Photometric Test Report

Astra Profile900

900W Profile Moving head, with Hich CRI white LED source, 5° - 52° zoom

(PRELIMINARY)

CONTENTS

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:

25311 lm

Peak candela output:

41898 cd

Light quality:

CRI: 95,4

Color temperature:

6123 K

PRODUCT NAME:

ASTRAPROFILE900

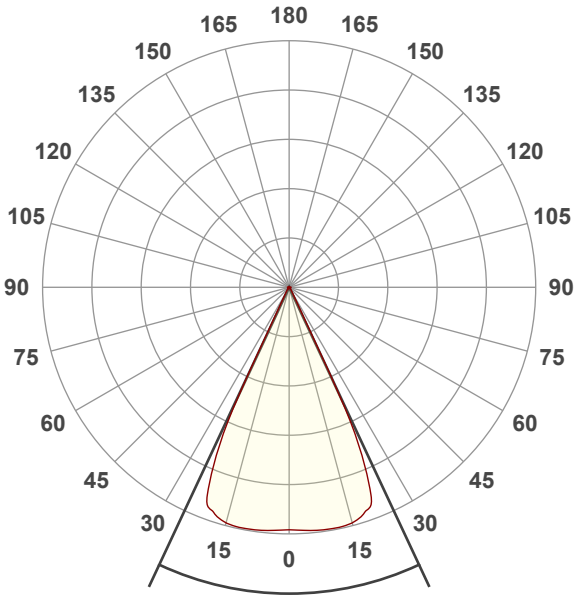
MEASURAMENT CONDITIONS:

Beam angle:
Max Zoom

Target:
Full On - High CRI LED

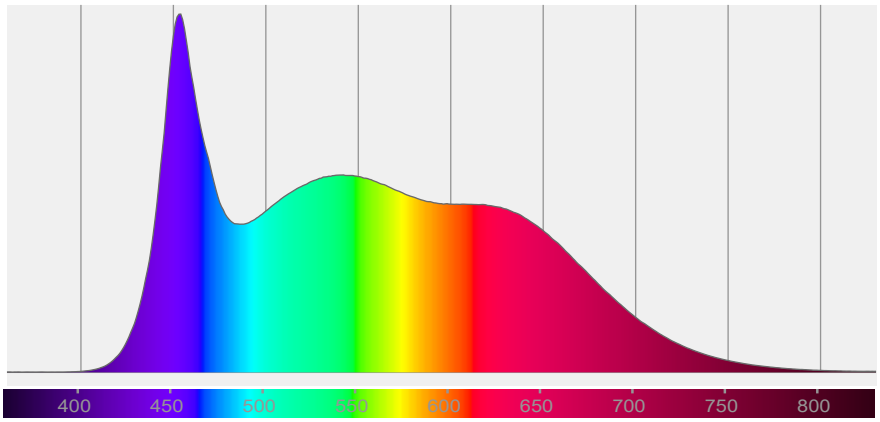
Operator:
Salvatore Giglio

Date and time:
21/08/2024 17:43:35

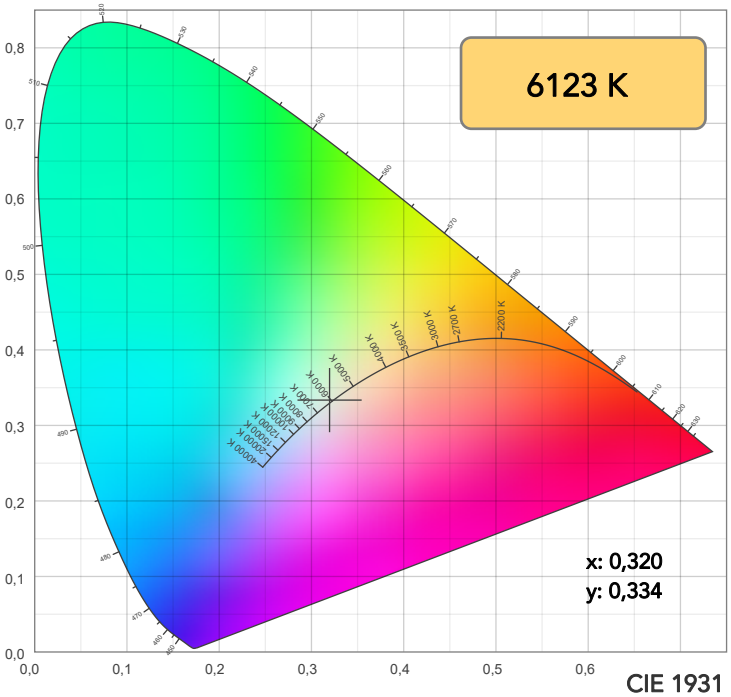


Beam angle 50%: 50,2°
Field angle 10%: 51,9°
Cut off angle 2.5%: 52,4°

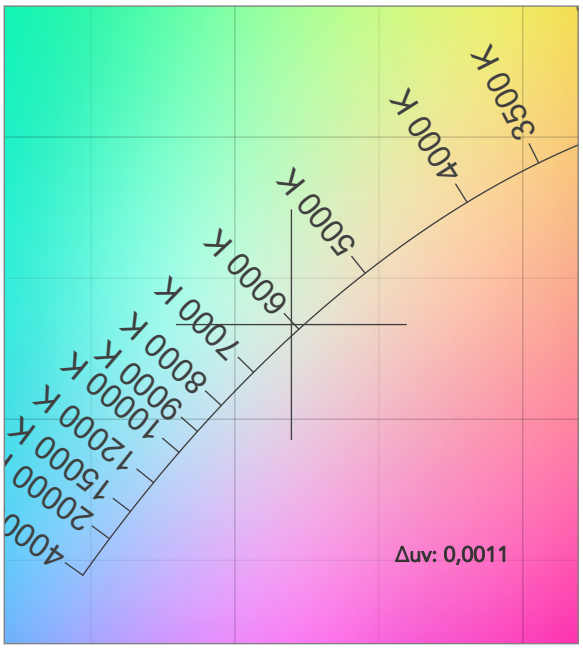
Spectra



COLOR DETAILS

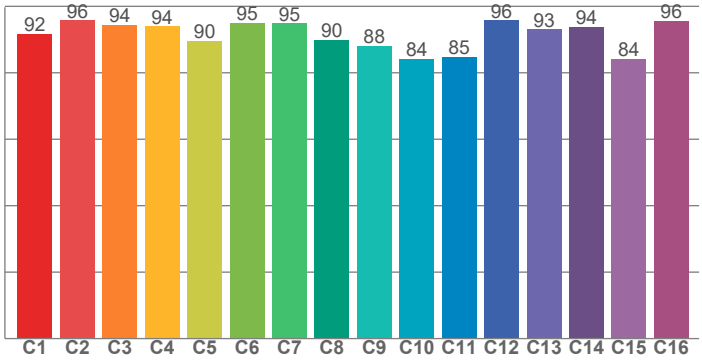


CIE 1931

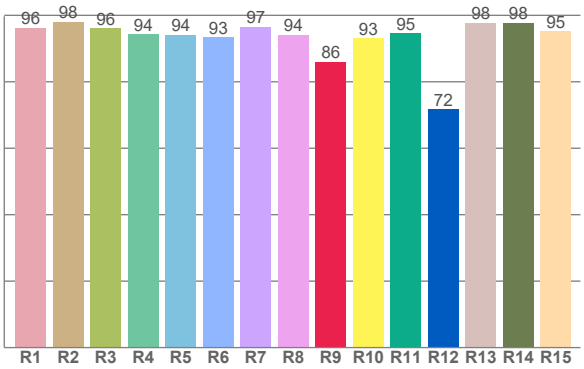


CIE 1931 ZOOM

TM30: 91,2



CRI: 95,4 (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
96,3	98,1	96,1	94,3	94,1	93,3	96,6	94,1	86,1	93,0	94,6	71,7	97,8	97,8	95,1

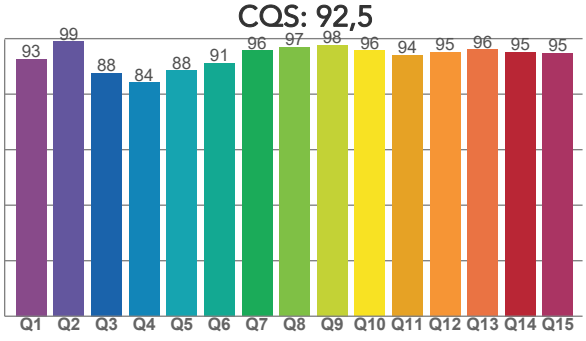
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91,7	95,8	94,4	94,0	89,5	95,0	94,9	89,8	88,1	84,2	84,8	95,7	93,1	93,8	84,2	95,6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
92,7	99,0	87,7	84,2	88,5	91,2	95,7	96,9	97,7	95,7	94,2	95,1	96,0	95,3	94,9

CQS: 92,5



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 diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
6123 K	95,4	86,1	91,2	98,3	92,5	97	0,320	0,334	0,0011

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TM30 DETAILS

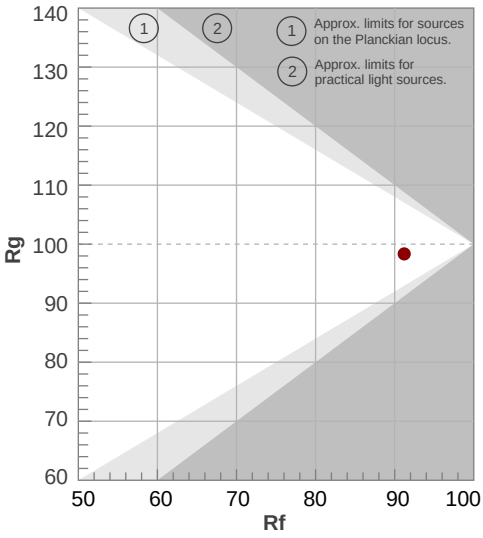
Rf 91,2

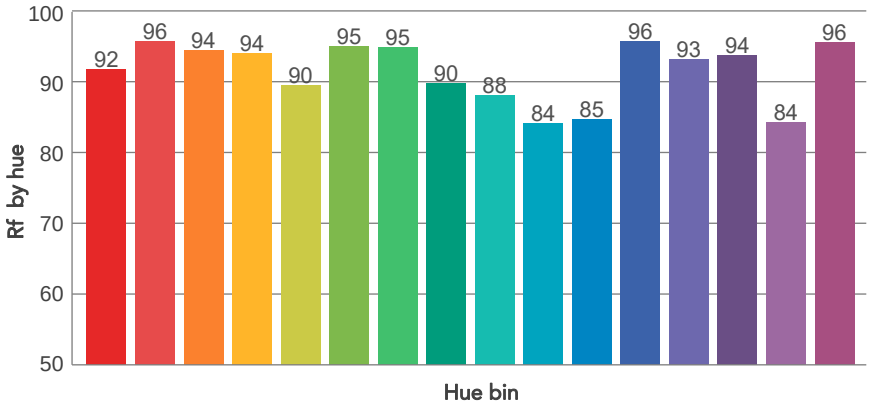
Fidelity index Rf

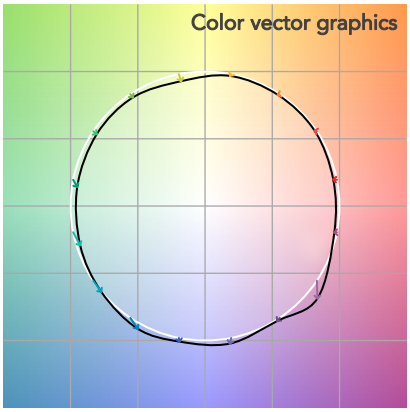
Rg 98,3

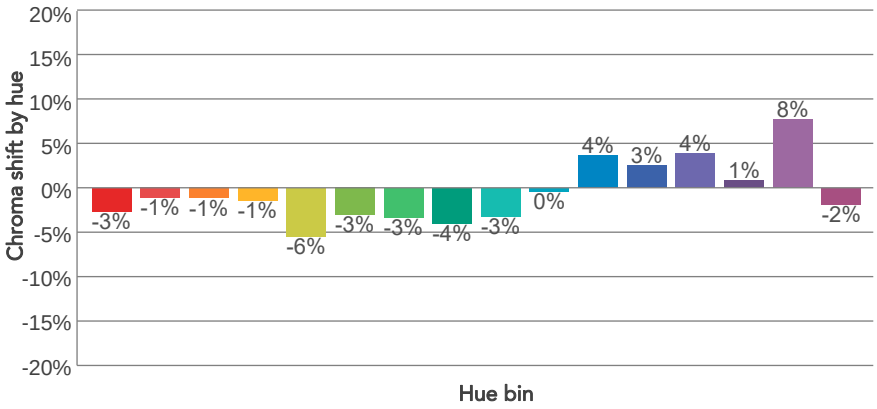
Gamut index

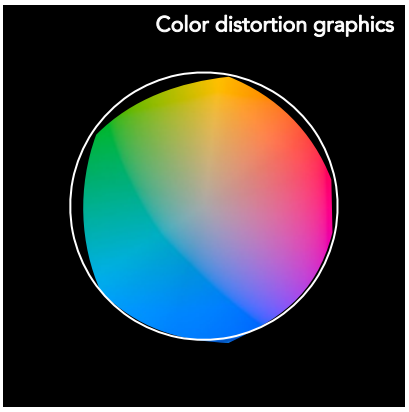
Hue Bin	R_f	Graphic shifts (%) Chroma	Hue
1	92	-3%	1%
2	96	-1%	1%
3	94	-1%	1%
4	94	-1%	1%
5	90	-6%	-1%
6	95	-3%	0%
7	95	-3%	0%
8	90	-4%	5%
9	88	-3%	10%
10	84	0%	10%
11	85	4%	9%
12	96	3%	1%
13	93	4%	-2%
14	94	1%	-3%
15	84	8%	-11%
16	96	-2%	-1%

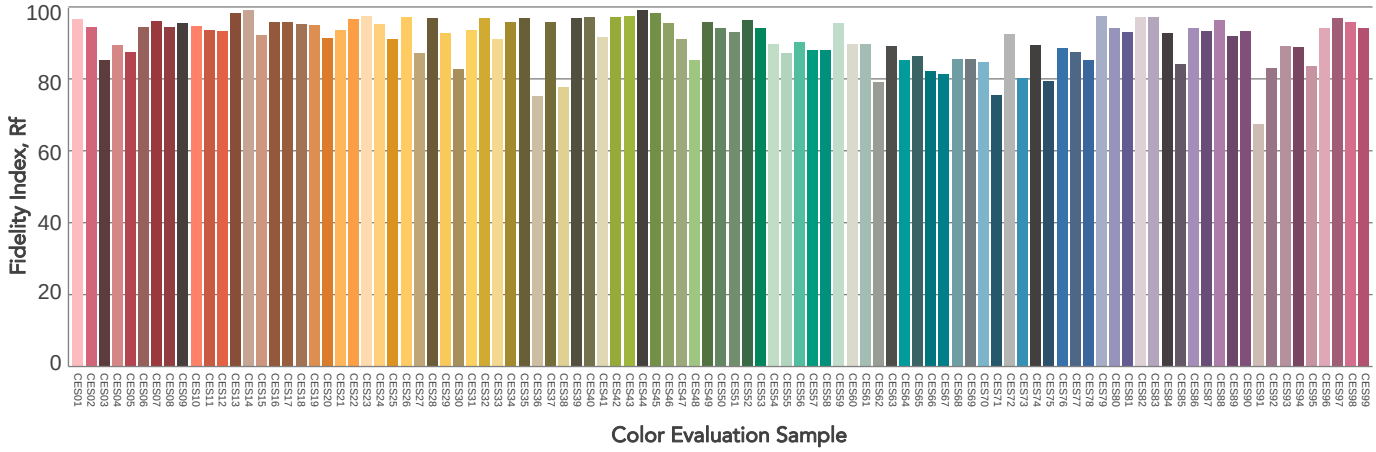












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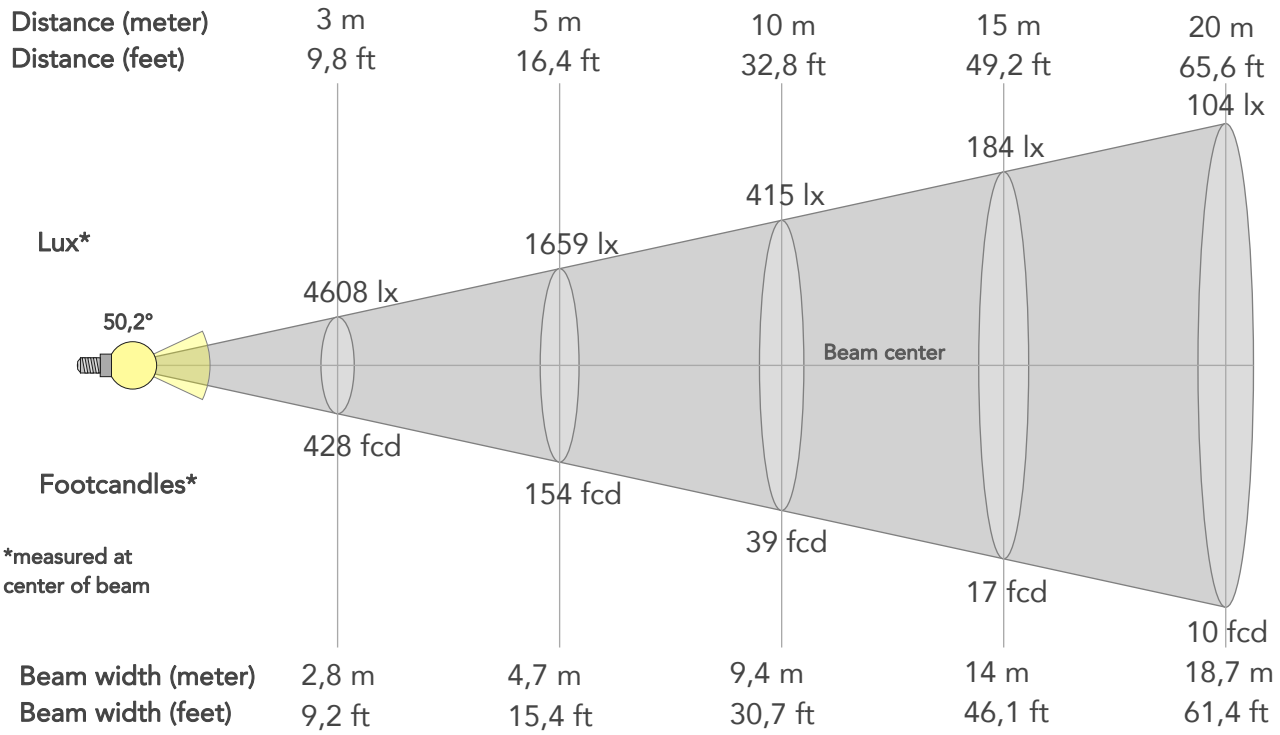
BEAM DETAILS

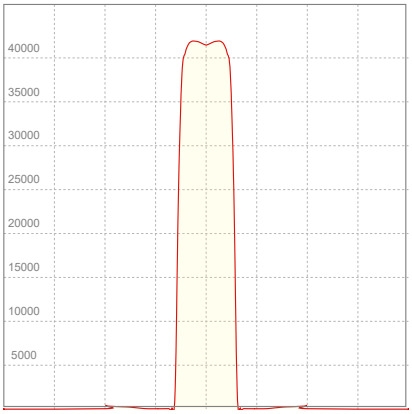
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
50,2°	51,9°	52,4°	99,9%	99,9%



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	41473lx	10368lx	4608lx	2592lx	1659lx	737lx	415lx	184lx	104lx	66lx	46lx	26lx	17lx
Footcand.	3853fcd	963fcd	428fcd	241fcd	154fcd	68fcd	39fcd	17fcd	10fcd	6fcd	4fcd	2fcd	2fcd
Beam wid.	0,9m	1,9m	2,8m	3,7m	4,7m	7m	9,4m	14m	18,7m	23,4m	28,1m	37,5m	46,8m
Beam wid.	3,1ft	6,2ft	9,2ft	12,3ft	15,4ft	23ft	30,7ft	46,1ft	61,4ft	76,8ft	92,1ft	122,9ft	153,6ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Effeciency
221V	5,55A	1229W	0,98	21lm/W

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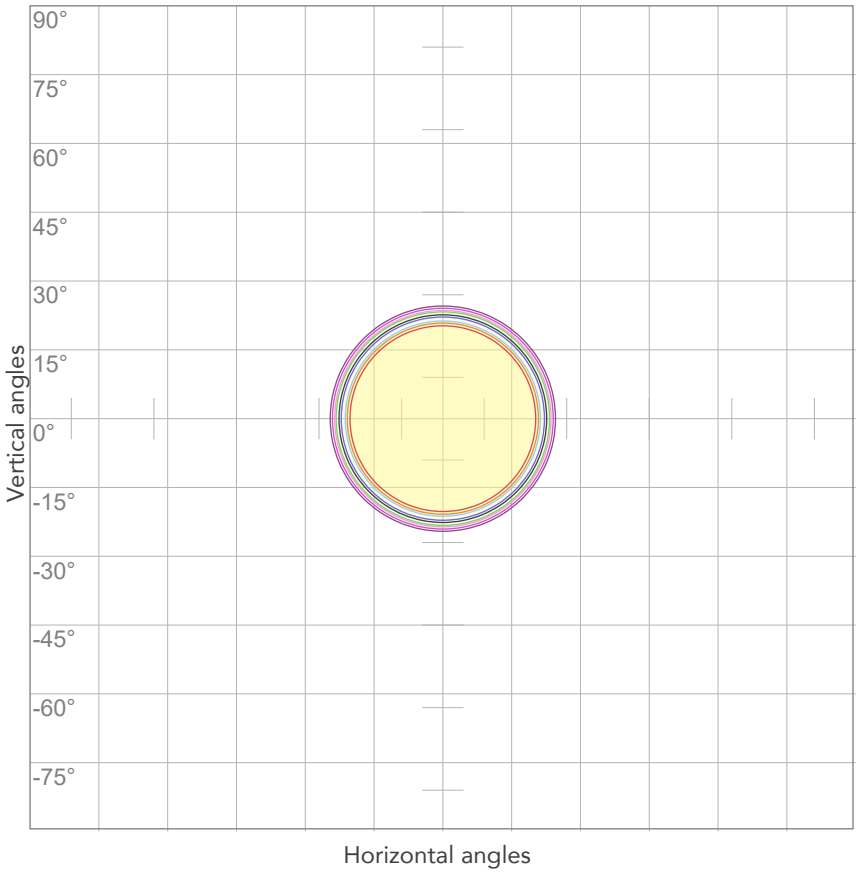
ISO DIAGRAMS

ISO CANDELA DIAGRAM



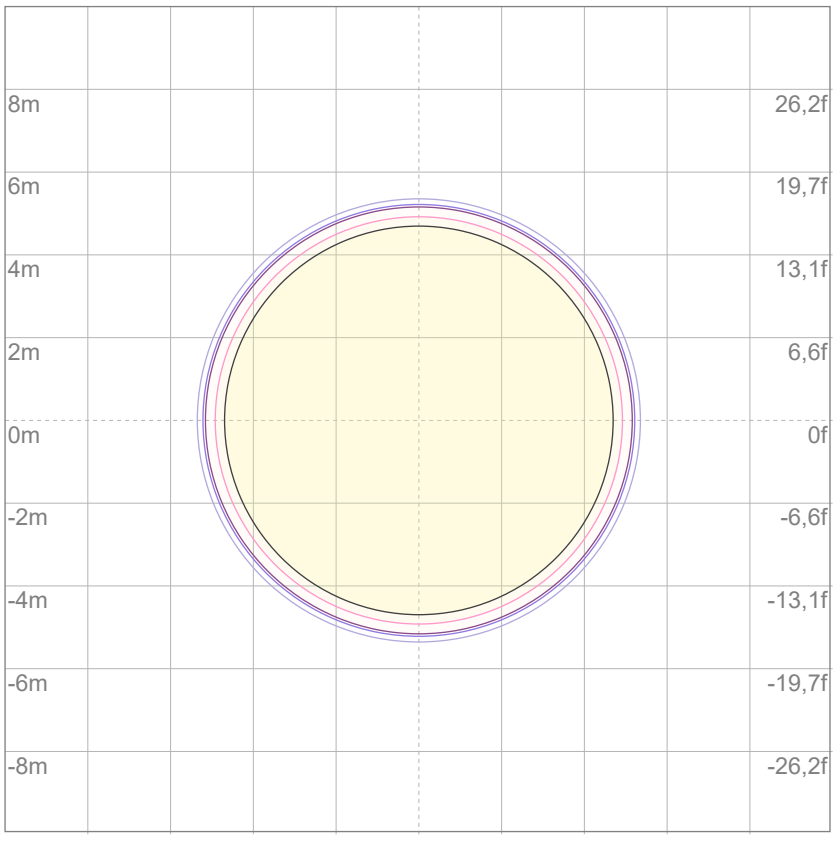
10%	4147 cd
20%	8295 cd
30%	12442 cd
40%	16589 cd
50%	20736 cd
60%	24884 cd
70%	29031 cd
80%	33178 cd

Conditions:

Number of c-planes: 2

Candela at center: 41473 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	12,4 lx
5%	20,7 lx
10%	41,5 lx
30%	124 lx
50%	207 lx

Conditions:

Number of c-planes: 2

Lux at center: 415 lx

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

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Total lumen output:

25941 lm

Peak candela output:

247902 cd

Light quality:

CRI: 95,5

Color temperature:

6094 K

PRODUCT NAME:

ASTRAPROFILE900

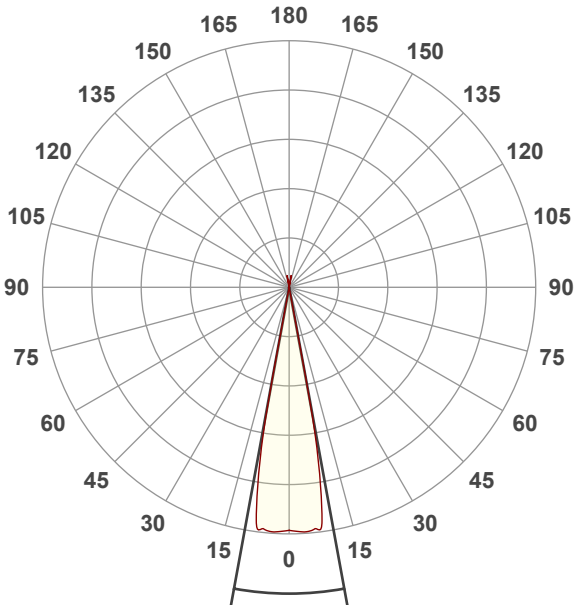
MEASURAMENT CONDITIONS:

Beam angle:
Med Zoom

Target:
Full On - High CRI LED

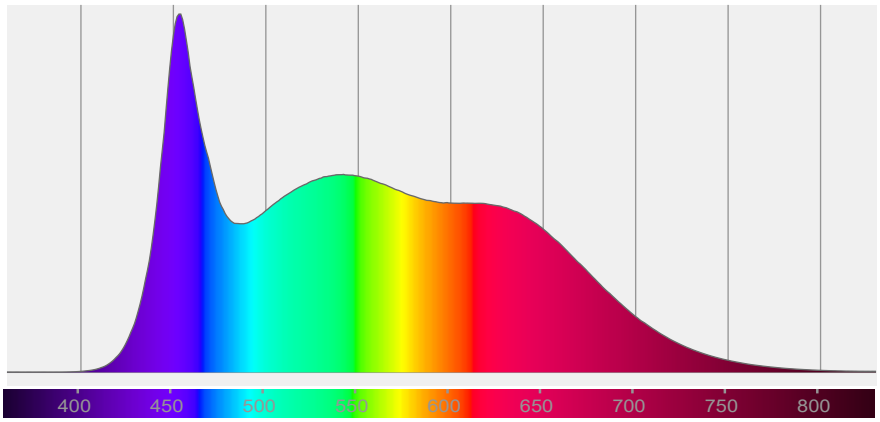
Operator:
Salvatore Giglio

Date and time:
21/08/2024 17:46:04

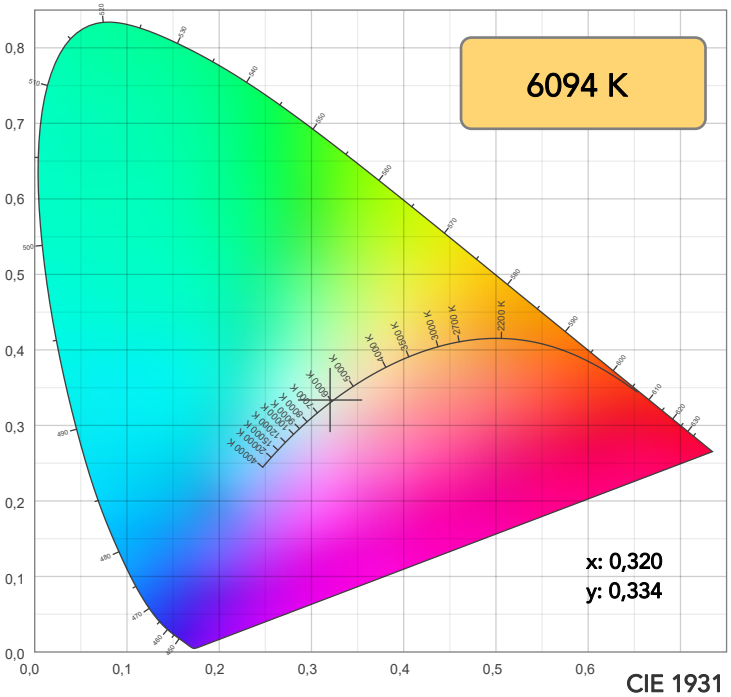


Beam angle 50%: 20,7°
Field angle 10%: 23,4°
Cut off angle 2.5%: 23,9°

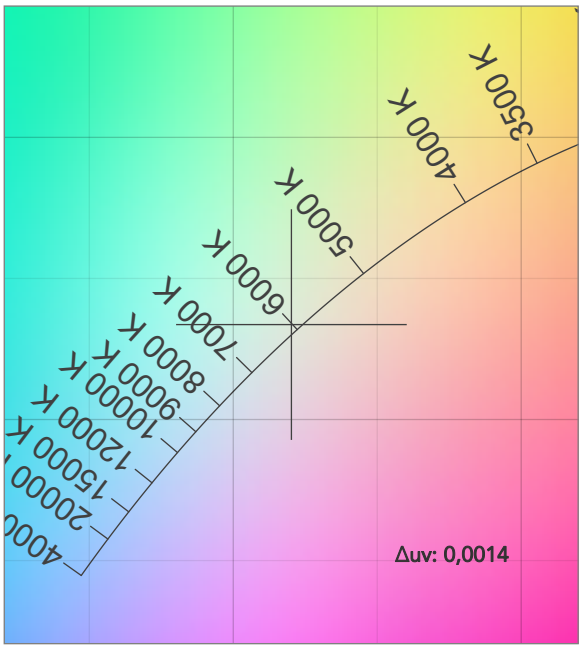
Spectra



COLOR DETAILS

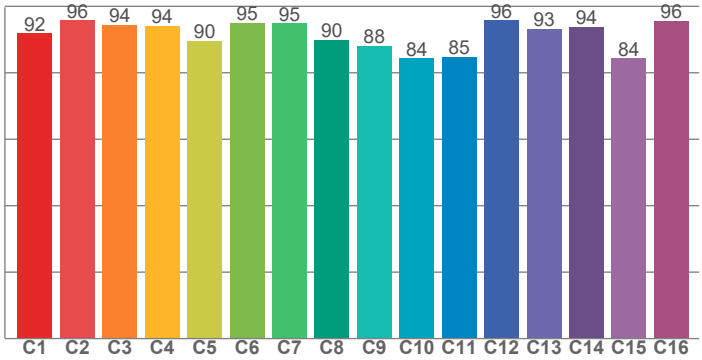


CIE 1931

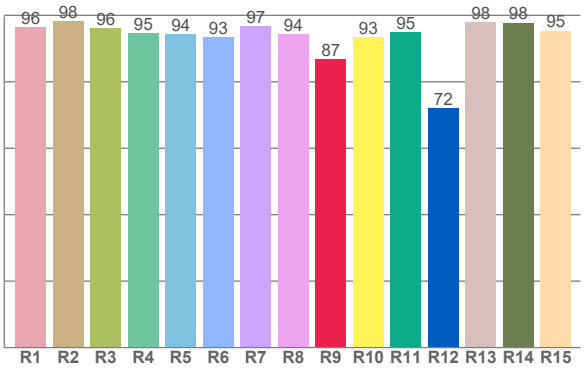


CIE 1931 ZOOM

TM30: 91,3



CRI: 95,5 (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
96,4	98,2	96,1	94,5	94,3	93,4	96,6	94,4	86,8	93,3	94,8	72,0	98,0	97,8	95,3

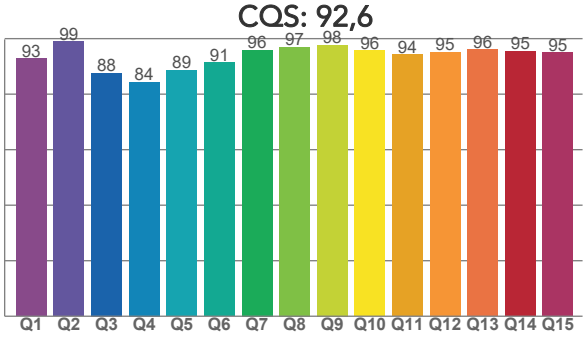
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91,8	95,8	94,5	94,1	89,6	95,0	94,9	89,9	88,2	84,3	84,8	95,7	93,2	93,9	84,3	95,6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
92,8	99,0	87,7	84,3	88,6	91,4	95,9	97,0	97,6	95,7	94,2	95,1	96,0	95,4	95,0

CQS: 92,6



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 diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
6094 K	95,5	86,8	91,3	98,4	92,6	97	0,320	0,334	0,0014

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TM30 DETAILS

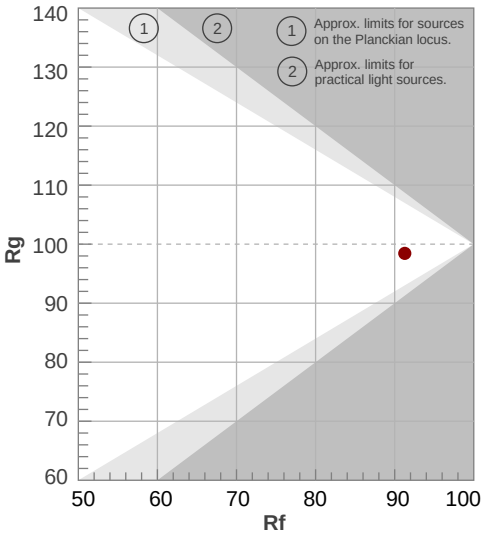
Rf 91,3

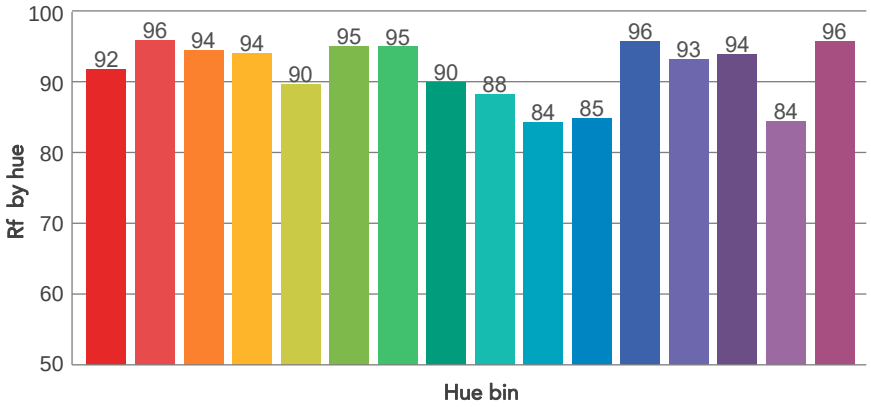
Fidelity index Rf

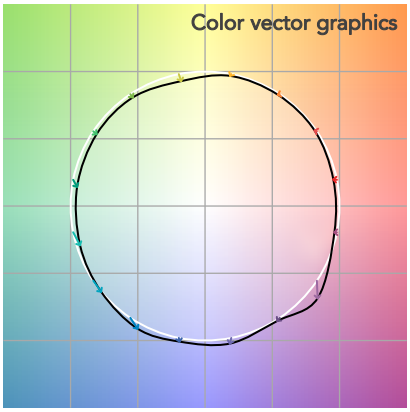
Rg 98,4

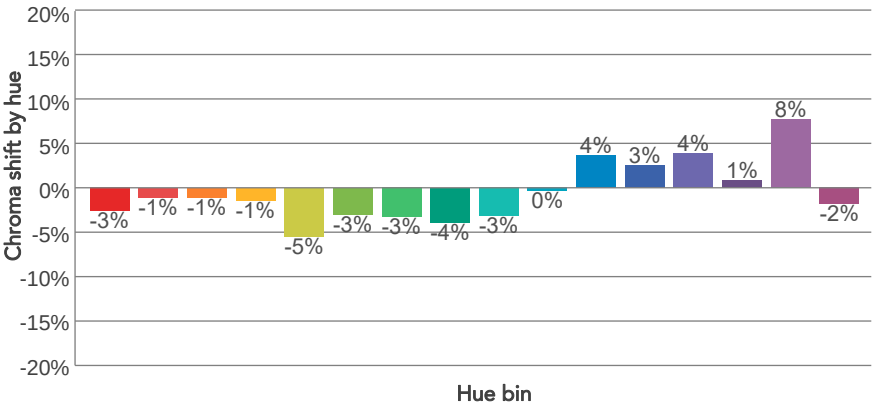
Gammut index

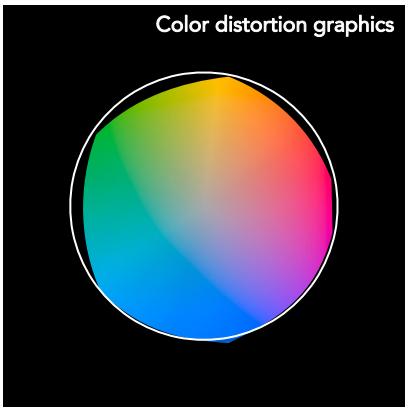
Hue Bin	R_f	Graphic shifts (%) Chroma	Hue
1	92	-3%	1%
2	96	-1%	1%
3	94	-1%	1%
4	94	-1%	1%
5	90	-5%	-1%
6	95	-3%	0%
7	95	-3%	0%
8	90	-4%	5%
9	88	-3%	10%
10	84	0%	10%
11	85	4%	9%
12	96	3%	1%
13	93	4%	-2%
14	94	1%	-3%
15	84	8%	-11%
16	96	-2%	0%

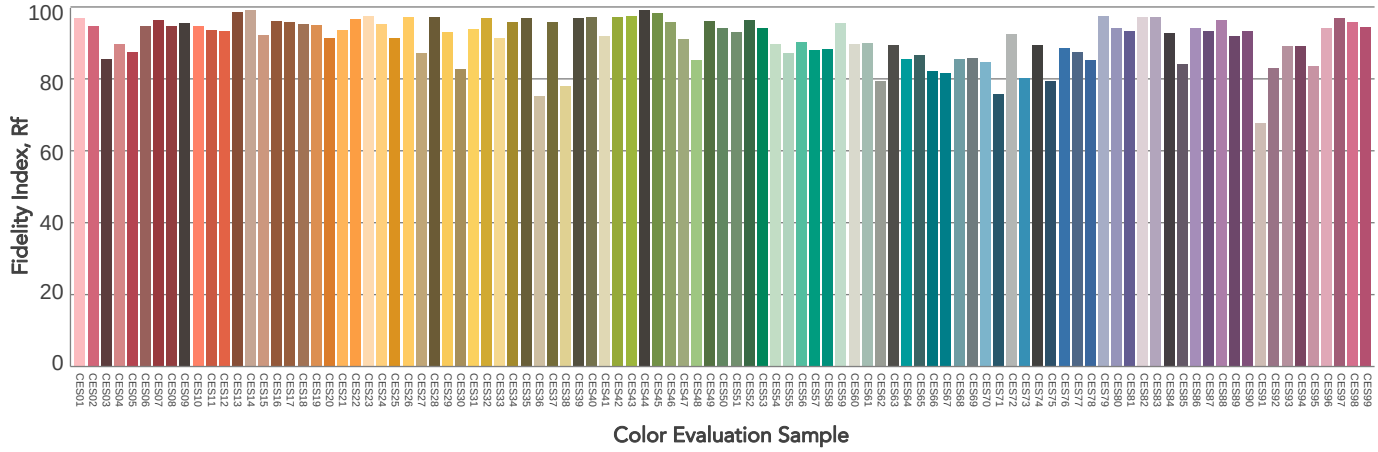












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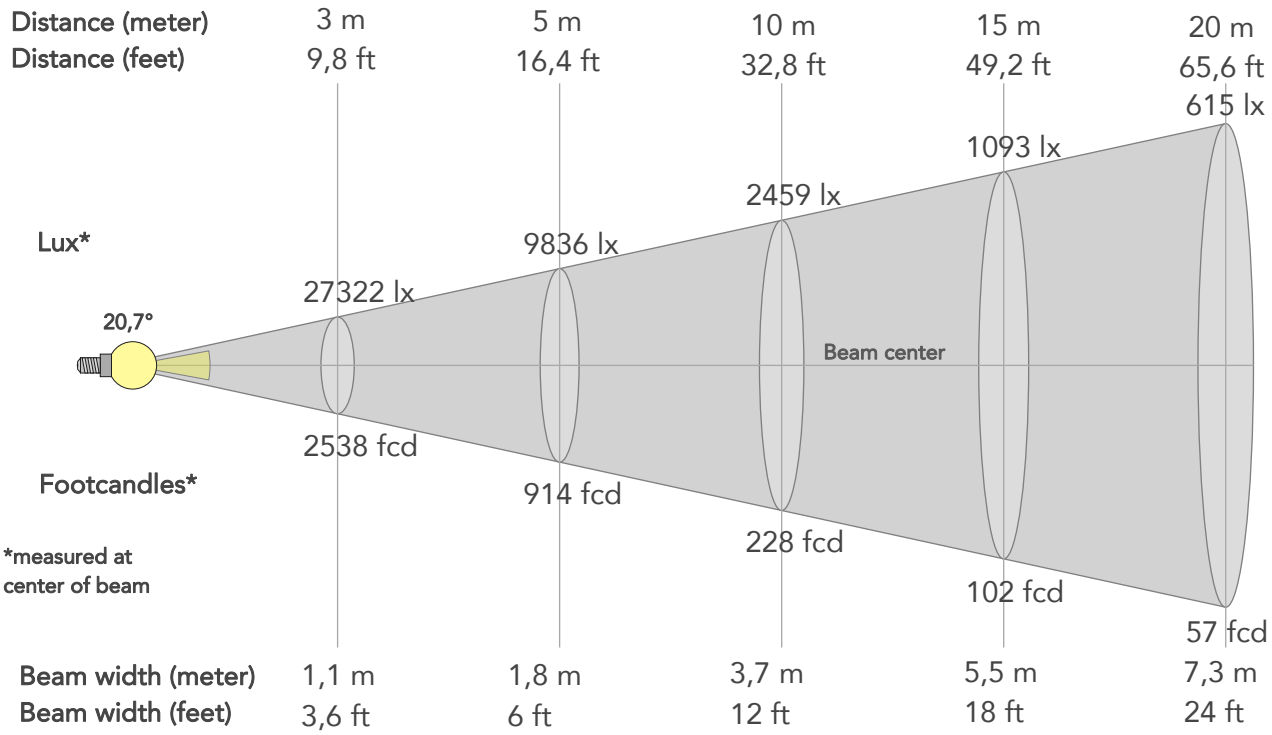
BEAM DETAILS

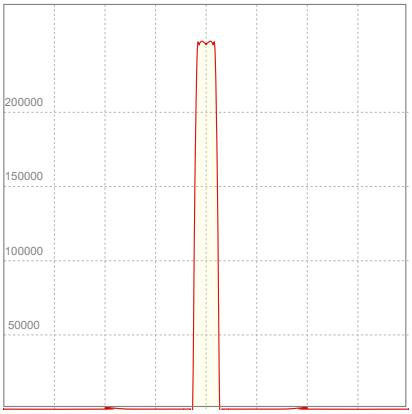
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
20,7°	22,3°	23,6°	99,8%	99,8%



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	245899lx	61475lx	27322lx	15369lx	9836lx	4372lx	2459lx	1093lx	615lx	393lx	273lx	154lx	98lx
Footcand.	22845fcd	5711fcd	2538fcd	1428fcd	914fcd	406fcd	228fcd	102fcd	57fcd	37fcd	25fcd	14fcd	9fcd
Beam wid.	0,4m	0,7m	1,1m	1,5m	1,8m	2,7m	3,7m	5,5m	7,3m	9,1m	11m	14,6m	18,3m
Beam wid.	1,2ft	2,4ft	3,6ft	4,8ft	6ft	9ft	12ft	18ft	24ft	30ft	36ft	48ft	60ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Effeciency
222V	5,43A	1204W	0,98	22lm/W

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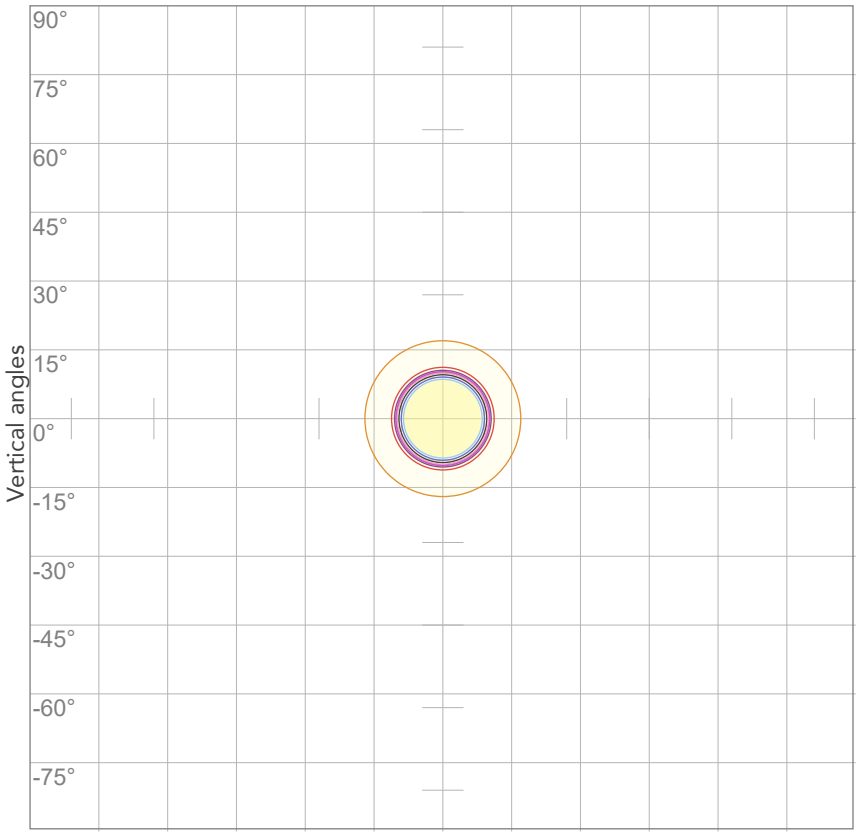
ISO DIAGRAMS

ISO CANDELA DIAGRAM



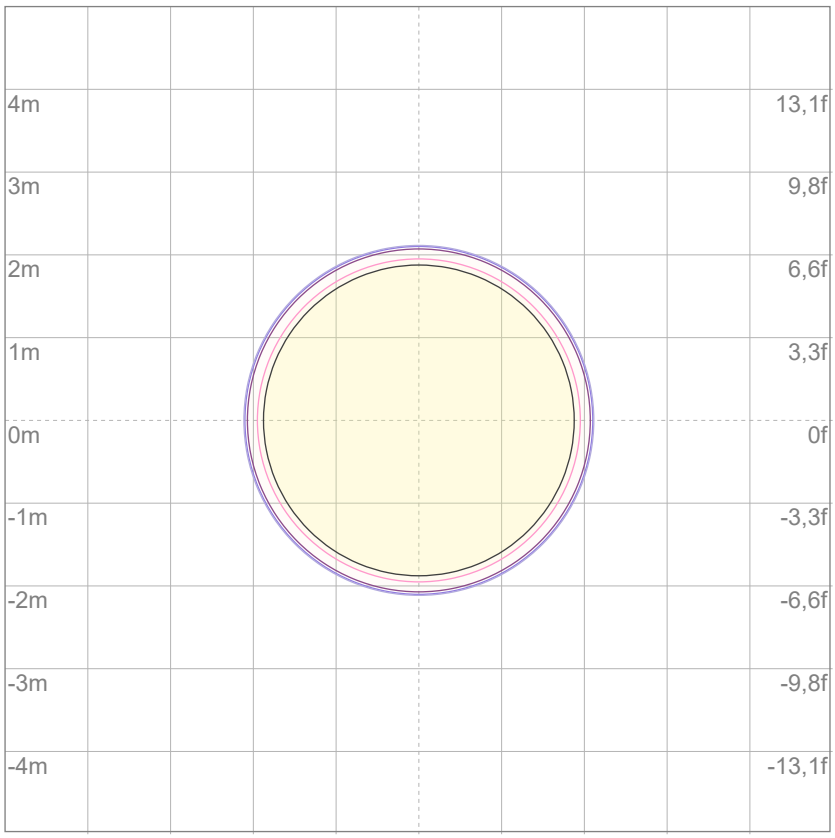
10%	24590 cd
20%	49180 cd
30%	73770 cd
40%	98360 cd
50%	122949 cd
60%	147539 cd
70%	172129 cd
80%	196719 cd

Conditions:

Number of c-planes: 2

Candela at center: 245899 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	73,8 lx
5%	123 lx
10%	246 lx
30%	738 lx
50%	1229 lx

Conditions:

Number of c-planes: 2

Lux at center: 2459 lx

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

Total lumen output:

13969 lm

Peak candela output:

1855710 cd

Light quality:

CRI: 96,0

Color temperature:

5976 K

PRODUCT NAME:

ASTRAPROFILE900

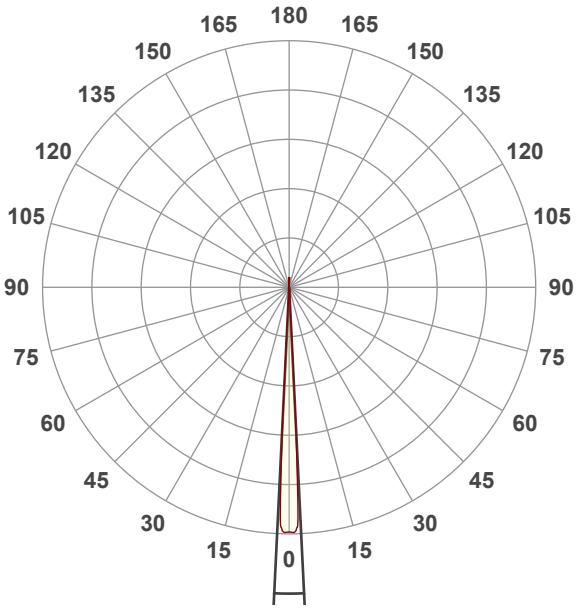
MEASURAMENT CONDITIONS:

Beam angle:
Min Zoom

Target:
Full On - High CRI LED

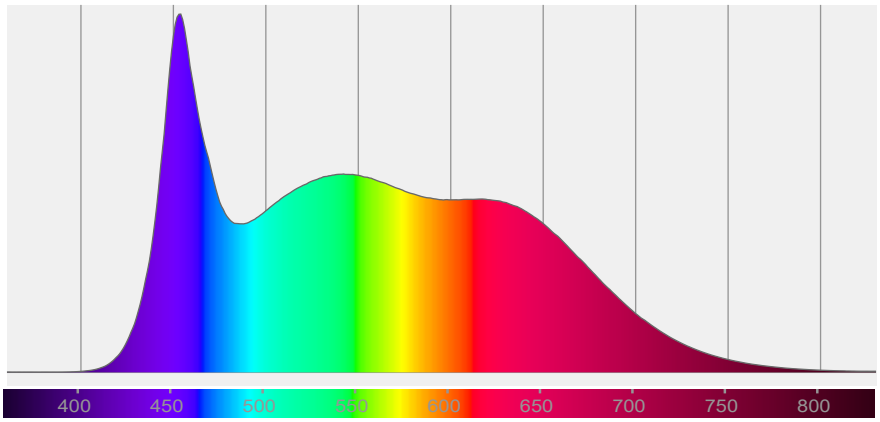
Operator:
Salvatore Giglio

Date and time:
21/08/2024 17:40:00

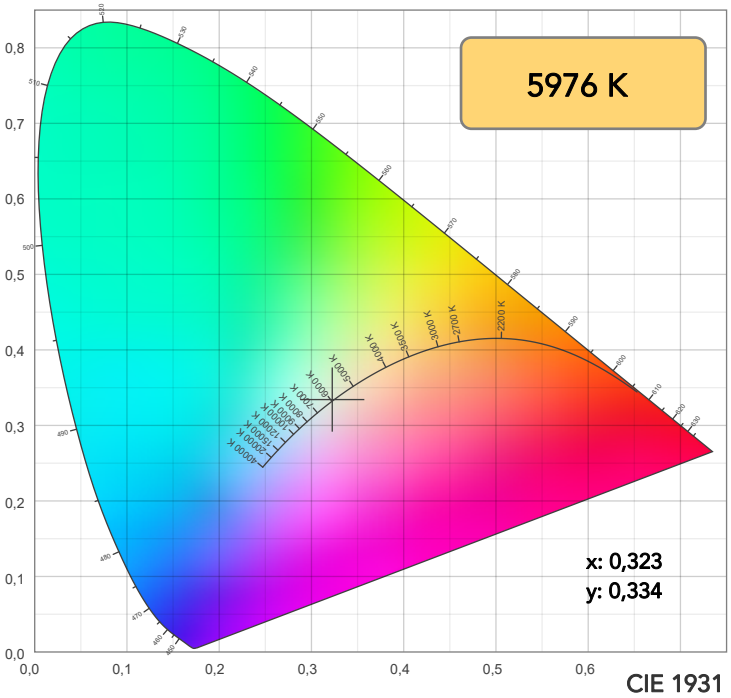


Beam angle 50%: 5,4°
Field angle 10%: 6,3°
Cut off angle 2.5%: 6,4°

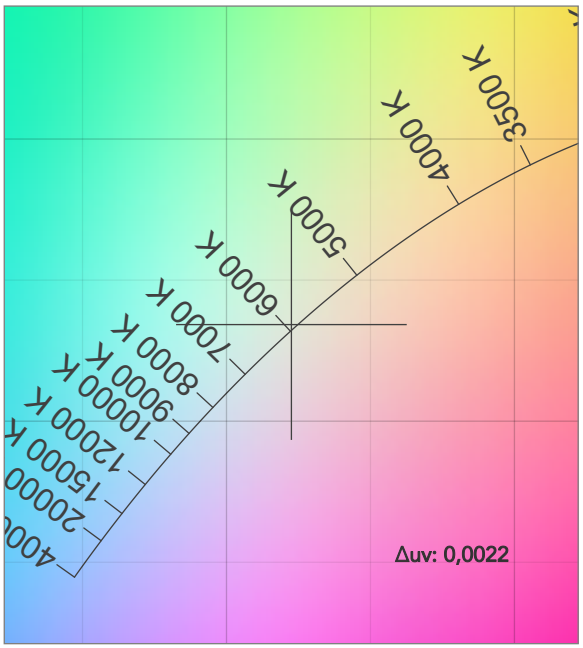
Spectra



COLOR DETAILS

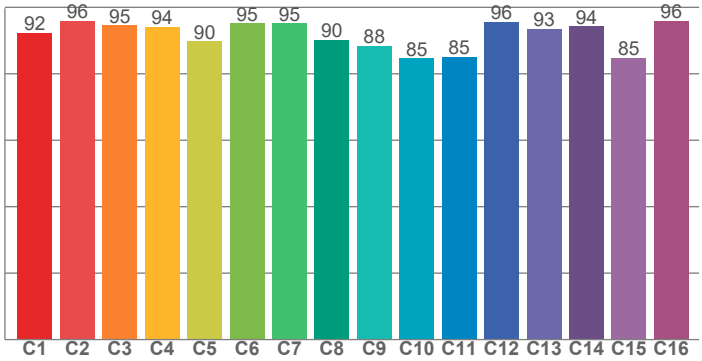


CIE 1931

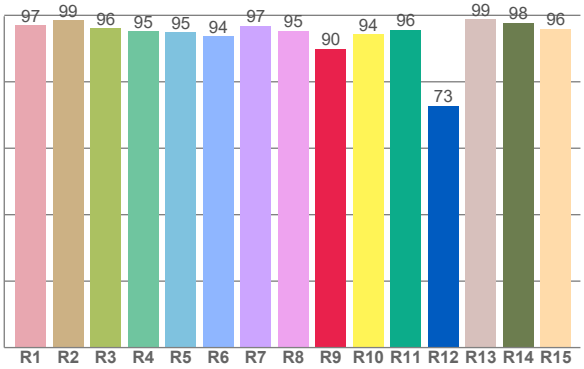


CIE 1931 ZOOM

TM30: 91,5



CRI: 96,0 (R1-R8)



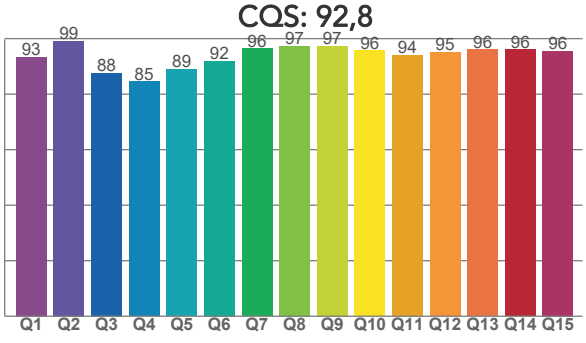
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
97,0	98,6	96,2	95,3	94,9	93,7	96,9	95,3	90,0	94,3	95,6	72,8	98,8	97,7	96,0

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
92,3	96,0	94,6	94,2	89,8	95,2	95,2	90,1	88,4	84,6	85,0	95,7	93,5	94,3	84,8	95,9

CQS: 92,8



CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
93,4	99,2	87,6	84,5	89,0	92,0	96,4	97,3	97,4	95,6	94,2	95,1	96,1	96,1	95,5

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 diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5976 K	96,0	90,0	91,5	98,8	92,8	97	0,323	0,334	0,0022

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TM30 DETAILS

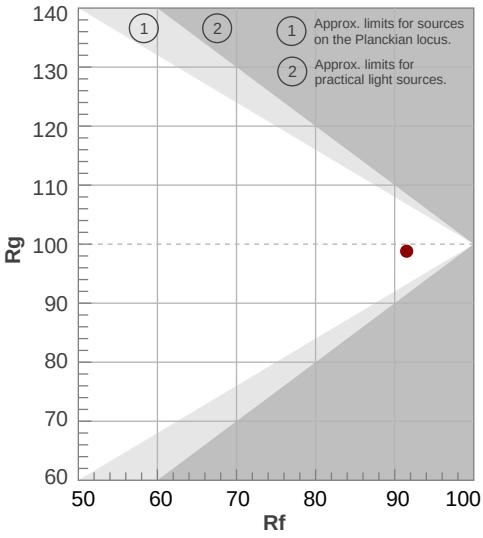
Rf 91,5

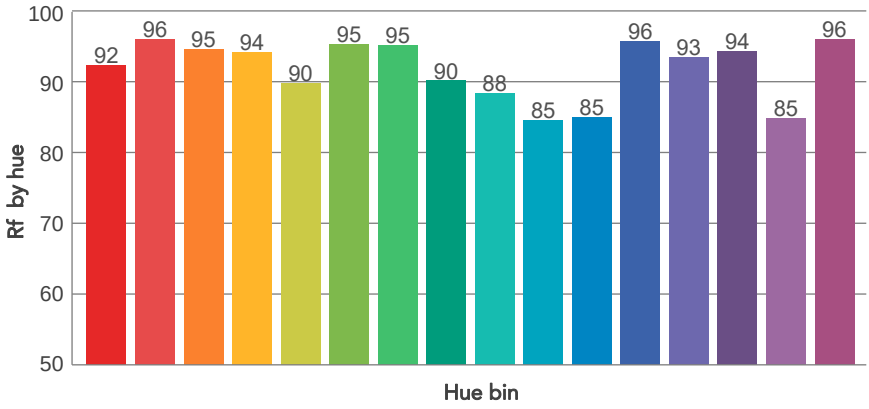
Fidelity index Rf

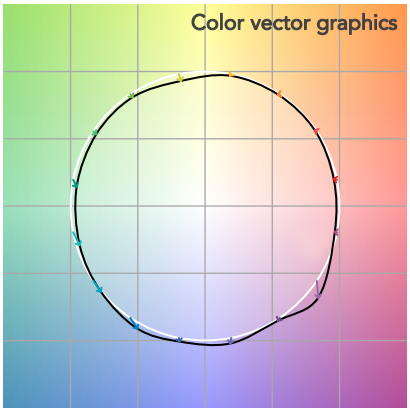
Rg 98,8

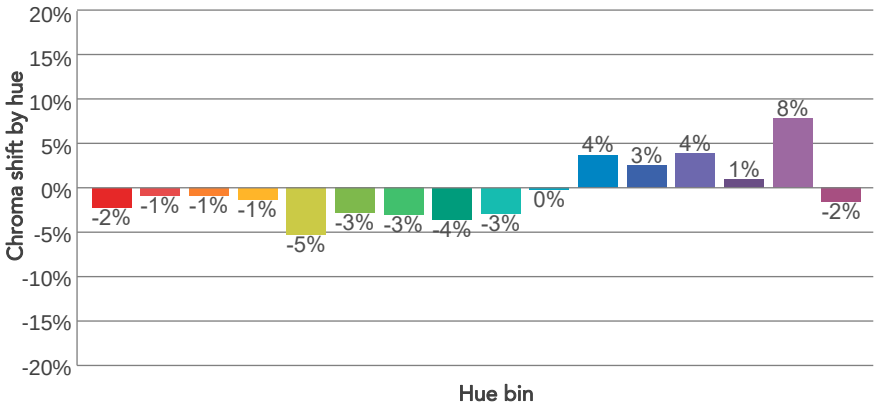
Gammut index

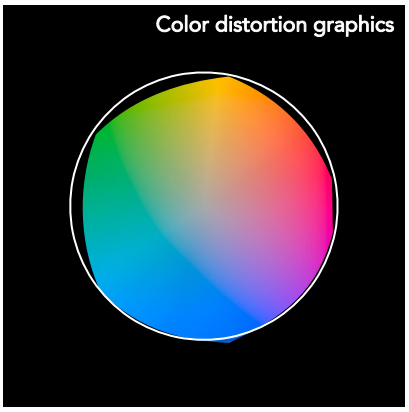
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	92	-2%	1%
2	96	-1%	1%
3	95	-1%	1%
4	94	-1%	1%
5	90	-5%	-1%
6	95	-3%	0%
7	95	-3%	0%
8	90	-4%	5%
9	88	-3%	10%
10	85	0%	10%
11	85	4%	9%
12	96	3%	1%
13	93	4%	-2%
14	94	1%	-2%
15	85	8%	-10%
16	96	-2%	0%

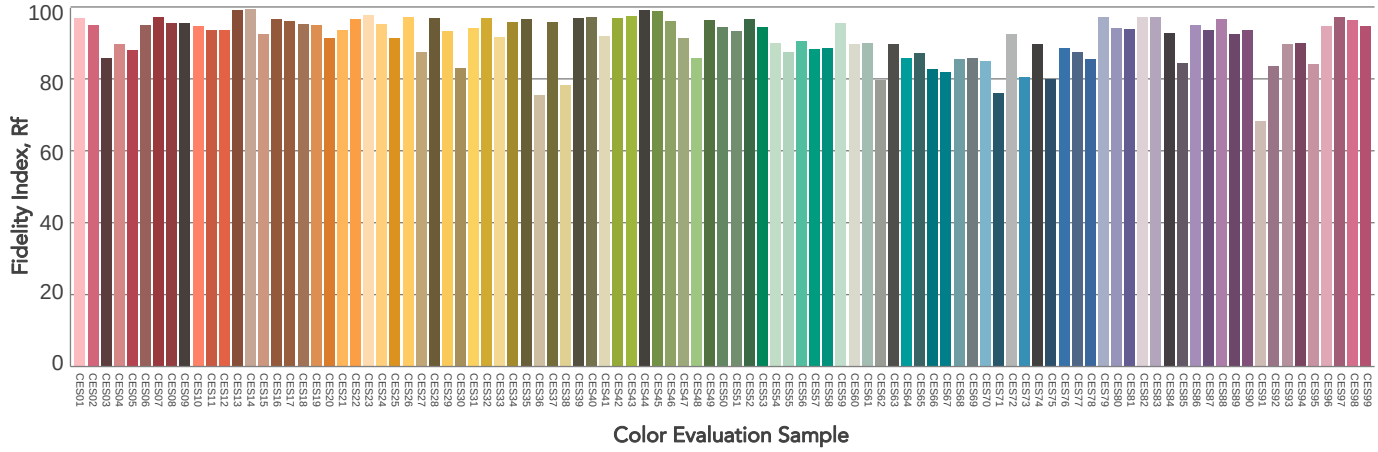












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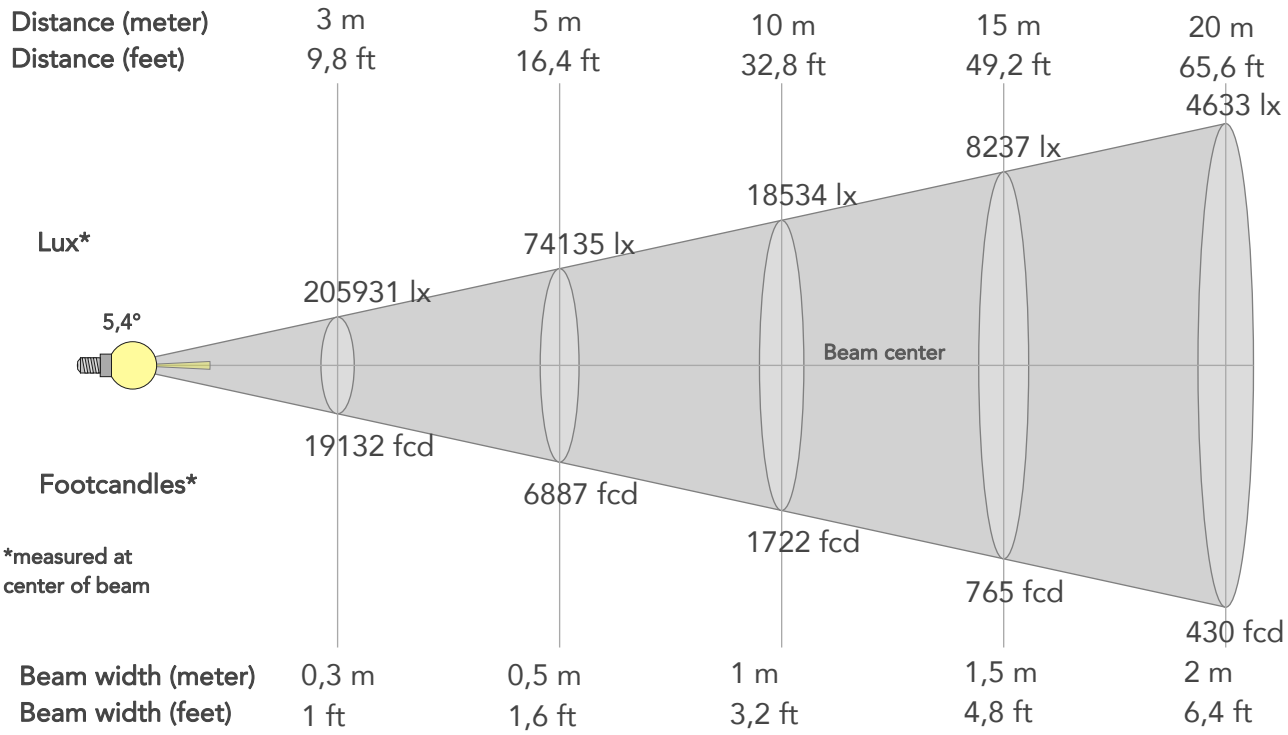
BEAM DETAILS

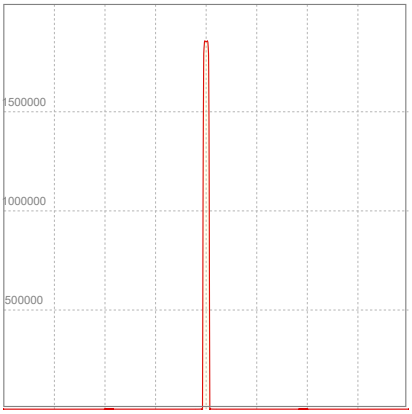
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
5,4°	6,3°	6,4°	96,2%	96,2%



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	1853378lx	463345lx	205931lx	115836lx	74135lx	32949lx	18534lx	8237lx	4633lx	2965lx	2059lx	1158lx	741lx
Footcand.	172184fcd	43046fcd	19132fcd	10762fcd	6887fcd	3061fcd	1722fcd	765fcd	430fcd	275fcd	191fcd	108fcd	69fcd
Beam wid.	0,1m	0,2m	0,3m	0,4m	0,5m	0,7m	1m	1,5m	2m	2,4m	2,9m	3,9m	4,9m
Beam wid.	0,3ft	0,6ft	1ft	1,3ft	1,6ft	2,4ft	3,2ft	4,8ft	6,4ft	8ft	9,6ft	12,8ft	16ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Effeciency
222V	5,52A	1224W	0,98	11lm/W

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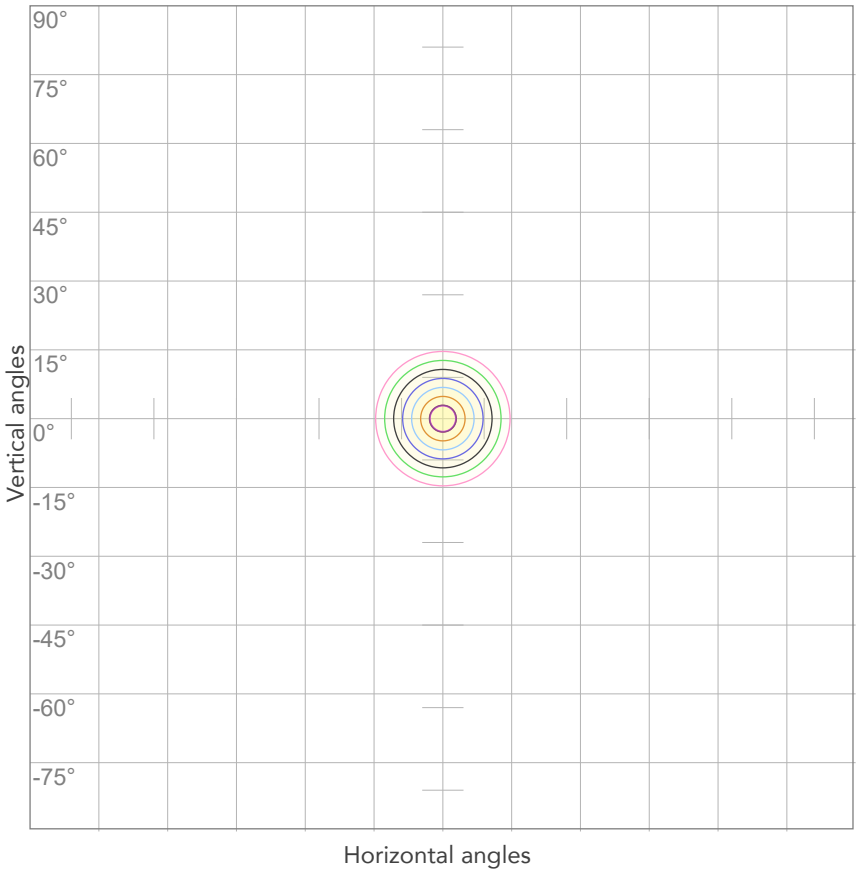
ISO DIAGRAMS

ISO CANDELA DIAGRAM



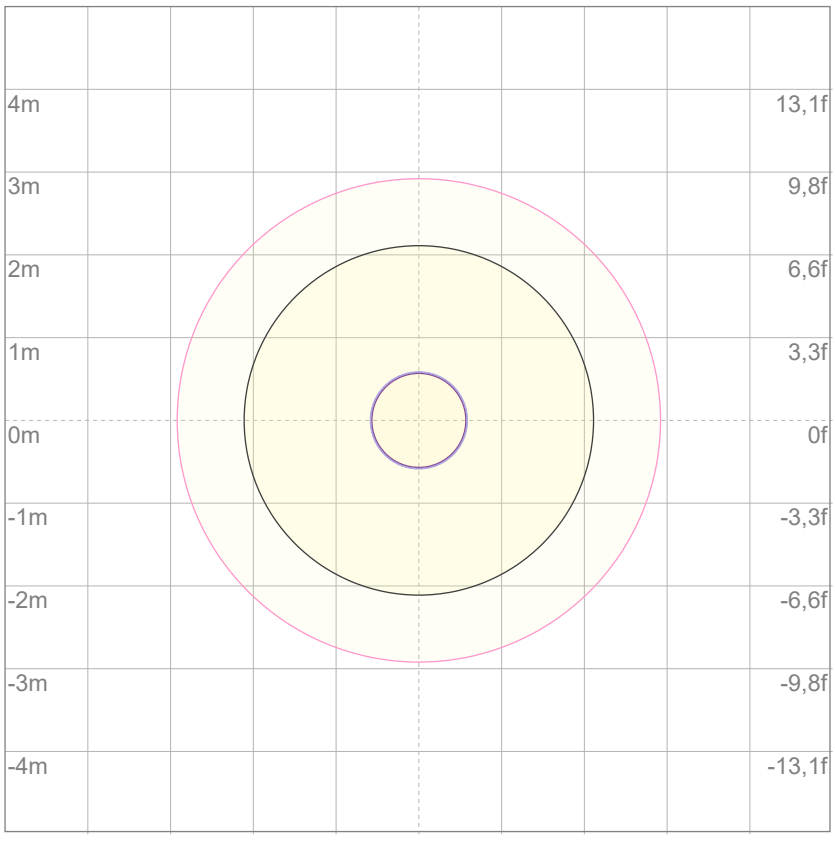
10%	185338 cd
20%	370676 cd
30%	556014 cd
40%	741351 cd
50%	926689 cd
60%	1112027 cd
70%	1297365 cd
80%	1482703 cd

Conditions:

Number of c-planes: 2

Candela at center: 1853378 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	556 lx
5%	927 lx
10%	1853 lx
30%	5560 lx
50%	9267 lx

Conditions:

Number of c-planes: 2

Lux at center: 18,5K lx

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

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