69,2ft	83ft	110,7ft	138,3ft

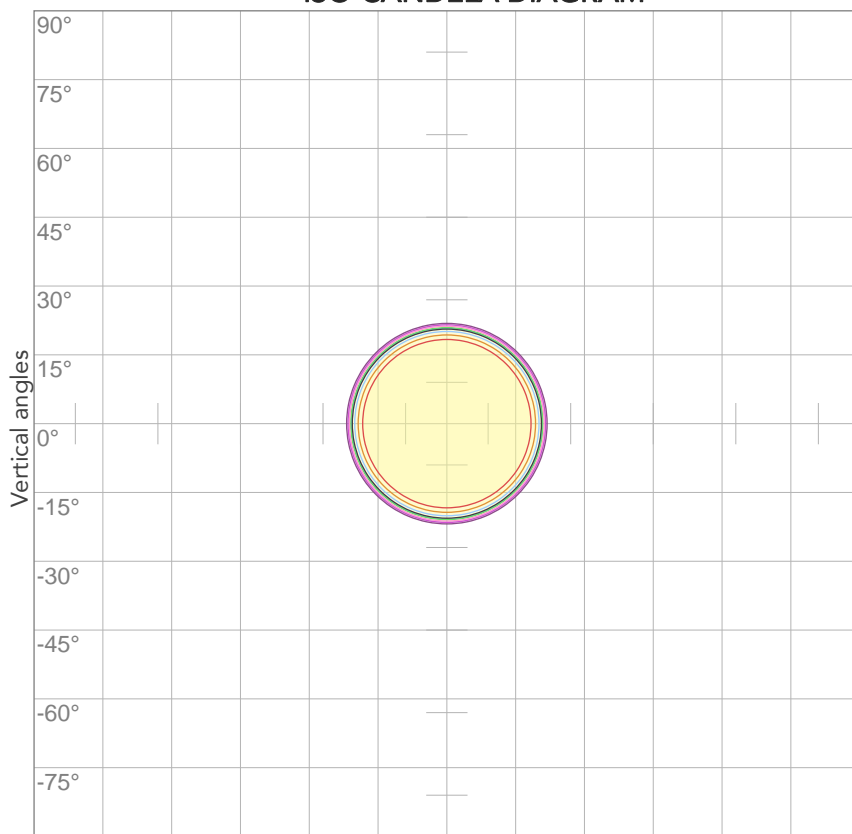
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
224V	3,17A	685,7W	20lm/W
Power FC			
0,96			

ISO CANDELA DIAGRAM



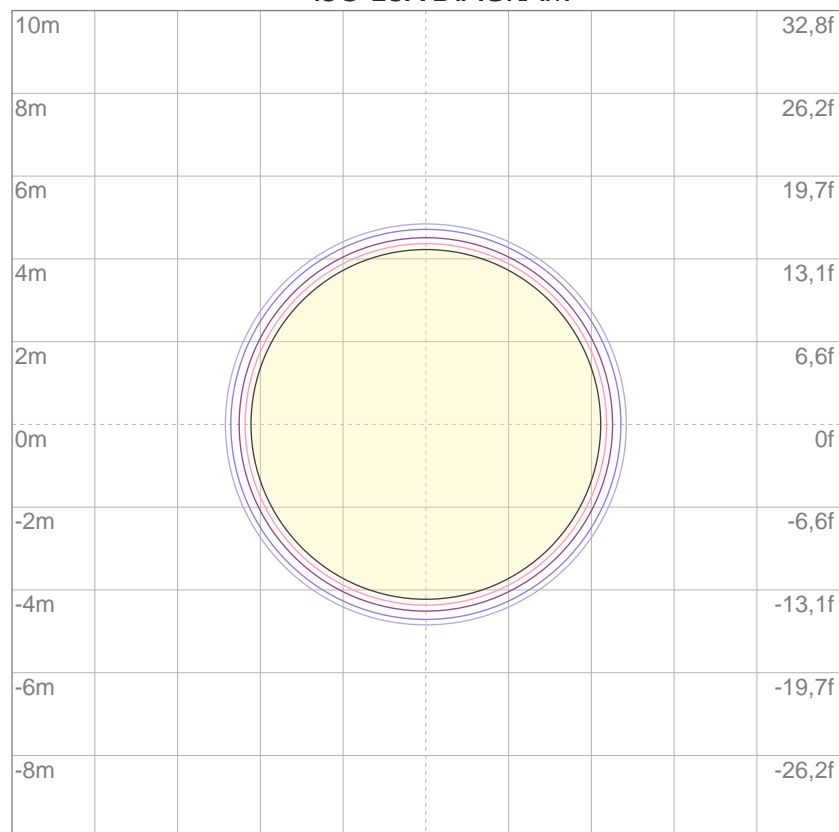
10%	2477 cd
20%	4955 cd
30%	7432 cd
40%	9910 cd
50%	12387 cd
60%	14865 cd
70%	17342 cd
80%	19820 cd

Conditions:

Number of c-planes: 2

Candela at center: 24775 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	7,43 lx
5%	12,4 lx
10%	24,8 lx
30%	74,3 lx
50%	124 lx

Conditions:

Number of c-planes: 2

Lux at center: 248 lx

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



Total lumen output:

11897 lm

Peak candela output:

152005 cd

Light quality:

CRI: 93,6

Color temperature:

6376 K

PRODUCT NAME:

RA2000PROFILE

MEASURAMENT CONDITIONS:

Beam angle:

Med Zoom

Target:

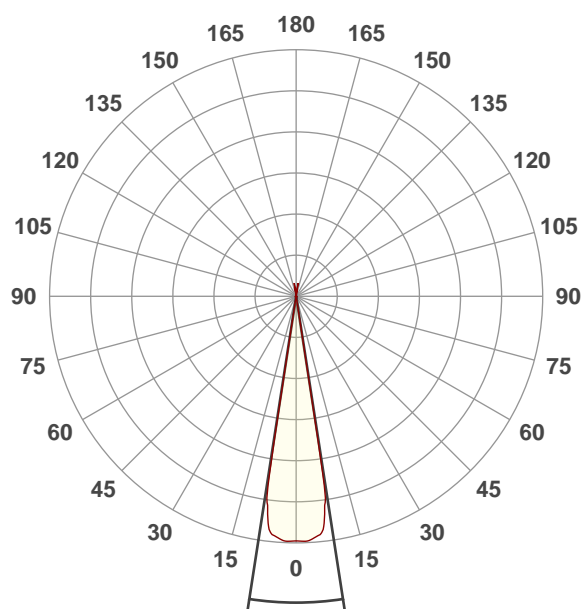
Full On

Operator:

Paolo Carvone

Date and time:

15/05/2020 11:32:17

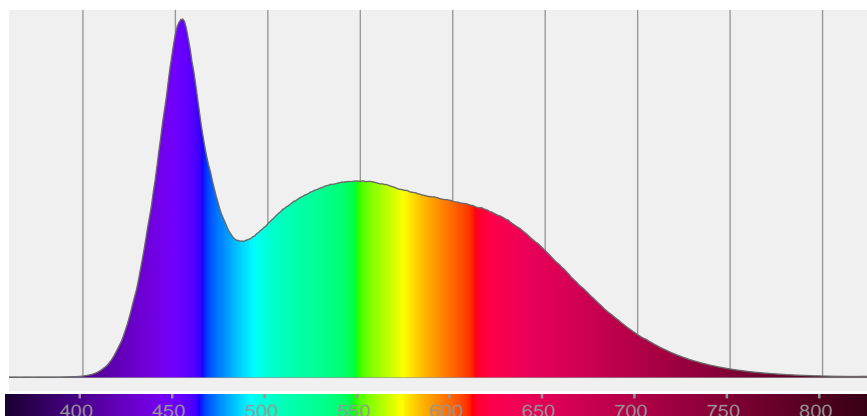


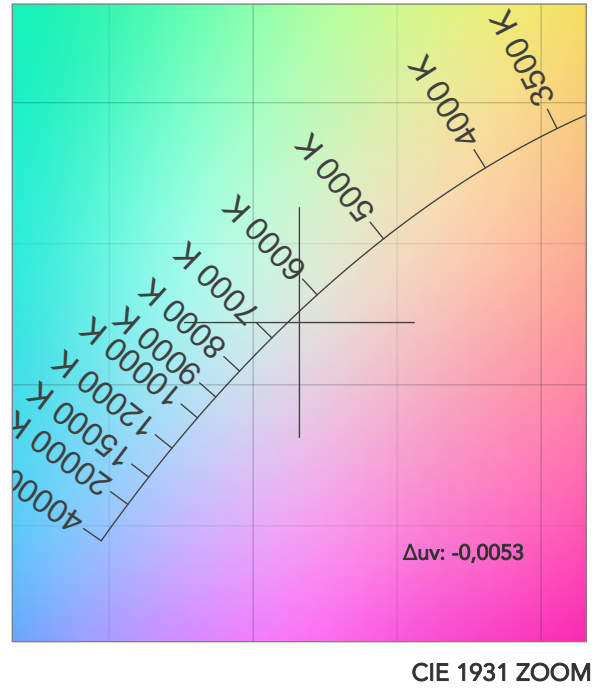
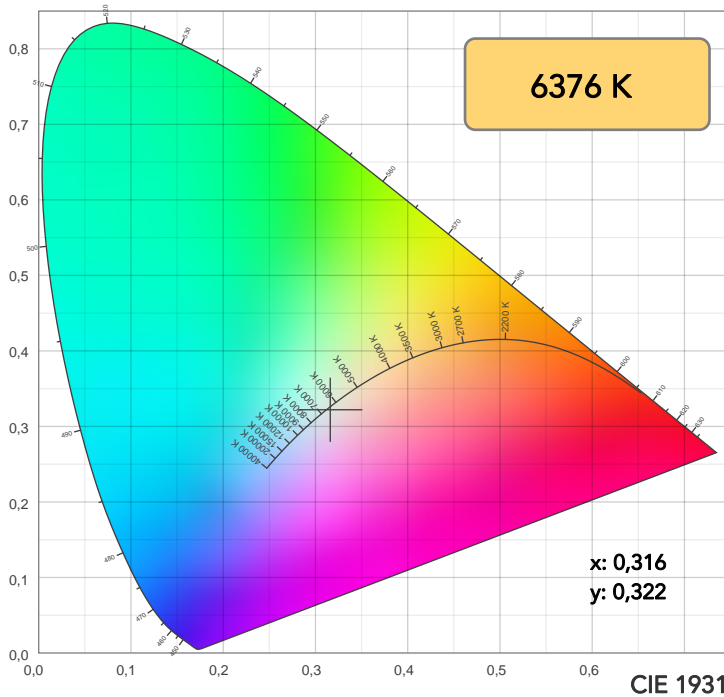
Beam angle 50%: 17,6°

Field angle 10%: 18,5°

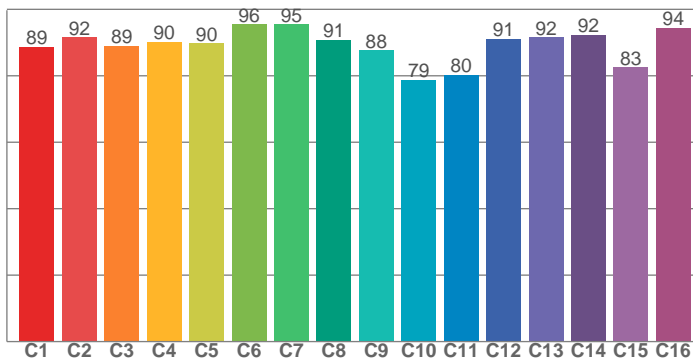
Cut off angle 2.5%: 18,7°

Spectra

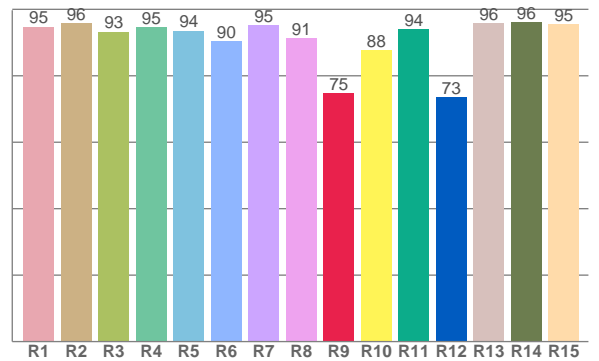




TM30: 89,1



CRI: 93,6 (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
94,8	95,8	93,2	94,5	93,6	90,5	95,2	91,2	74,8	87,7	94,0	73,4	95,8	96,0	95,4

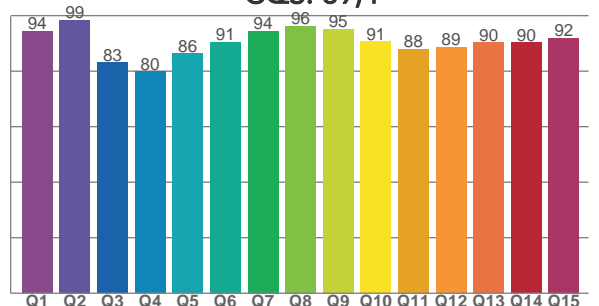
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
88,6	91,5	89,0	90,2	89,8	95,5	95,4	90,8	87,7	78,8	80,3	91,1	91,5	92,3	82,6	94,4

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
94,3	98,5	83,1	79,8	86,3	90,6	94,4	96,2	95,2	90,6	88,0	88,6	90,4	90,3	92,0

CQS: 89,4



COLOR PARAMETERS

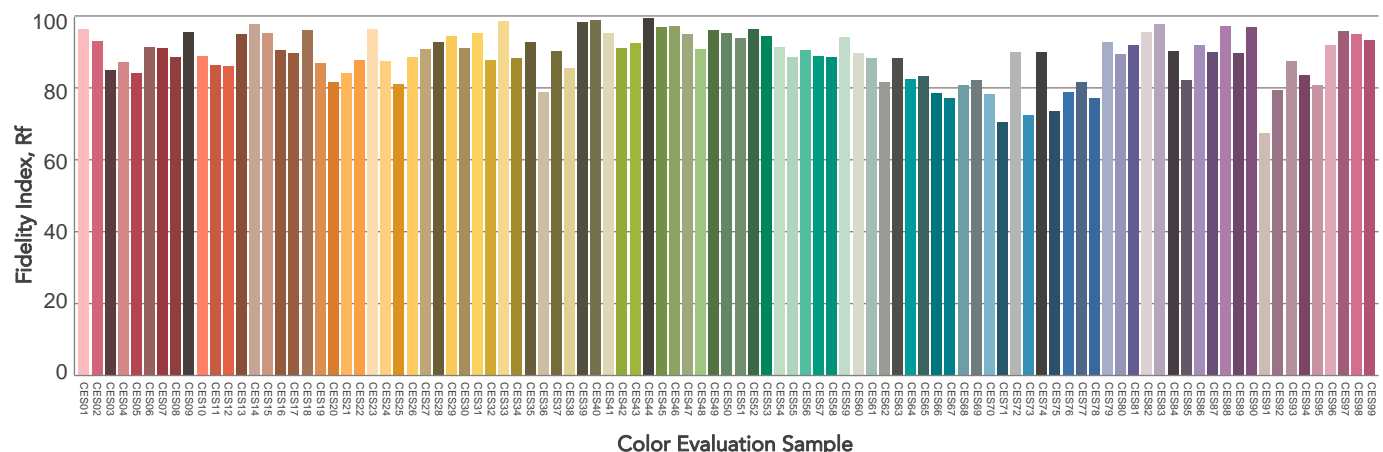
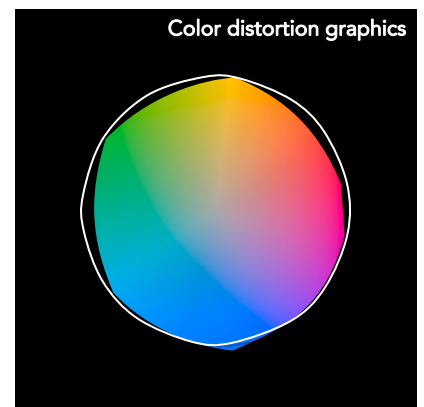
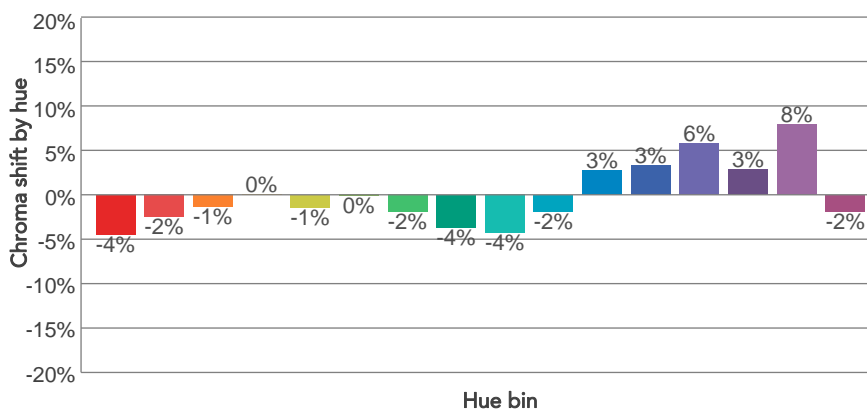
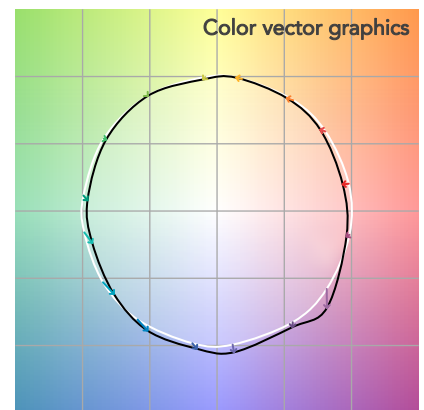
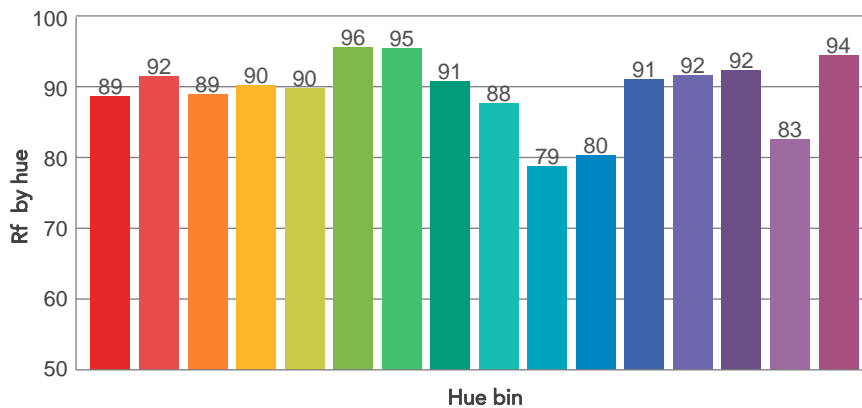
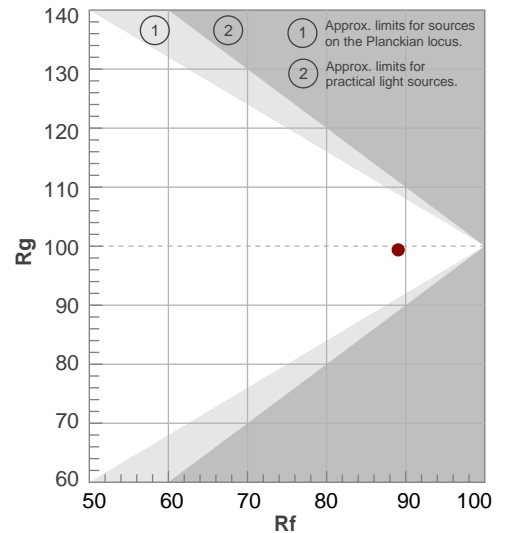
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
6376 K	93,6	74,8	89,1	99,4	89,4	93	0,316	0,322	-0,0053

TM30 DETAILS

Rf 89,1
Fidelity index Rf

Rg 99,4
Gammut index

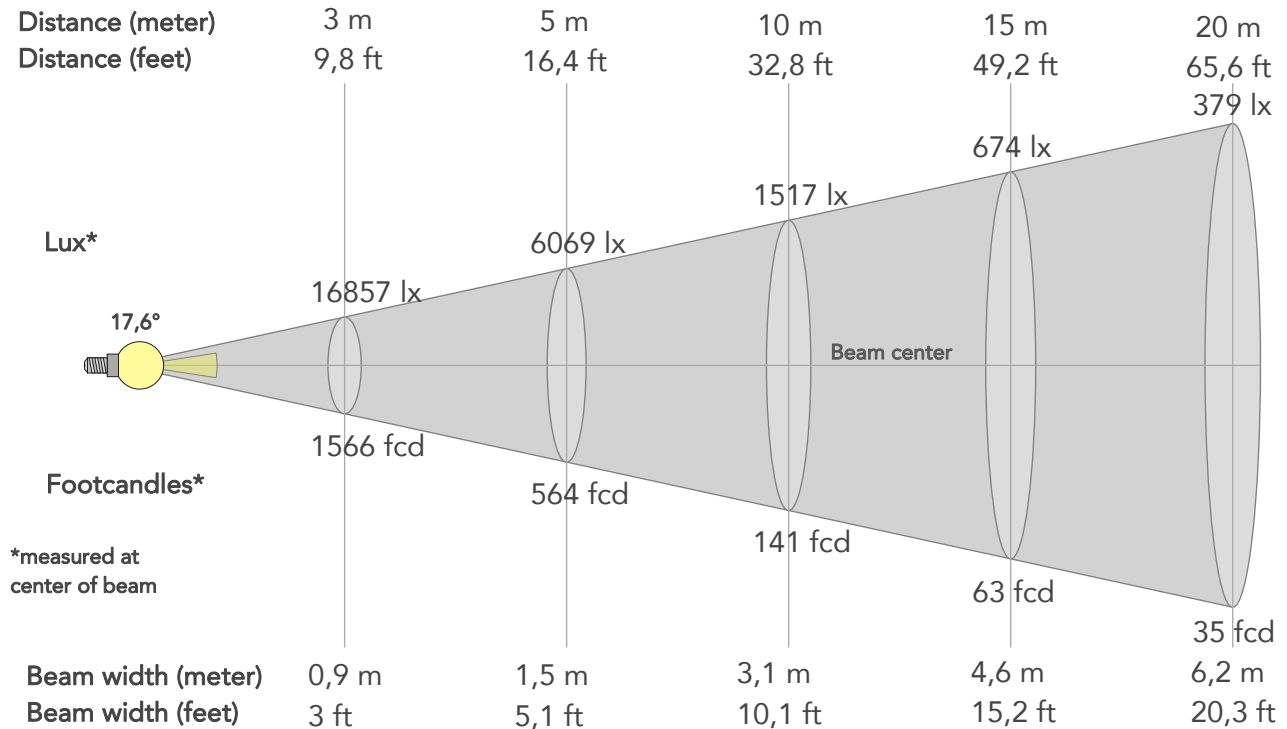
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	89	-4%	0%
2	92	-2%	3%
3	89	-1%	5%
4	90	0%	4%
5	90	-1%	2%
6	96	0%	0%
7	95	-2%	0%
8	91	-4%	3%
9	88	-4%	9%
10	79	-2%	12%
11	80	3%	11%
12	91	3%	4%
13	92	6%	0%
14	92	3%	-2%
15	83	8%	-12%
16	94	-2%	-2%



BEAM DETAILS



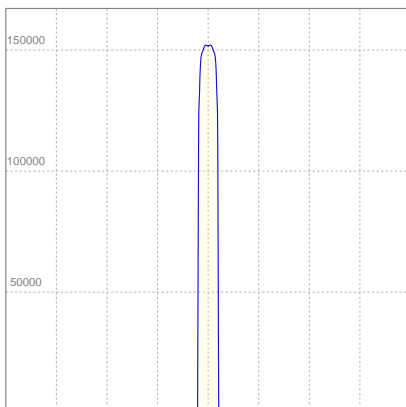
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
17,6°	18,5°	18,7°	90,8%	90,3%



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	151713lx	37928lx	16857lx	9482lx	6069lx	2697lx	1517lx	674lx	379lx	243lx	169lx	95lx	61lx
Footcand.	14095fcd	3524fcd	1566fcd	881fcd	564fcd	251fcd	141fcd	63fcd	35fcd	23fcd	16fcd	9fcd	6fcd
Beam wid.	0,3m	0,6m	0,9m	1,2m	1,5m	2,3m	3,1m	4,6m	6,2m	7,7m	9,3m	12,4m	15,5m
Beam wid.	1ft	2ft	3ft	4,1ft	5,1ft	7,6ft	10,1ft	15,2ft	20,3ft	25,4ft	30,4ft	40,6ft	50,7ft

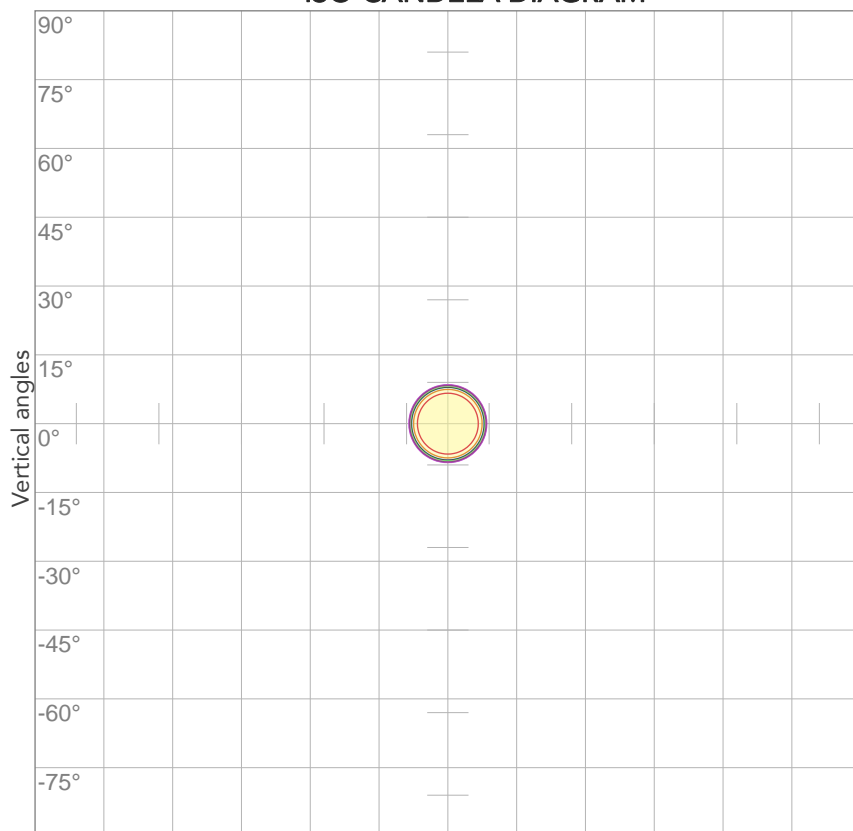
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
223V	3,18A	685,3W	17lm/W
Power FC			
0,96			

ISO CANDELA DIAGRAM



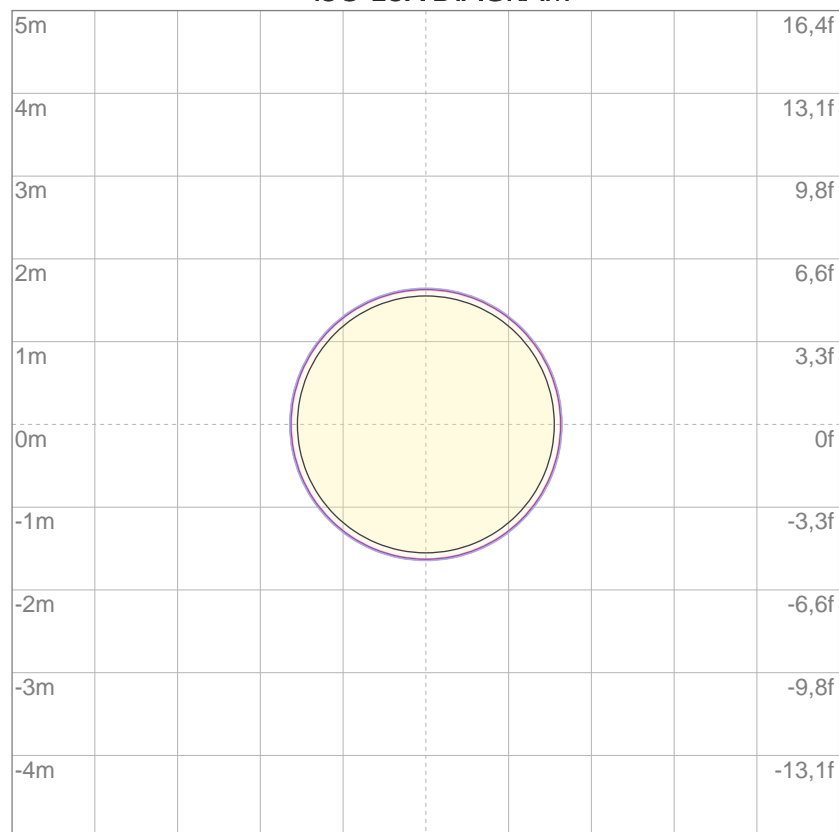
10%	15171 cd
20%	30343 cd
30%	45514 cd
40%	60685 cd
50%	75856 cd
60%	91028 cd
70%	106199 cd
80%	121370 cd

Conditions:

Number of c-planes: 2

Candela at center: 151713 cd

ISO LUX DIAGRAM



3%	45,5 lx
5%	75,9 lx
10%	152 lx
30%	455 lx
50%	759 lx

Conditions:

Number of c-planes: 2

Lux at center: 1517 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:

9019 lm

Peak candela output:

613430 cd

Light quality:

CRI: 93,5

Color temperature:

6346 K

PRODUCT NAME:

RA2000PROFILE

MEASURAMENT CONDITIONS:

Beam angle:

Min Zoom

Target:

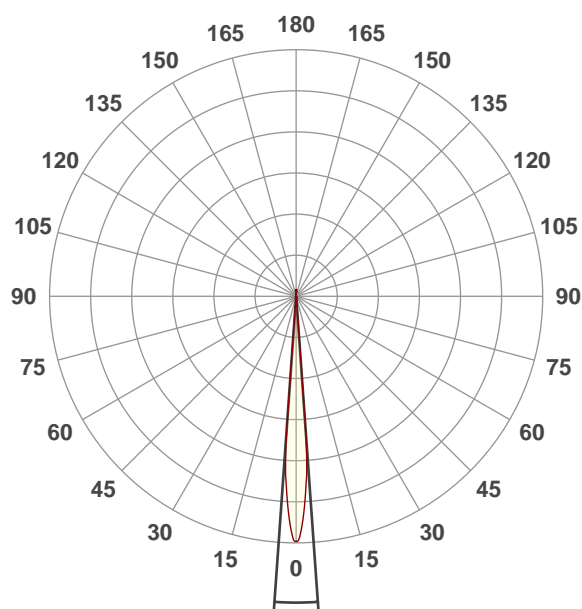
Full On

Operator:

Paolo Carvone

Date and time:

15/05/2020 11:25:59

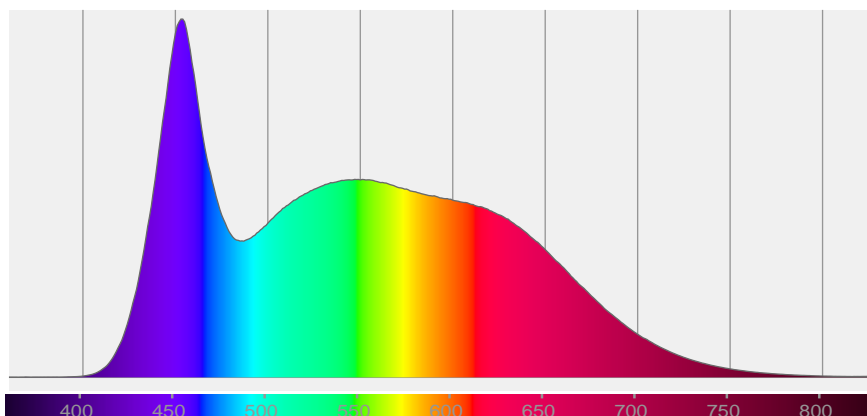


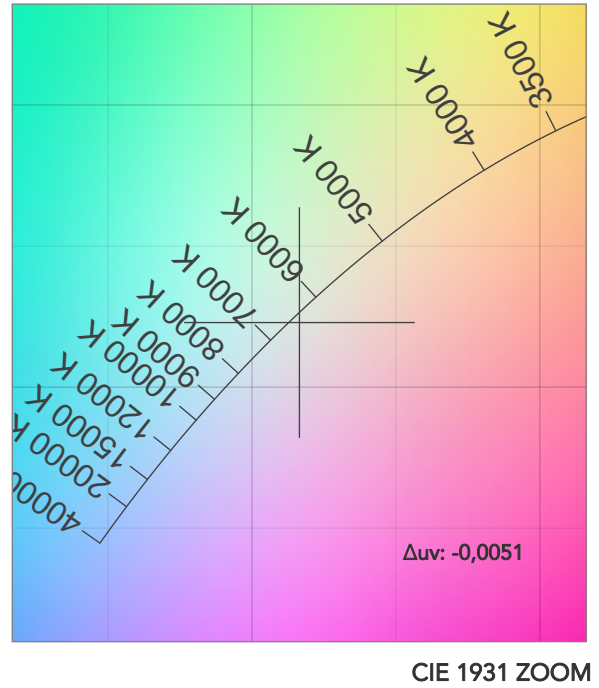
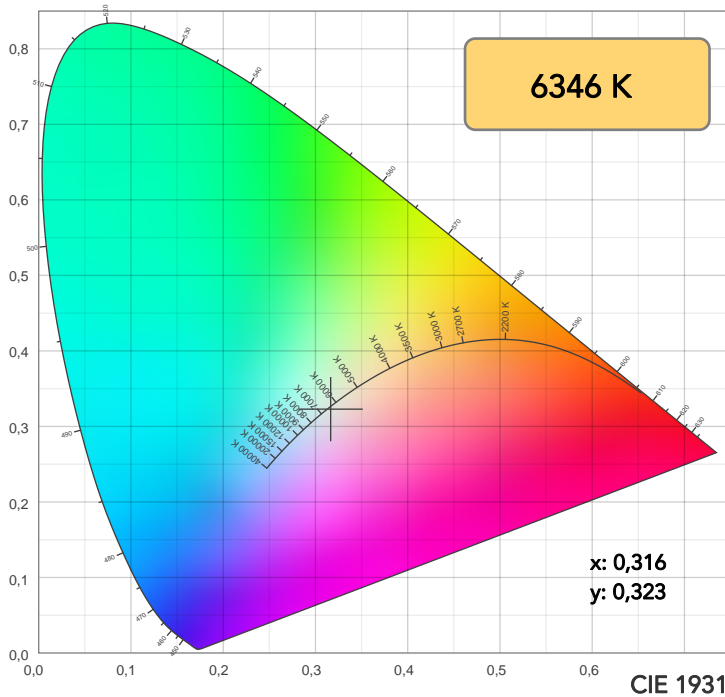
Beam angle 50%: 8,1°

Field angle 10%: 8,9°

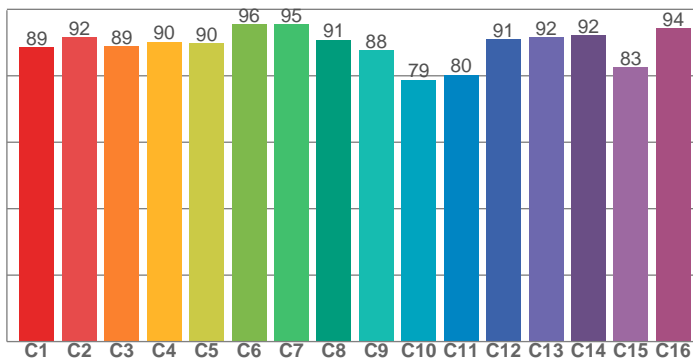
Cut off angle 2.5%: 9°

Spectra

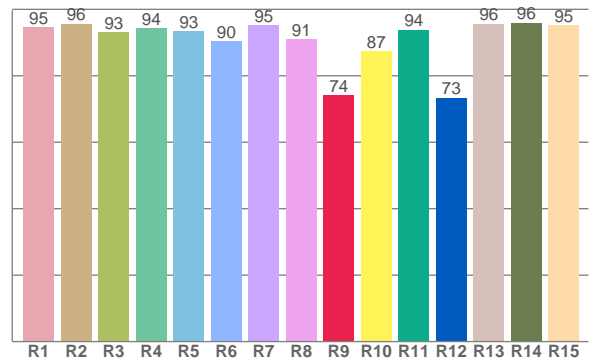




TM30: 89,0



CRI: 93,5 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
94,6	95,6	93,1	94,4	93,4	90,4	95,2	91,0	74,1	87,3	93,8	73,3	95,6	96,0	95,2

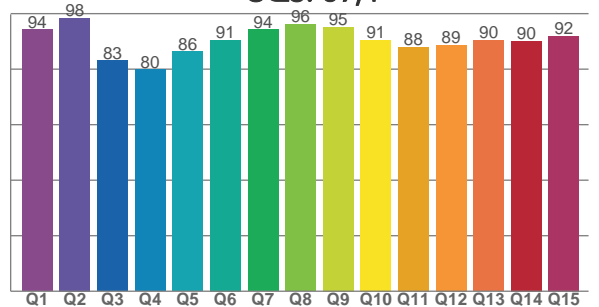
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
88,6	91,5	88,9	90,1	89,8	95,5	95,4	90,8	87,7	78,8	80,3	91,0	91,5	92,2	82,6	94,3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
94,3	98,5	83,1	79,8	86,3	90,5	94,3	96,1	95,2	90,6	88,0	88,7	90,4	90,2	91,9

CQS: 89,4



COLOR PARAMETERS

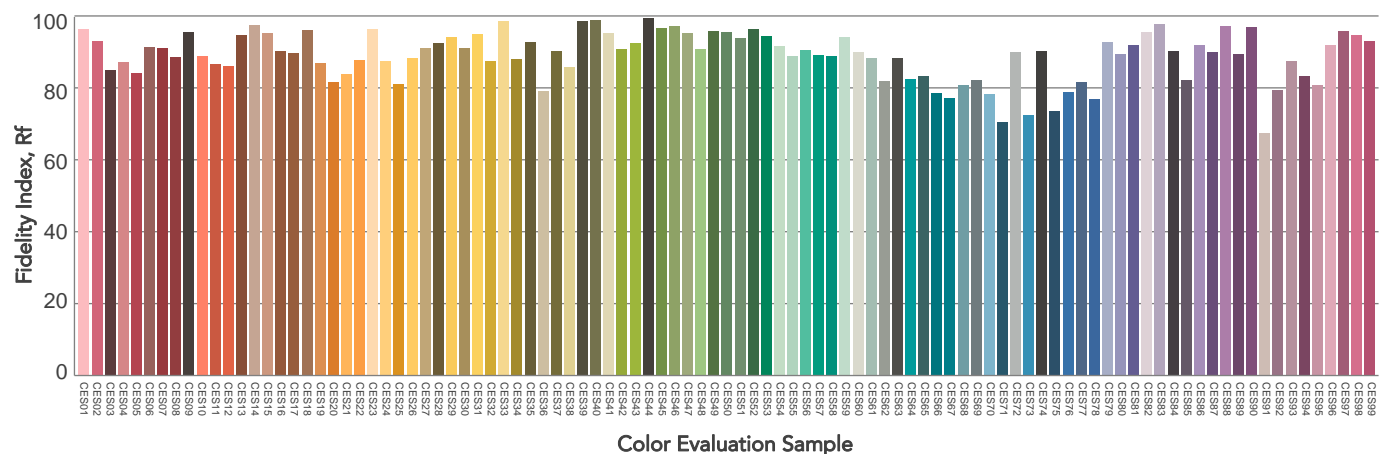
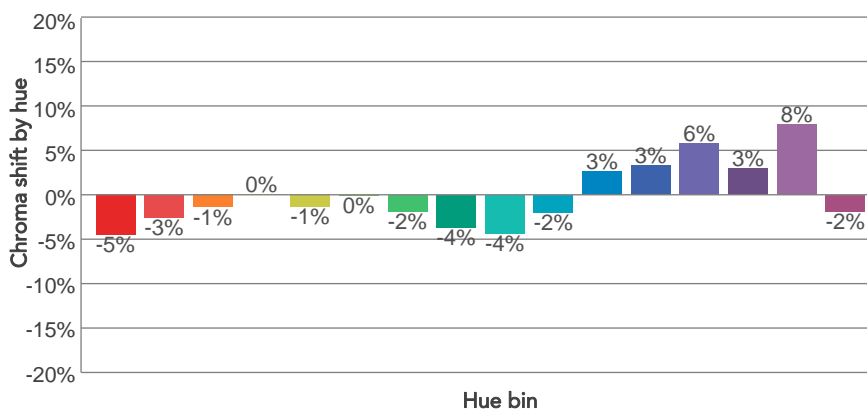
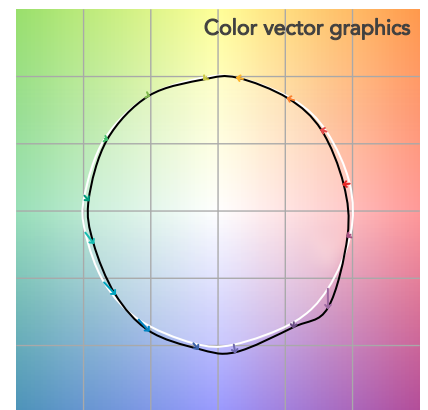
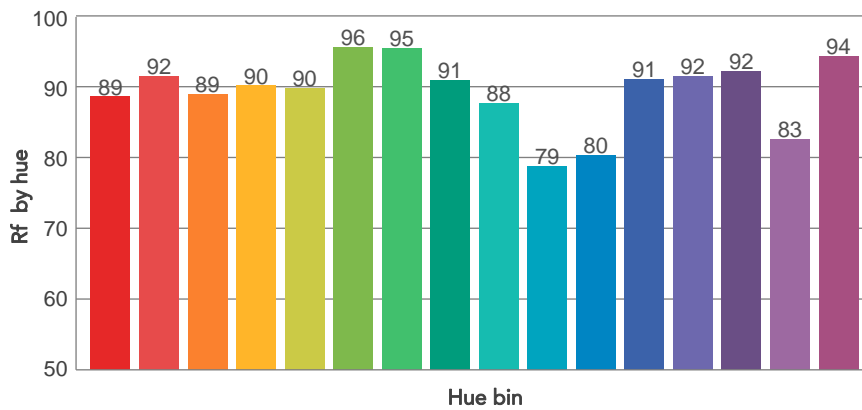
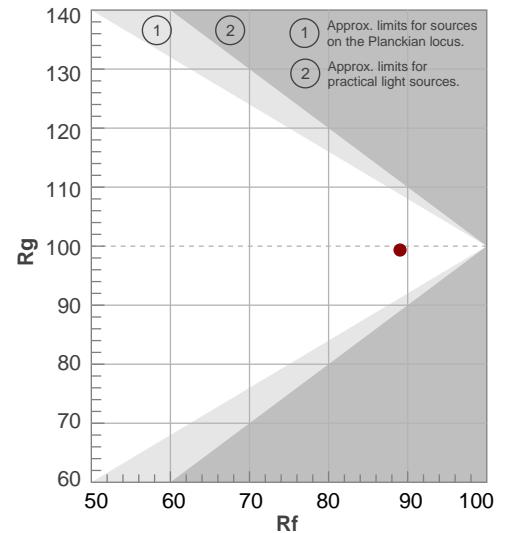
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
6346 K	93,5	74,1	89,0	99,3	89,4	92	0,316	0,323	-0,0051

TM30 DETAILS

Rf 89,0
Fidelity index Rf

Rg 99,3
Gammut index

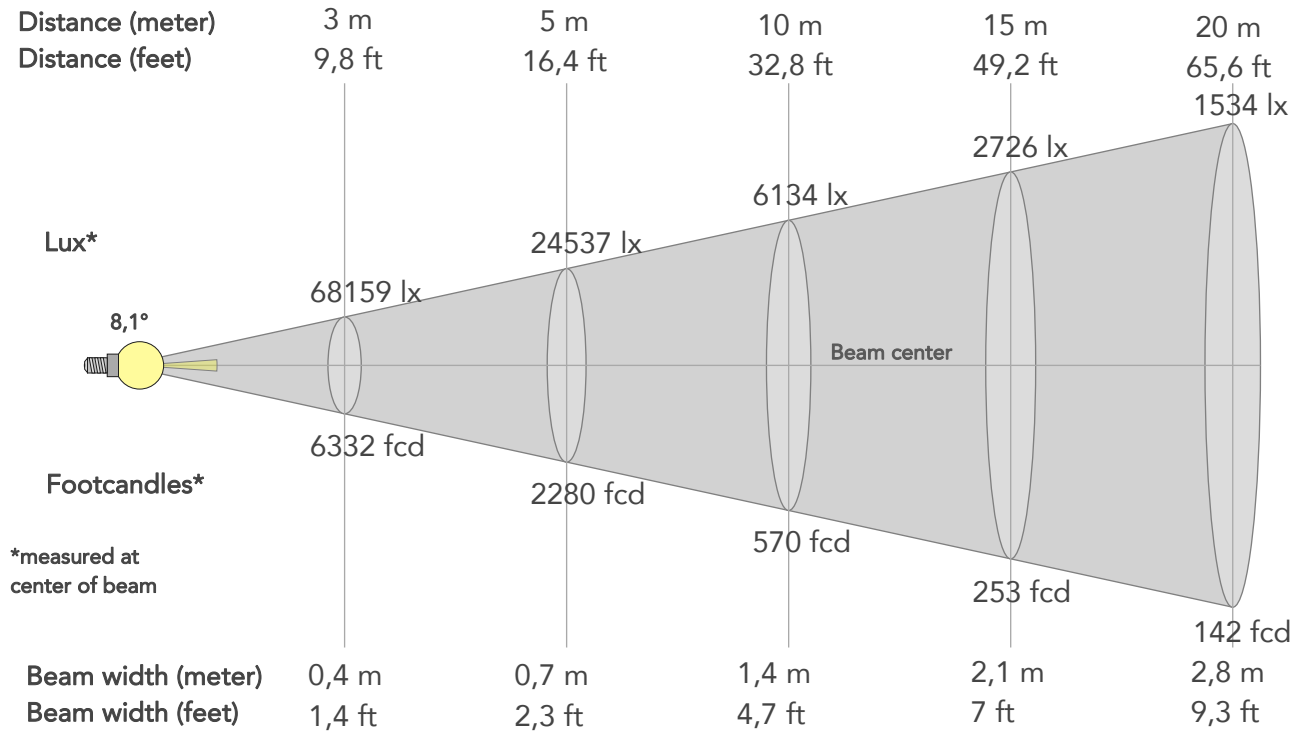
		Graphic shifts (%)	
Hue Bin	R _f	Chroma	Hue
1	89	-5%	0%
2	92	-3%	3%
3	89	-1%	5%
4	90	0%	4%
5	90	-1%	2%
6	96	0%	0%
7	95	-2%	0%
8	91	-4%	3%
9	88	-4%	9%
10	79	-2%	12%
11	80	3%	11%
12	91	3%	4%
13	92	6%	0%
14	92	3%	-2%
15	83	8%	-12%
16	94	-2%	-2%



BEAM DETAILS



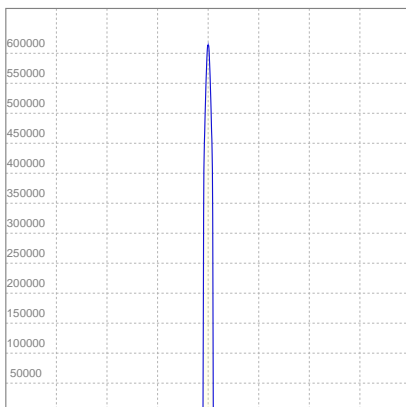
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
8,1°	8,9°	9°	91,2%	91,1%



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	613430lx	153358lx	68159lx	38339lx	24537lx	10905lx	6134lx	2726lx	1534lx	981lx	682lx	383lx	245lx
Footcand.	56990fcd	14247fcd	6332fcd	3562fcd	2280fcd	1013fcd	570fcd	253fcd	142fcd	91fcd	63fcd	36fcd	23fcd
Beam wid.	0,1m	0,3m	0,4m	0,6m	0,7m	1,1m	1,4m	2,1m	2,8m	3,6m	4,3m	5,7m	7,1m
Beam wid.	0,5ft	0,9ft	1,4ft	1,9ft	2,3ft	3,5ft	4,7ft	7ft	9,3ft	11,6ft	14ft	18,6ft	23,3ft

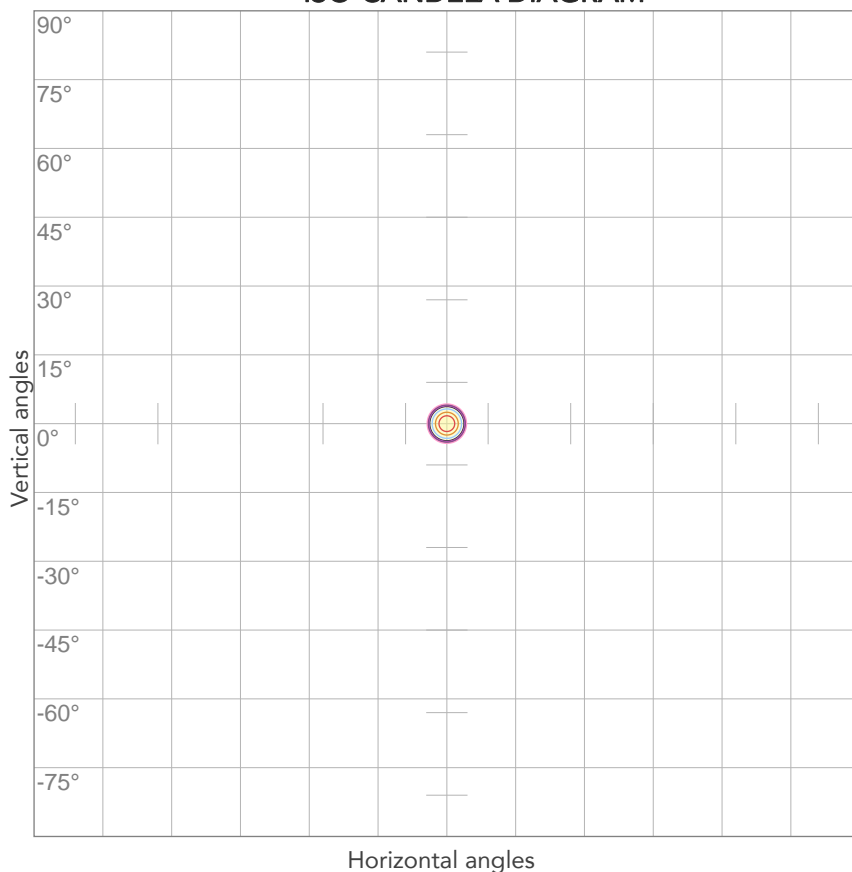
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
224V	3,18A	685,3W	13lm/W
Power FC			
0,96			

ISO CANDELA DIAGRAM



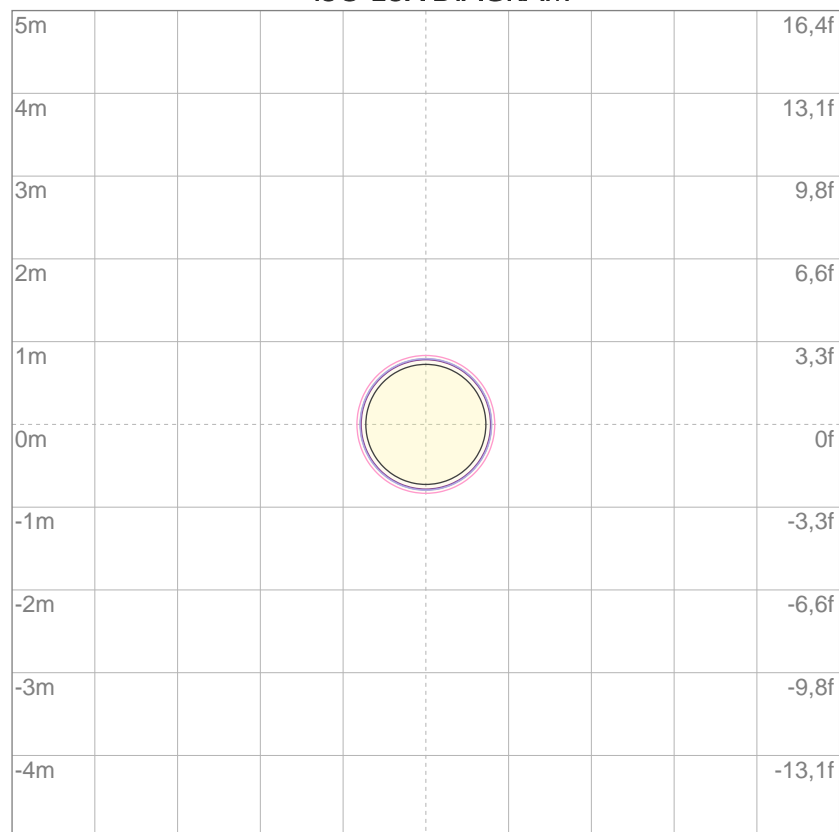
10%	61343 cd
20%	122686 cd
30%	184029 cd
40%	245372 cd
50%	306715 cd
60%	368058 cd
70%	429401 cd
80%	490744 cd

Conditions:

Number of c-planes: 2

Candela at center: 613430 cd

ISO LUX DIAGRAM



3%	184 lx
5%	307 lx
10%	613 lx
30%	1840 lx
50%	3067 lx

Conditions:

Number of c-planes: 2

Lux at center: 6134 lx

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