



Photometric Test Report



DISPLAYCOBTRWDDY2

45W Daylight White LED track mounted and
W-DMX/DMX spotlight

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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 25°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-7000 and Gossen Mavospec Base, this is done to ensure, that the data in the photometric report are as accurate as possible.



Total lumen output:

2351 lm

Peak candela output:

15565 cd

Light quality:

CRI: 91,5

Color temperature:

4806 K

PRODUCT NAME:
DISPLAYCOBTRWDDY

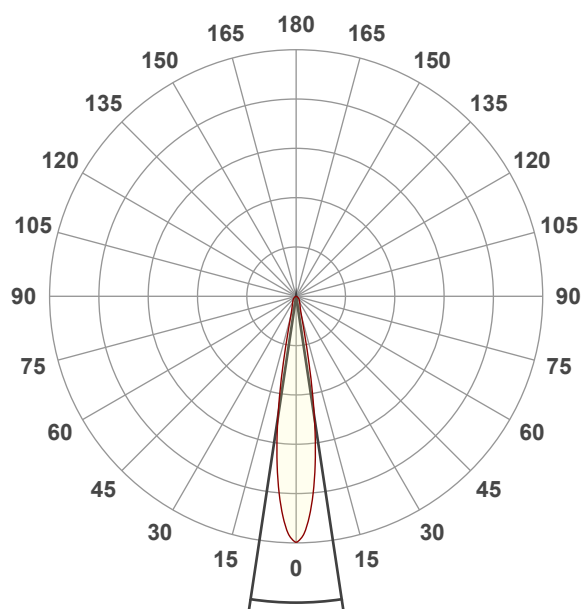
MEASURAMENT CONDITIONS:

Beam angle:
15° Optics (Optional)

Target:
Full on

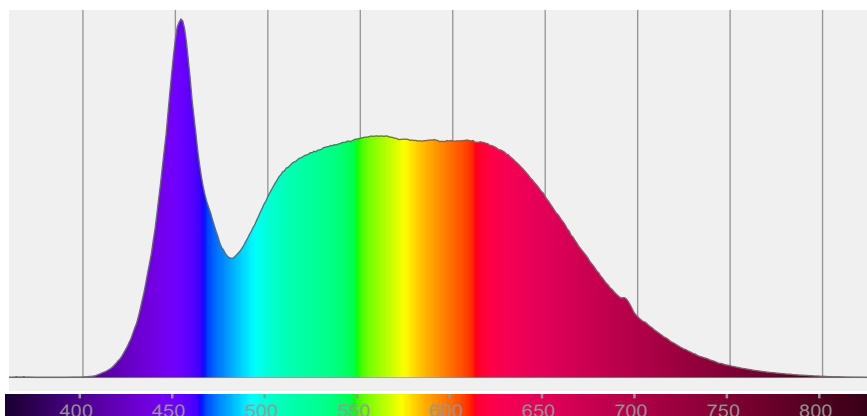
Operator:
Salvatore Giglio

Date and time:
07/12/2023 10:34:41

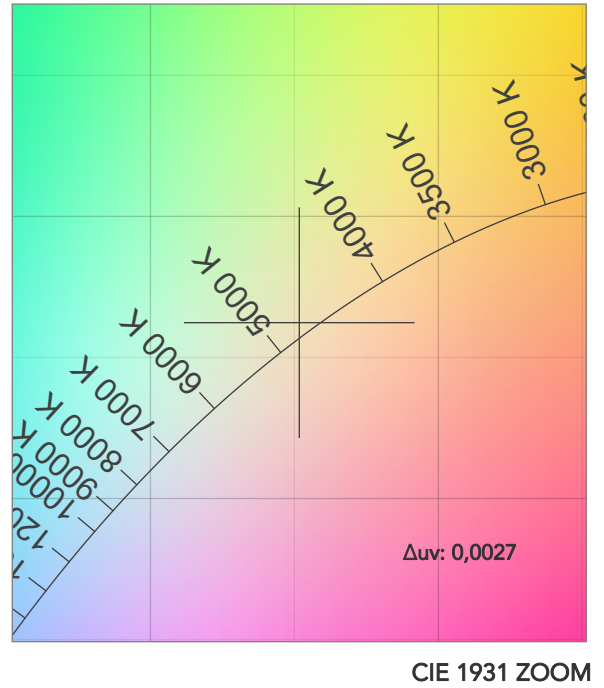
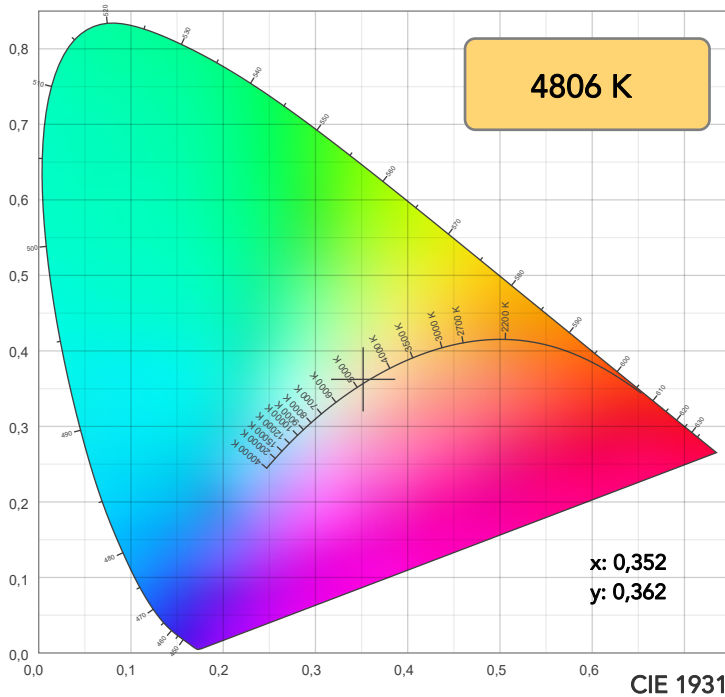


Beam angle 50%: 17,1°
Field angle 10%: 29°
Cut off angle 2.5%: 66,3°

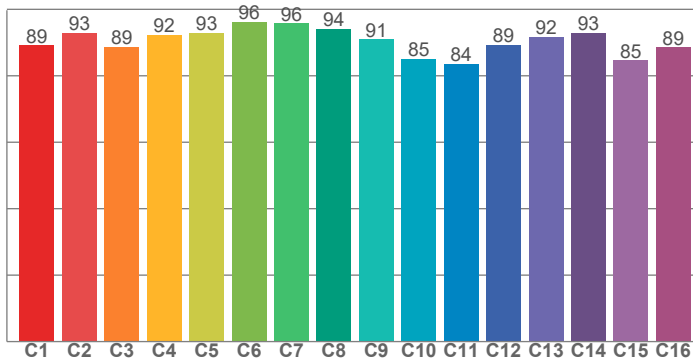
Spectra



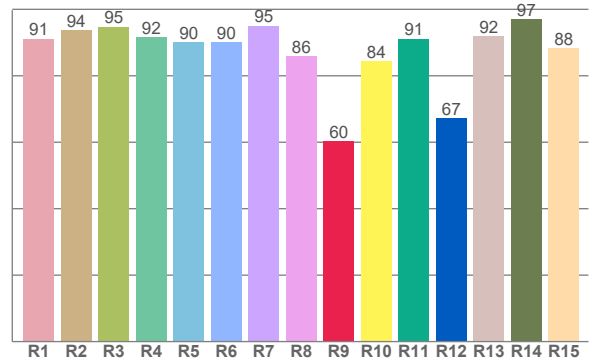
COLOR DETAILS



TM30: 90,5



CRI: 91,5 (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
91,2	93,7	94,8	91,5	90,1	90,1	95,1	85,8	60,4	84,3	91,2	67,1	91,9	97,1	88,3

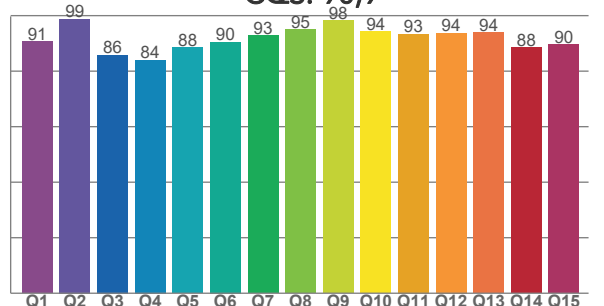
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
89,1	92,9	88,7	92,3	92,9	96,2	95,7	94,1	91,0	85,1	83,6	89,2	91,8	92,9	84,6	88,6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
90,7	98,7	85,8	83,9	88,5	90,4	92,8	95,0	98,2	94,3	93,4	93,7	93,8	88,5	89,6

CQS: 90,9



COLOR PARAMETERS

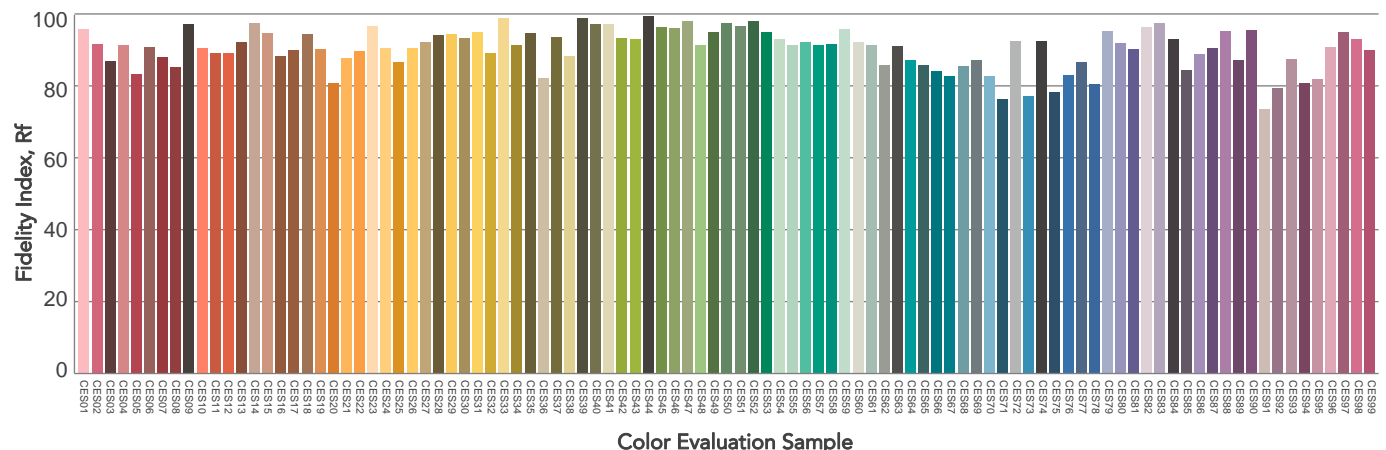
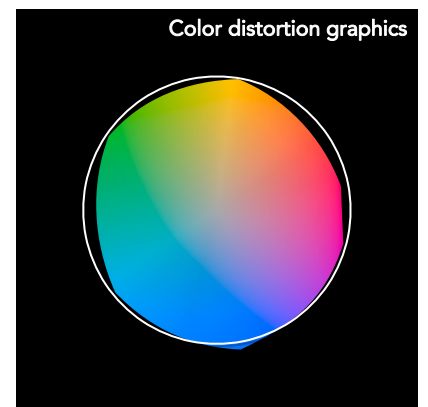
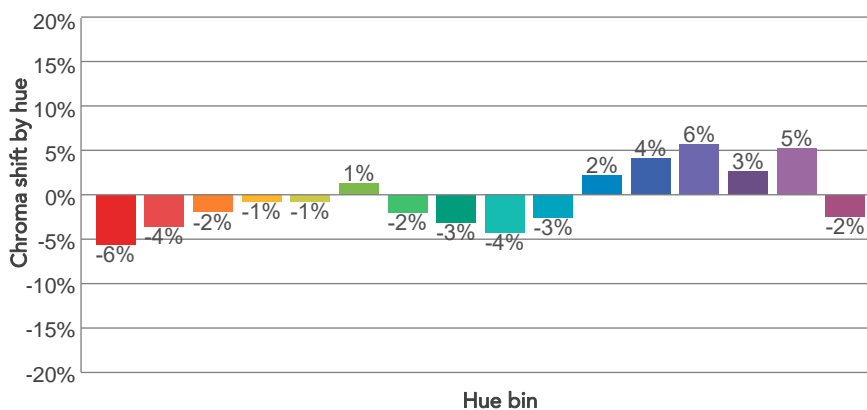
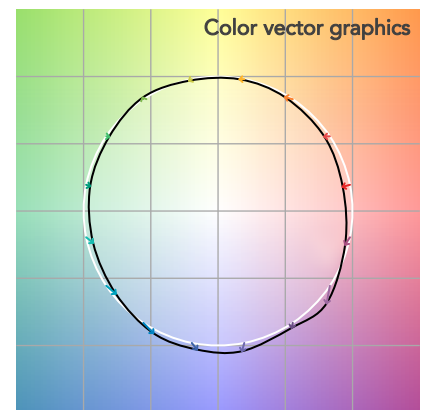
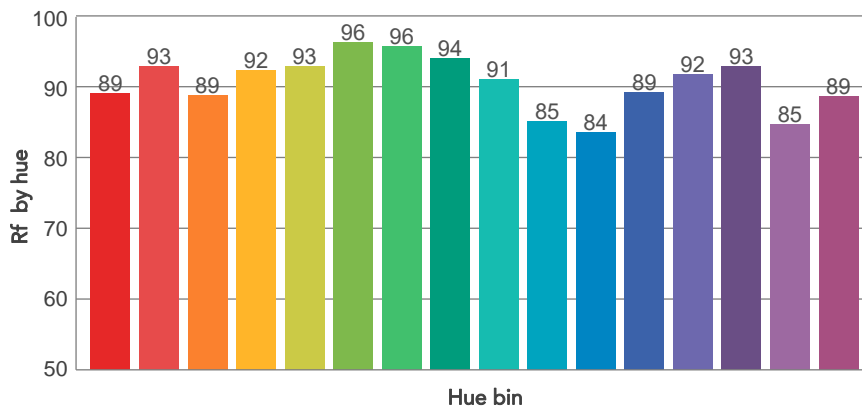
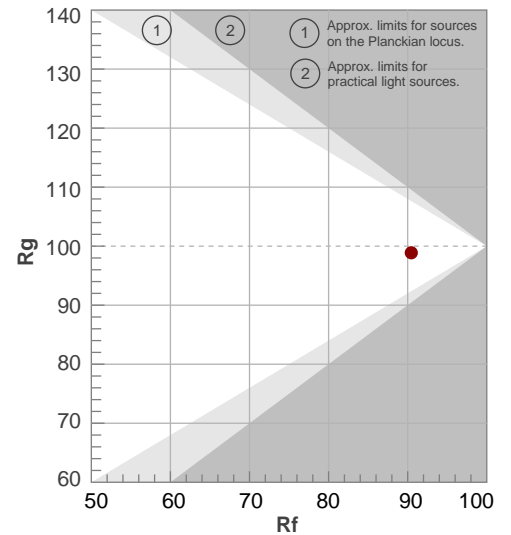
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
4806 K	91,5	60,4	90,5	98,9	90,9	94	0,352	0,362	0,0027

TM30 DETAILS

Rf 90,5
Fidelity index Rf

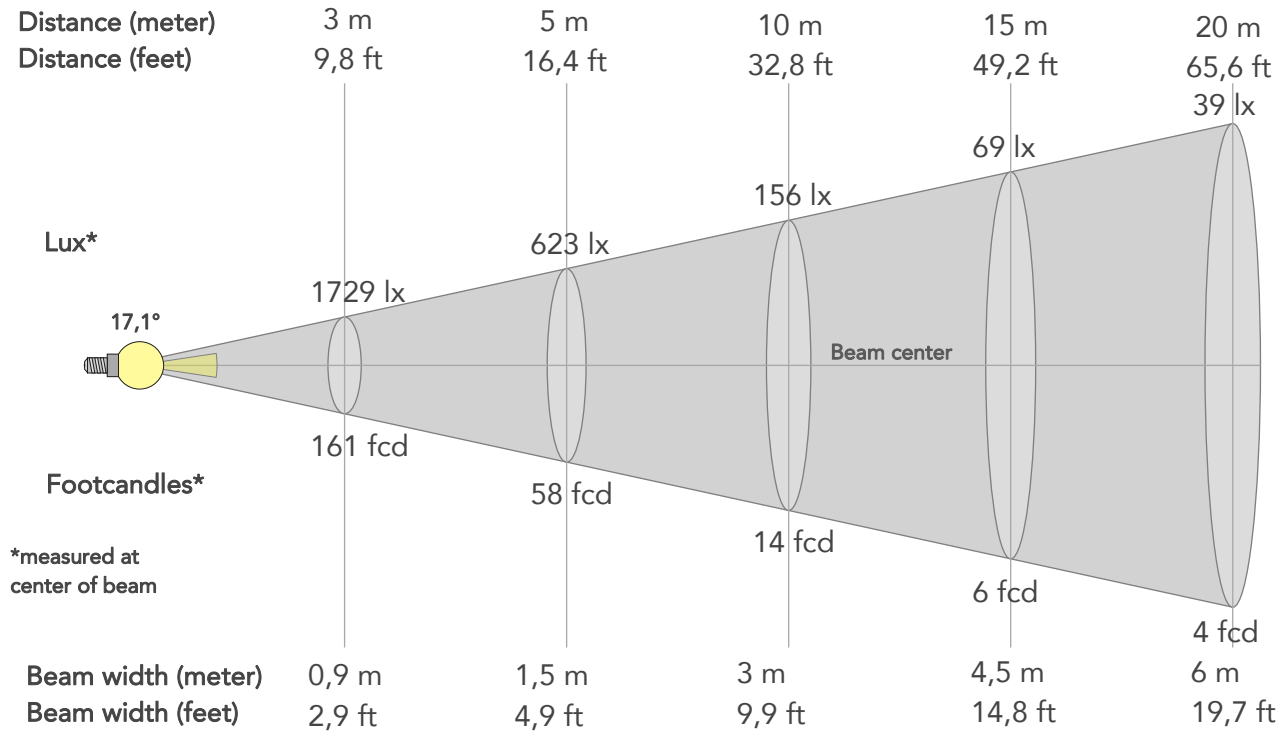
Rg 98,9
Gammut index

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	89	-6%	0%
2	93	-4%	2%
3	89	-2%	6%
4	92	-1%	3%
5	93	-1%	2%
6	96	1%	0%
7	96	-2%	-1%
8	94	-3%	0%
9	91	-4%	5%
10	85	-3%	9%
11	84	2%	10%
12	89	4%	5%
13	92	6%	-3%
14	93	3%	-3%
15	85	5%	-12%
16	89	-2%	-6%



BEAM DETAILS

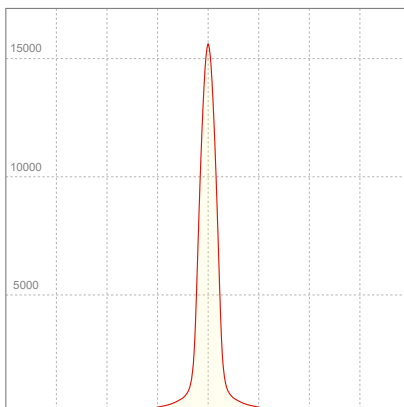
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
17,1°	29°	66,3°	96,7%	87,3%



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	15565lx	3891lx	1729lx	973lx	623lx	277lx	156lx	69lx	39lx	25lx	17lx	10lx	6lx
Footcand.	1446fcd	362fcd	161fcd	90fcd	58fcd	26fcd	14fcd	6fcd	4fcd	2fcd	2fcd	1fcd	1fcd
Beam wid.	0,3m	0,6m	0,9m	1,2m	1,5m	2,3m	3m	4,5m	6m	7,5m	9m	12m	15m
Beam wid.	1ft	2ft	2,9ft	3,9ft	4,9ft	7,4ft	9,9ft	14,8ft	19,7ft	24,7ft	29,6ft	39,5ft	49,3ft

LINEAR DISTRIBUTION DIAGRAM

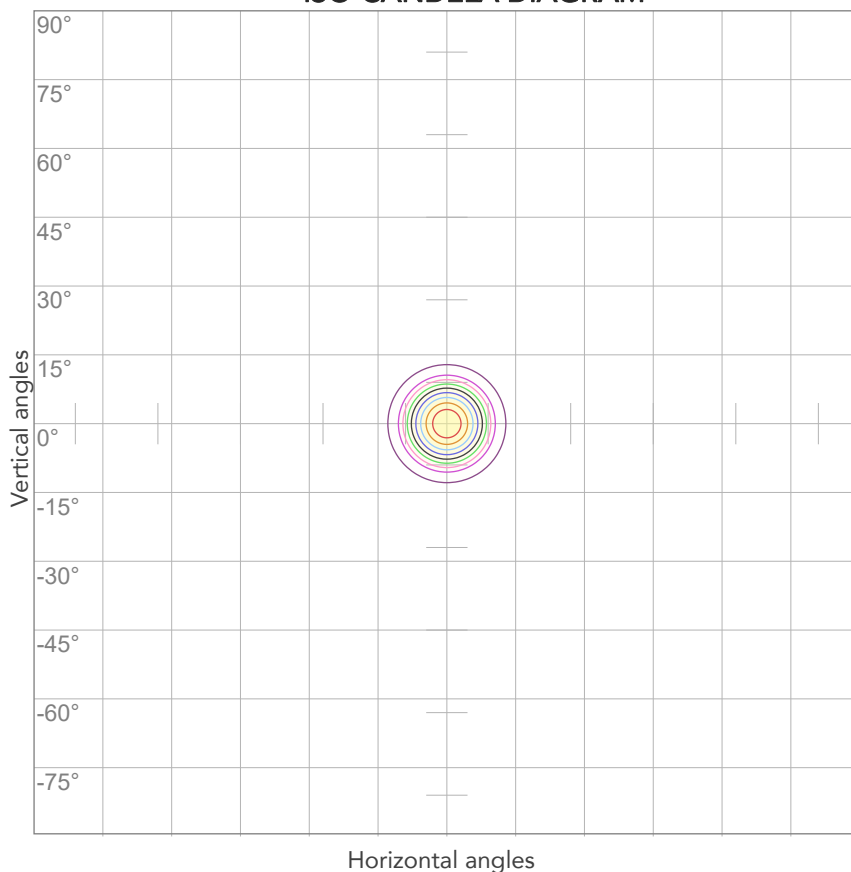


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Effeciency
226V	0,230A	51,0W	0,98	46lm/W

ISO DIAGRAMS

ISO CANDELA DIAGRAM



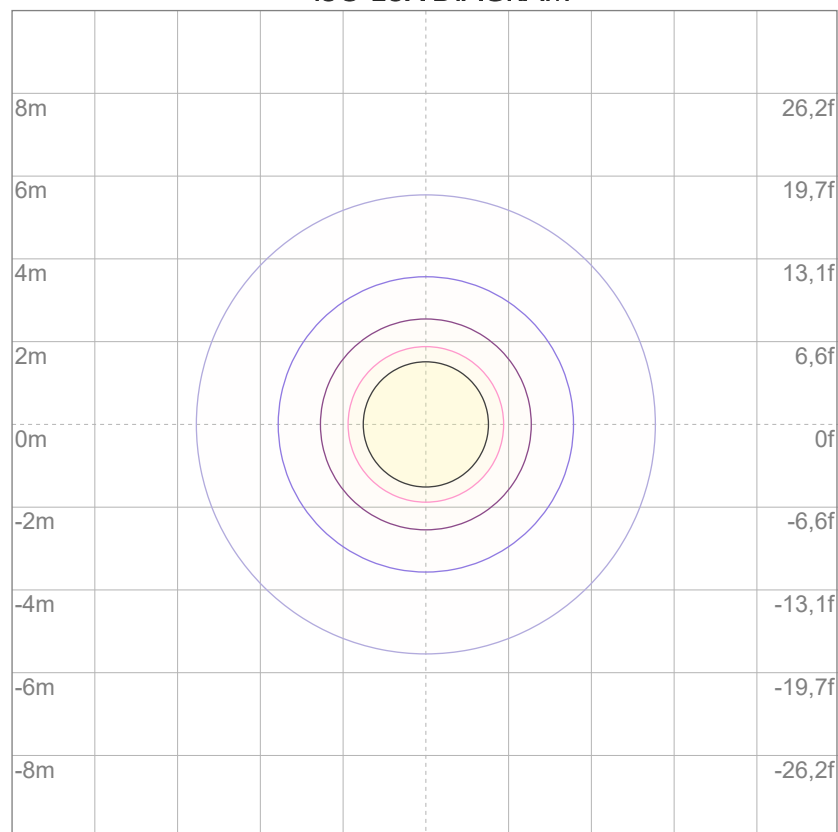
10%	1557 cd
20%	3113 cd
30%	4670 cd
40%	6226 cd
50%	7783 cd
60%	9339 cd
70%	10896 cd
80%	12452 cd

Conditions:

Number of c-planes: 2

Candela at center: 15565 cd

ISO LUX DIAGRAM



3%	4,67 lx
5%	7,78 lx
10%	15,6 lx
30%	46,7 lx
50%	77,8 lx

Conditions:

Number of c-planes: 2

Lux at center: 156 lx

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



Total lumen output:

2418 lm

Peak candela output:

6862 cd

Light quality:

CRI: 91,6

Color temperature:

4877 K

PRODUCT NAME:
DISPLAYCOBTRWDDY

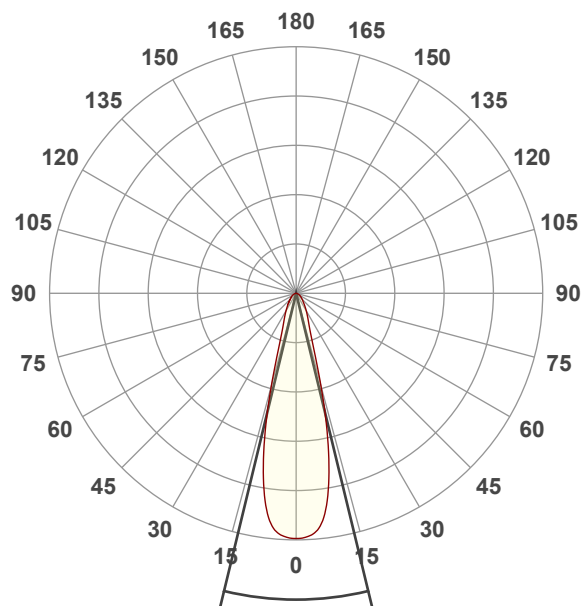
MEASURAMENT CONDITIONS:

Beam angle:
30° Optics (Included)

Target:
Full on

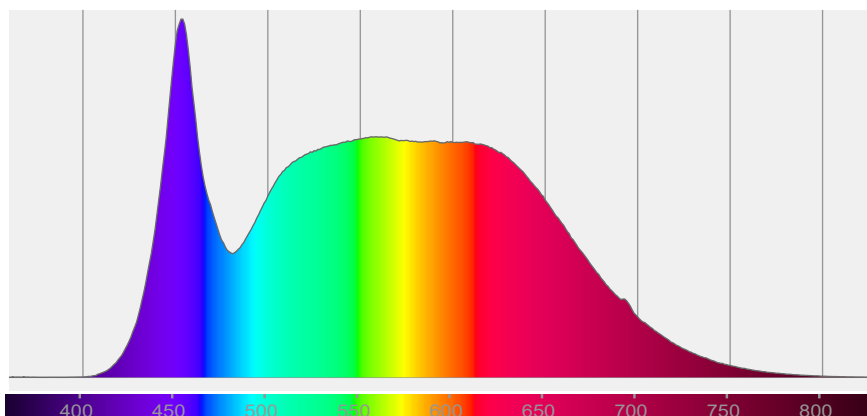
Operator:
Salvatore Giglio

Date and time:
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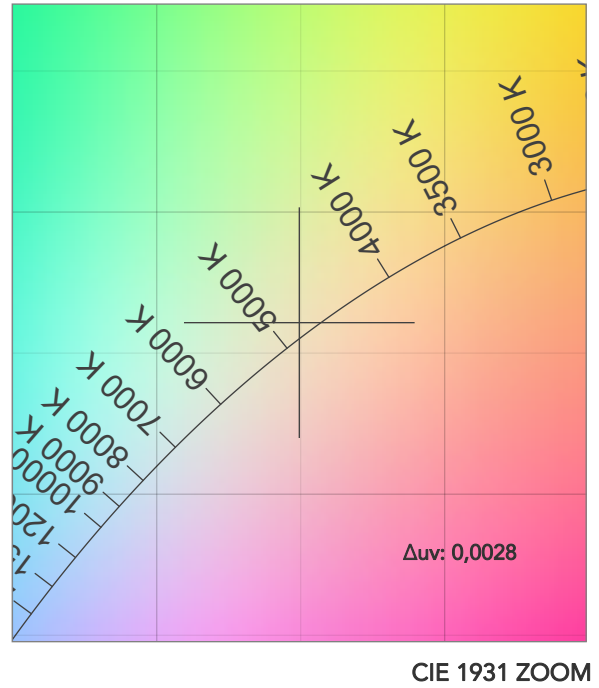
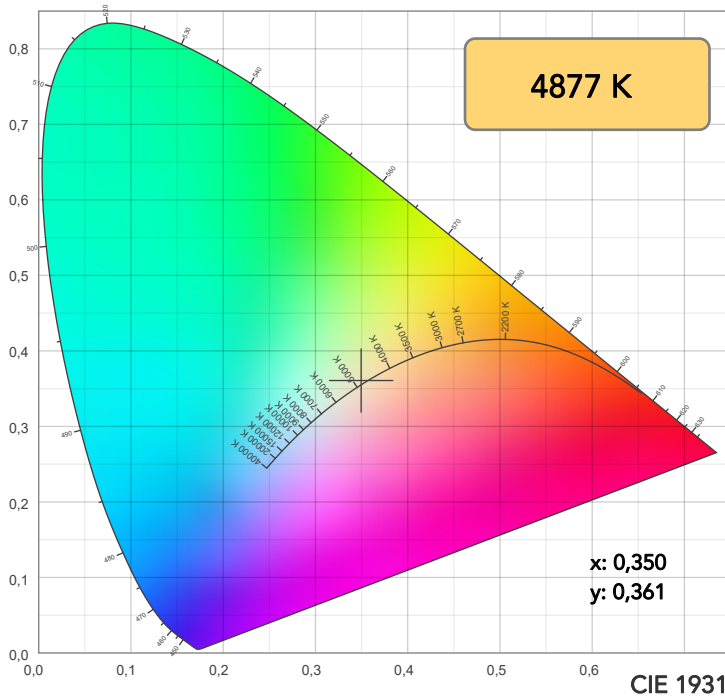


Beam angle 50%: 27,2°
Field angle 10%: 54°
Cut off angle 2.5%: 104,7°

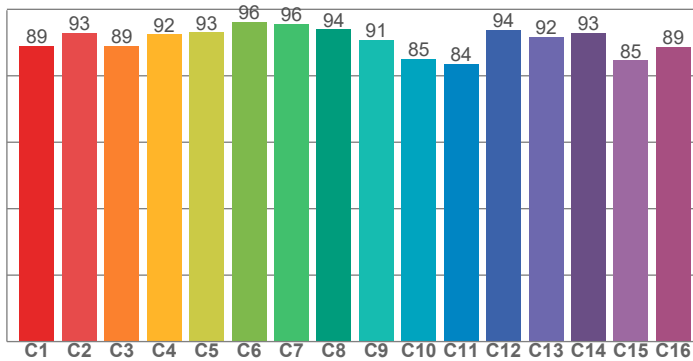
Spectra



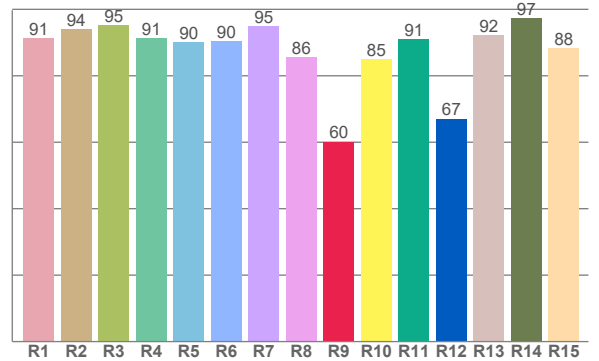
COLOR DETAILS



TM30: 90,5



CRI: 91,6 (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
91,2	94,0	95,2	91,3	90,1	90,4	94,9	85,7	60,2	84,9	91,0	67,1	92,1	97,3	88,3

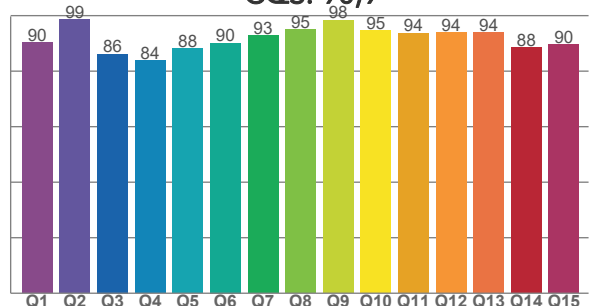
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
89,1	92,9	89,0	92,4	93,1	96,3	95,6	94,0	90,8	85,1	83,6	93,8	91,8	93,0	84,6	88,7

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
90,2	98,5	86,1	83,9	88,2	90,1	92,8	95,0	98,3	94,6	93,6	93,8	93,9	88,4	89,5

CQS: 90,9



COLOR PARAMETERS

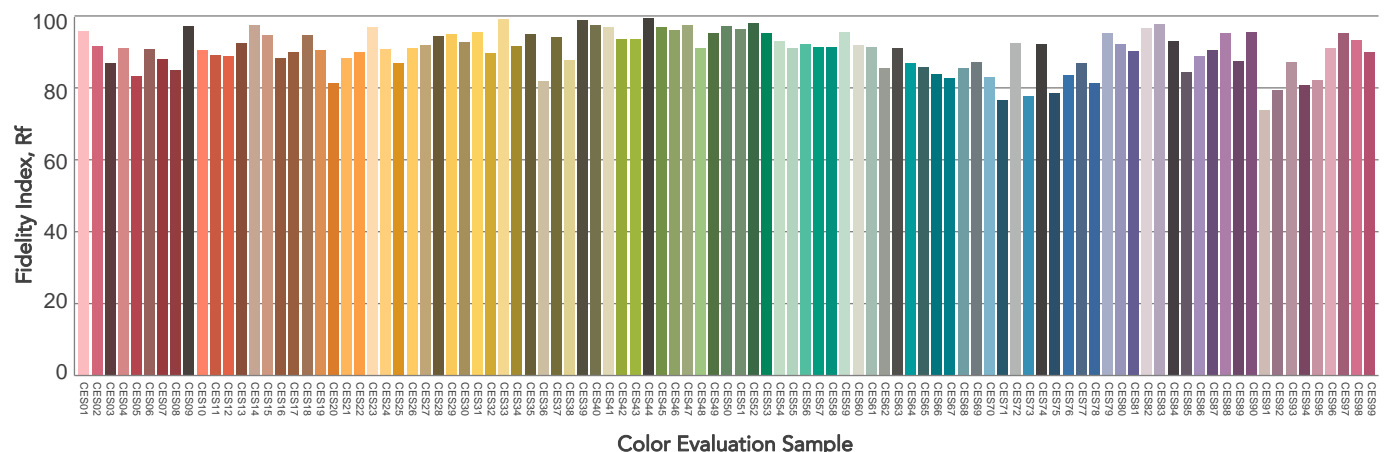
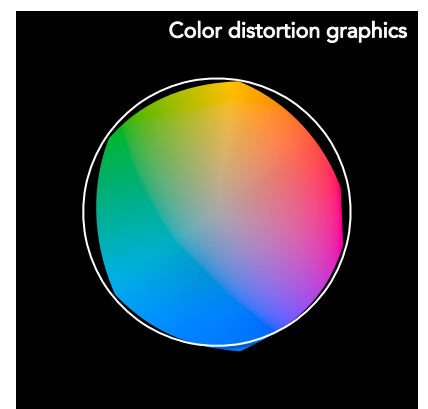
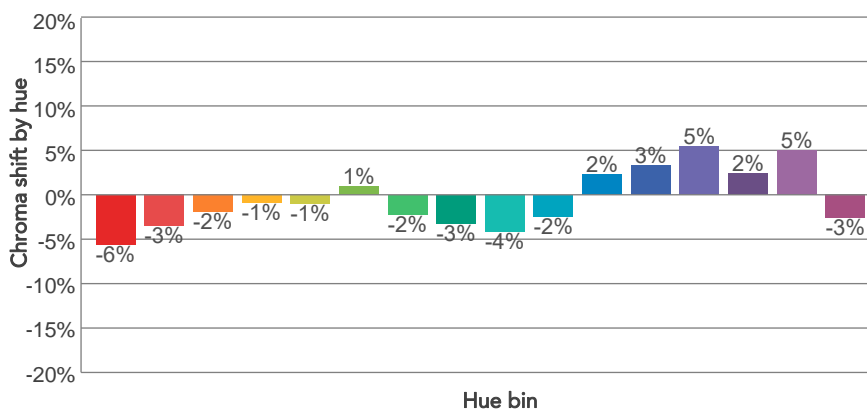
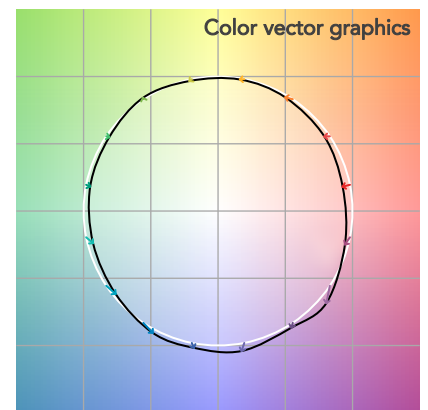
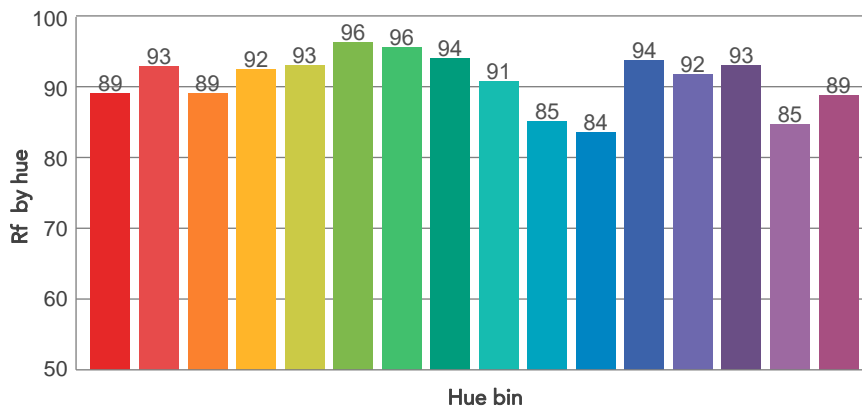
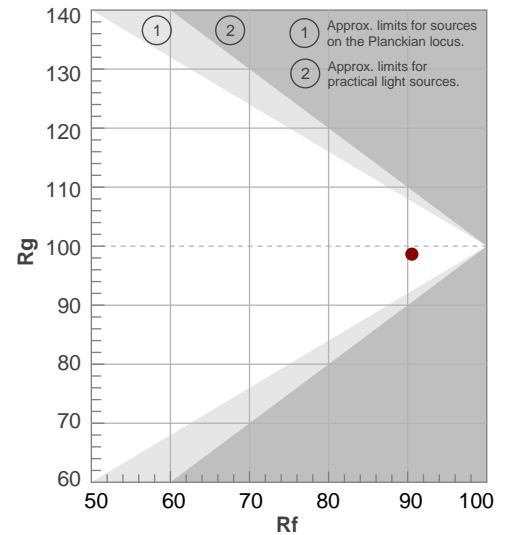
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
4877 K	91,6	60,2	90,5	98,6	90,9	95	0,350	0,361	0,0028

TM30 DETAILS

Rf 90,5
Fidelity index Rf

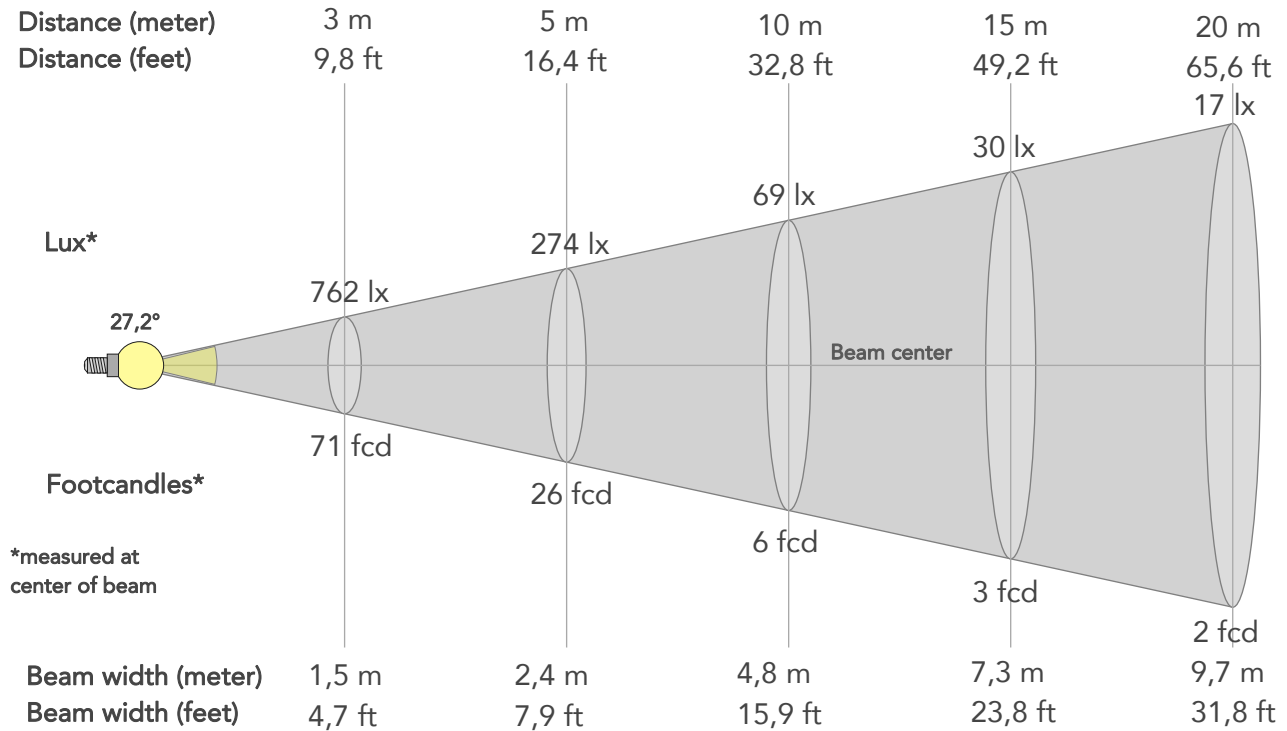
Rg 98,6
Gammut index

		Graphic shifts (%)	
Hue Bin	R _f	Chroma	Hue
1	89	-6%	0%
2	93	-3%	2%
3	89	-2%	5%
4	92	-1%	3%
5	93	-1%	2%
6	96	1%	0%
7	96	-2%	-1%
8	94	-3%	1%
9	91	-4%	5%
10	85	-2%	9%
11	84	2%	10%
12	94	3%	2%
13	92	5%	-3%
14	93	2%	-3%
15	85	5%	-12%
16	89	-3%	-6%



BEAM DETAILS

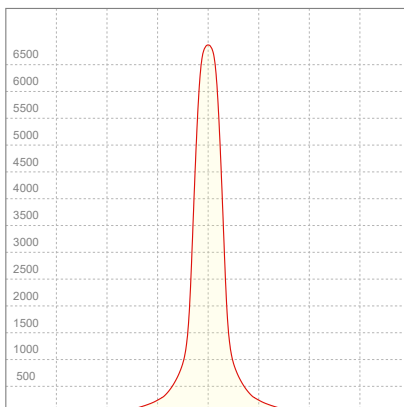
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
27,2°	54°	104,7°	94,9%	85,7%



BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	6862lx	1716lx	762lx	429lx	274lx	122lx	69lx	30lx	17lx	11lx	8lx	4lx	3lx
Footcand.	638fcd	159fcd	71fcd	40fcd	26fcd	11fcd	6fcd	3fcd	2fcd	1fcd	1fcd	0fcd	0fcd
Beam wid.	0,5m	1m	1,5m	1,9m	2,4m	3,6m	4,8m	7,3m	9,7m	12,1m	14,5m	19,4m	24,2m
Beam wid.	1,6ft	3,2ft	4,7ft	6,3ft	7,9ft	11,9ft	15,9ft	23,8ft	31,8ft	39,7ft	47,7ft	63,5ft	79,4ft

LINEAR DISTRIBUTION DIAGRAM

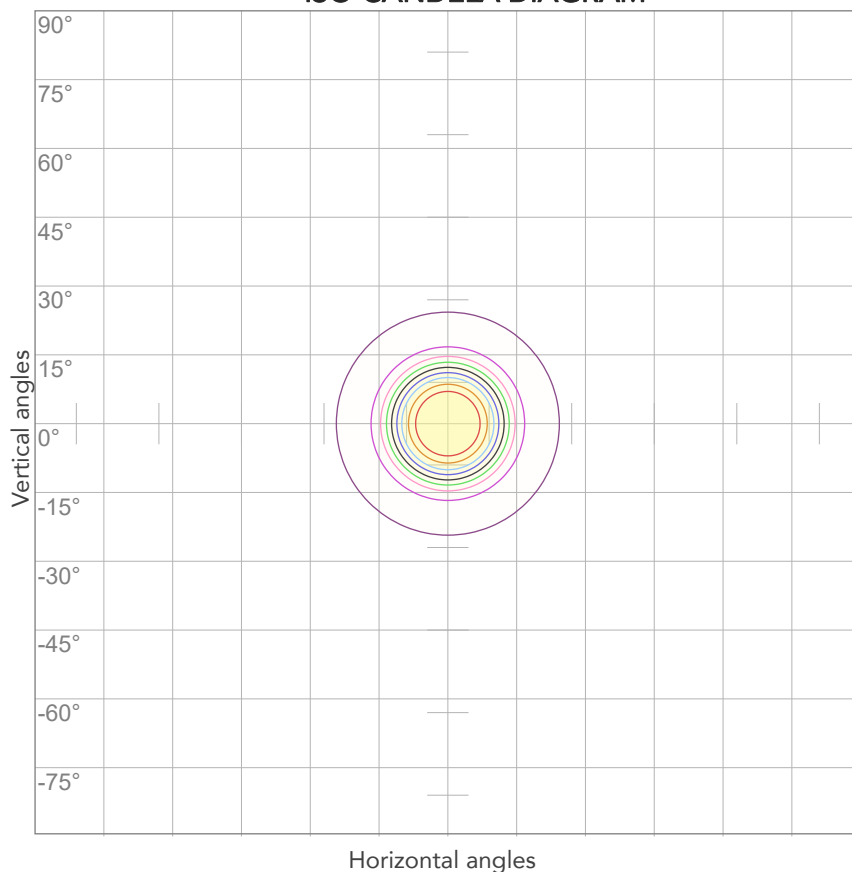


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Efficiency
224V	0,230A	50,6W	0,98	48lm/W

ISO DIAGRAMS

ISO CANDELA DIAGRAM



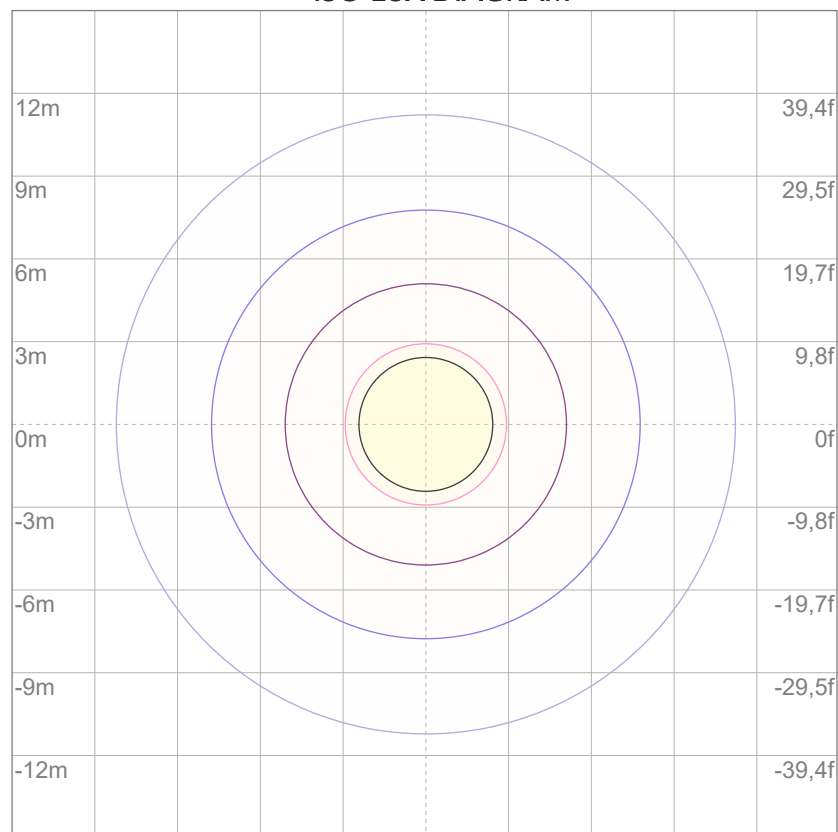
10%	686 cd
20%	1372 cd
30%	2059 cd
40%	2745 cd
50%	3431 cd
60%	4117 cd
70%	4804 cd
80%	5490 cd

Conditions:

Number of c-planes: 2

Candela at center: 6862 cd

ISO LUX DIAGRAM



3%	2,06 lx
5%	3,43 lx
10%	6,86 lx
30%	20,6 lx
50%	34,3 lx

Conditions:

Number of c-planes: 2

Lux at center: 68,6 lx

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



Total lumen output:

2520 lm

Peak candela output:

2835 cd

Light quality:

CRI: 91,3

Color temperature:

4903 K

PRODUCT NAME:
DISPLAYCOBTRWDDY

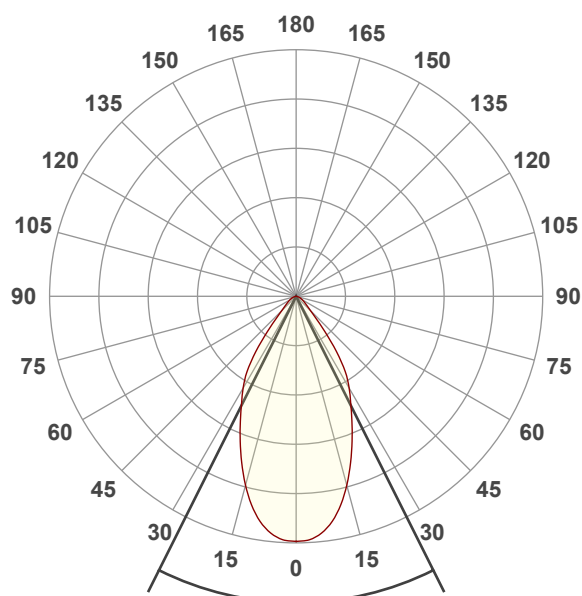
MEASURAMENT CONDITIONS:

Beam angle:
60° Original Lens (without Additional Optics)

Target:
Full on

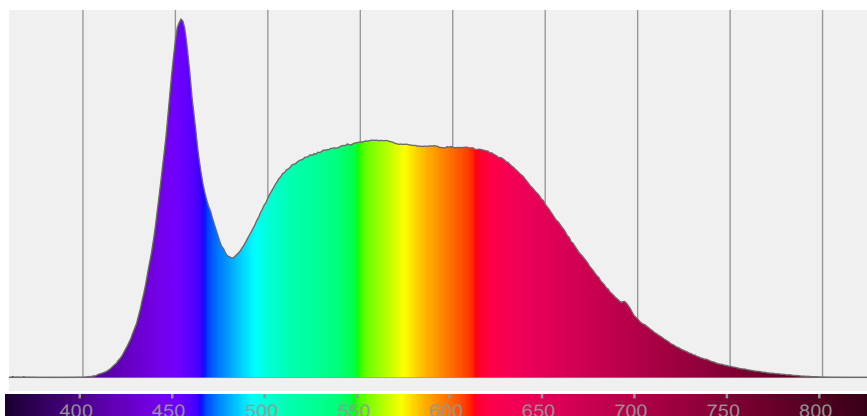
Operator:
Salvatore Giglio

Date and time:
07/12/2023 10:42:29

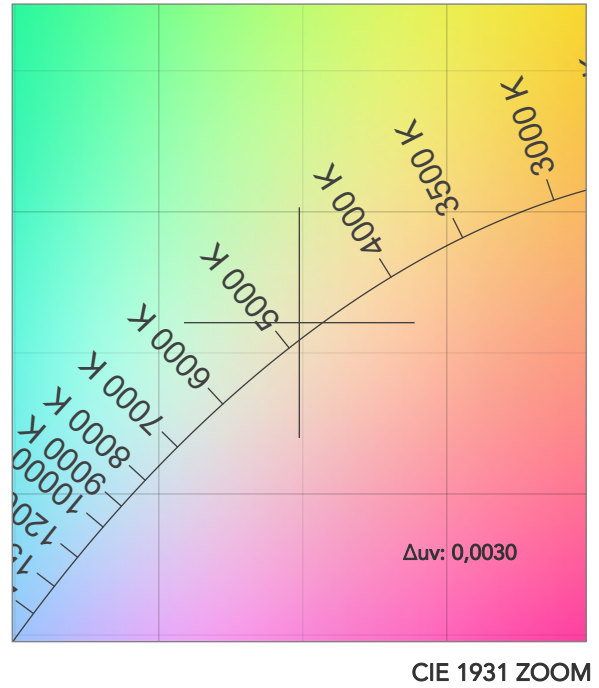
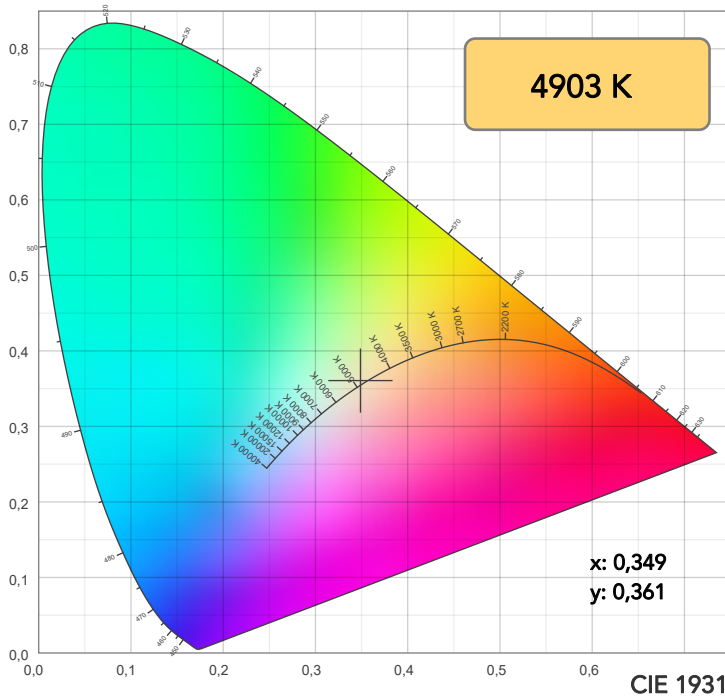


Beam angle 50%: 53,2°
Field angle 10%: 87,3°
Cut off angle 2.5%: 125,4°

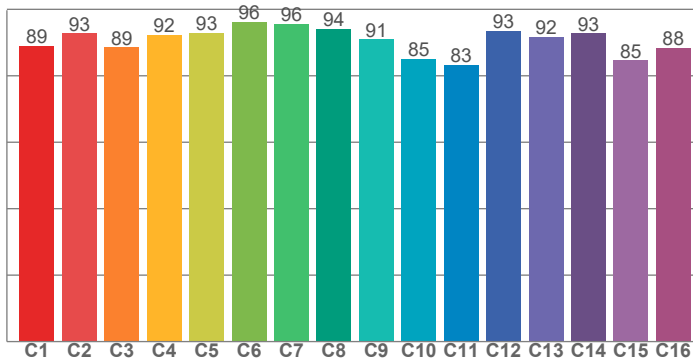
Spectra



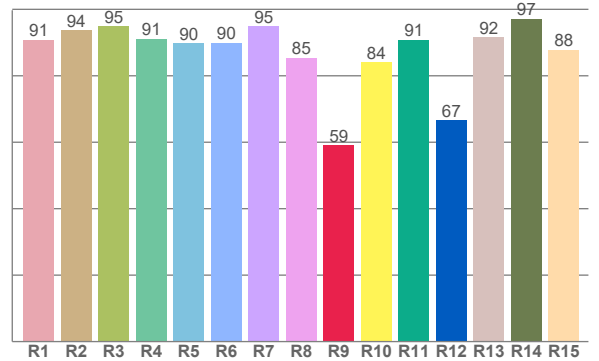
COLOR DETAILS



TM30: 90,4



CRI: 91,3 (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
90,9	93,6	94,9	91,2	89,8	90,0	94,9	85,4	59,1	84,1	90,8	66,7	91,7	97,1	87,9

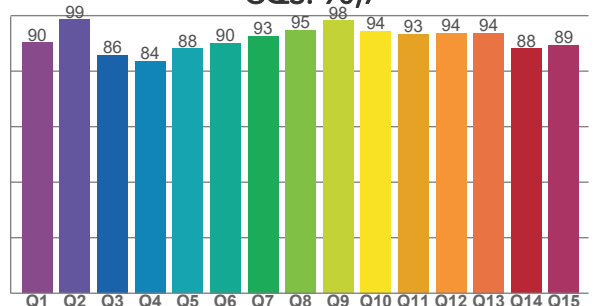
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
89,0	92,8	88,6	92,3	92,9	96,2	95,7	94,0	91,0	85,0	83,3	93,5	91,8	92,8	84,6	88,5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
90,3	98,6	85,8	83,7	88,1	90,1	92,6	94,9	98,2	94,4	93,4	93,7	93,8	88,1	89,4

CQS: 90,7



COLOR PARAMETERS

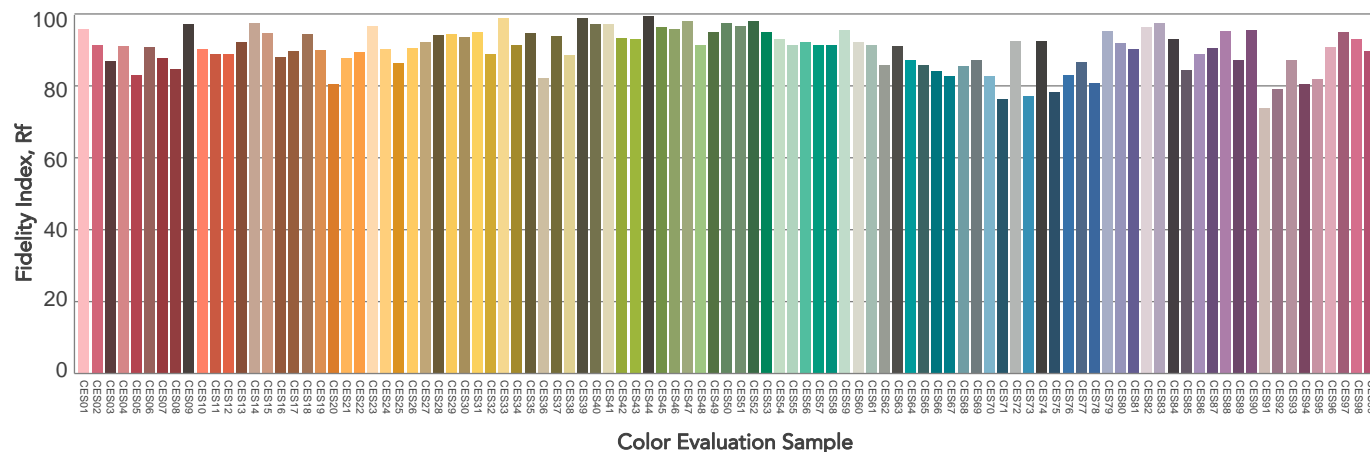
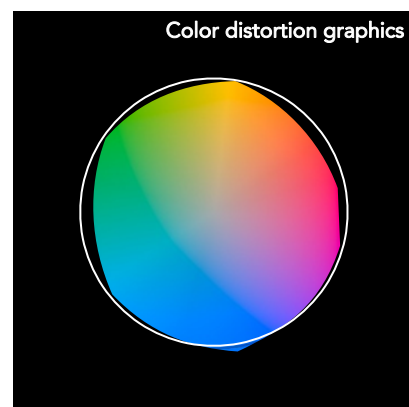
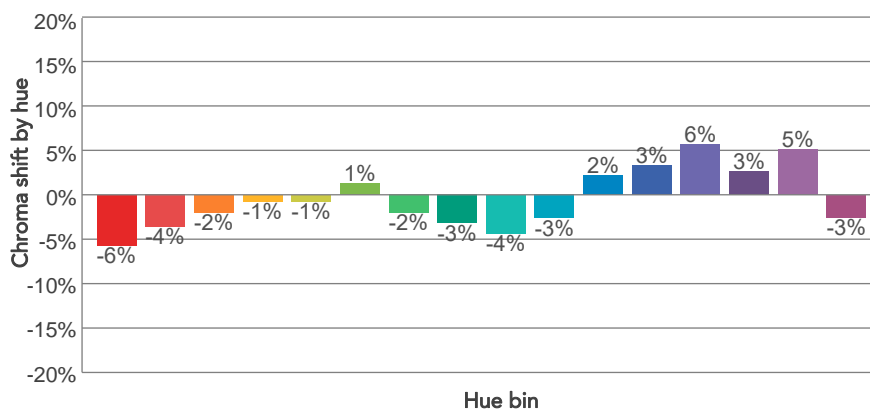
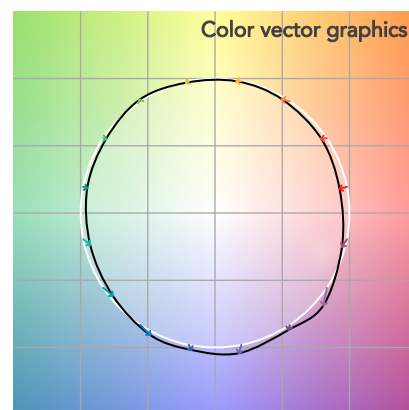
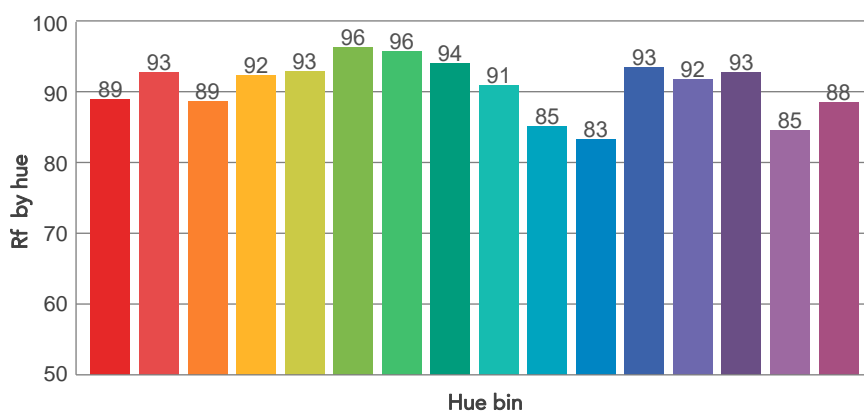
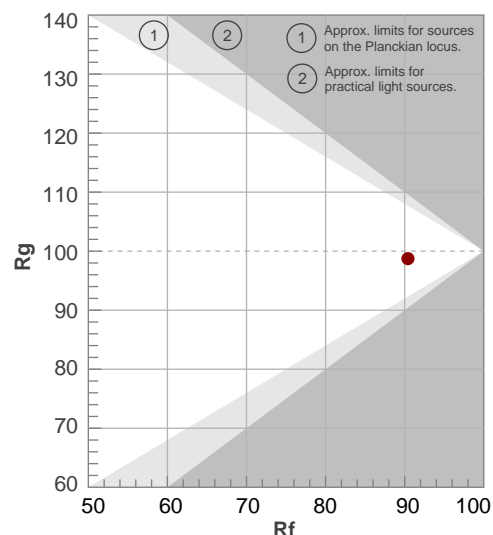
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
4903 K	91,3	59,1	90,4	98,7	90,7	95	0,349	0,361	0,0030

TM30 DETAILS

Rf 90,4
Fidelity index Rf

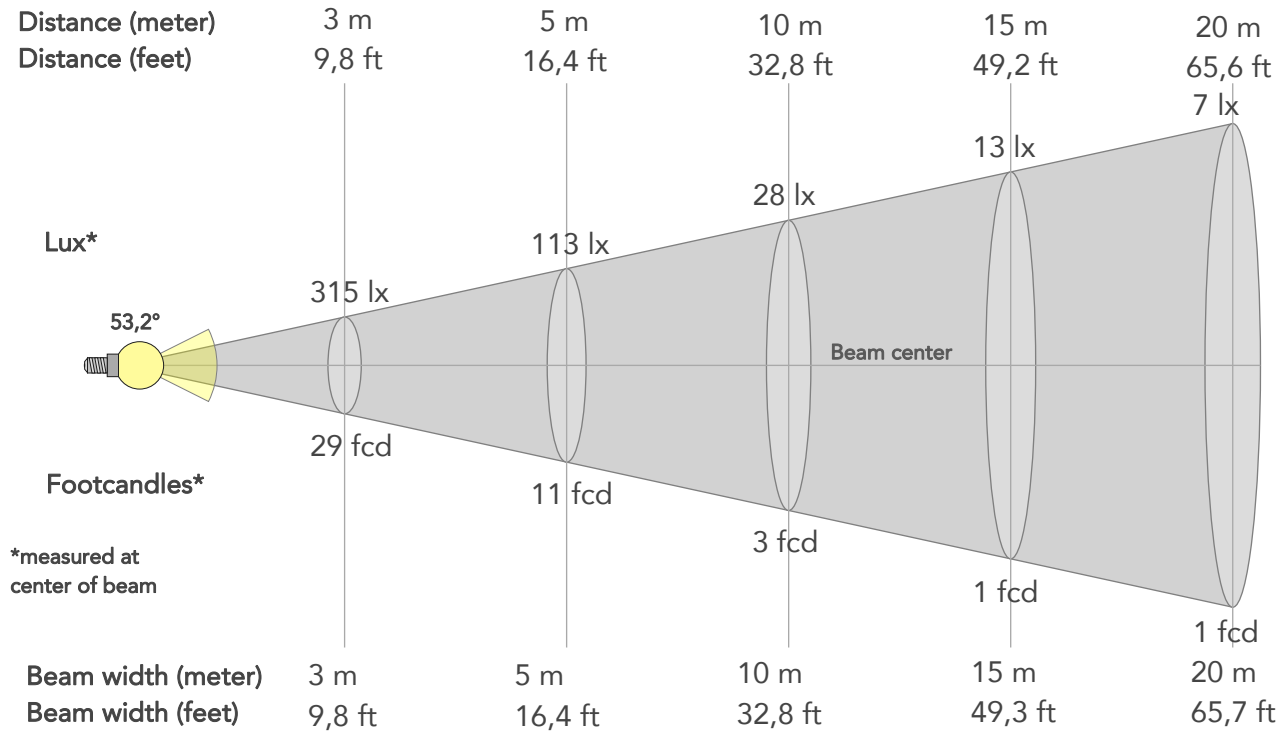
Rg 98,7
Gammut index

		Graphic shifts (%)	
Hue Bin	R _f	Chroma	Hue
1	89	-6%	0%
2	93	-4%	2%
3	89	-2%	6%
4	92	-1%	3%
5	93	-1%	2%
6	96	1%	0%
7	96	-2%	-1%
8	94	-3%	0%
9	91	-4%	5%
10	85	-3%	9%
11	83	2%	10%
12	93	3%	3%
13	92	6%	-3%
14	93	3%	-3%
15	85	5%	-12%
16	88	-3%	-6%



BEAM DETAILS

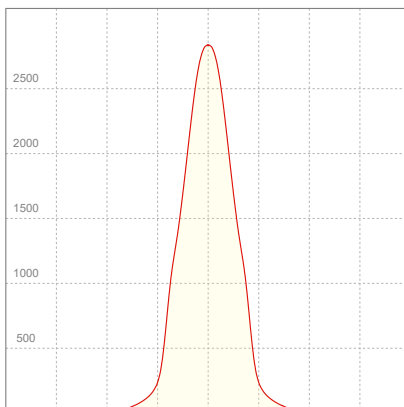
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
53,2°	87,3°	125,4°	96,3%	89,1%



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	2835lx	709lx	315lx	177lx	113lx	50lx	28lx	13lx	7lx	5lx	3lx	2lx	1lx
Footcand.	263fcd	66fcd	29fcd	16fcd	11fcd	5fcd	3fcd	1fcd	1fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40,1m	50,1m
Beam wid.	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,3ft	65,7ft	82,1ft	98,5ft	131,4ft	164,2ft

LINEAR DISTRIBUTION DIAGRAM

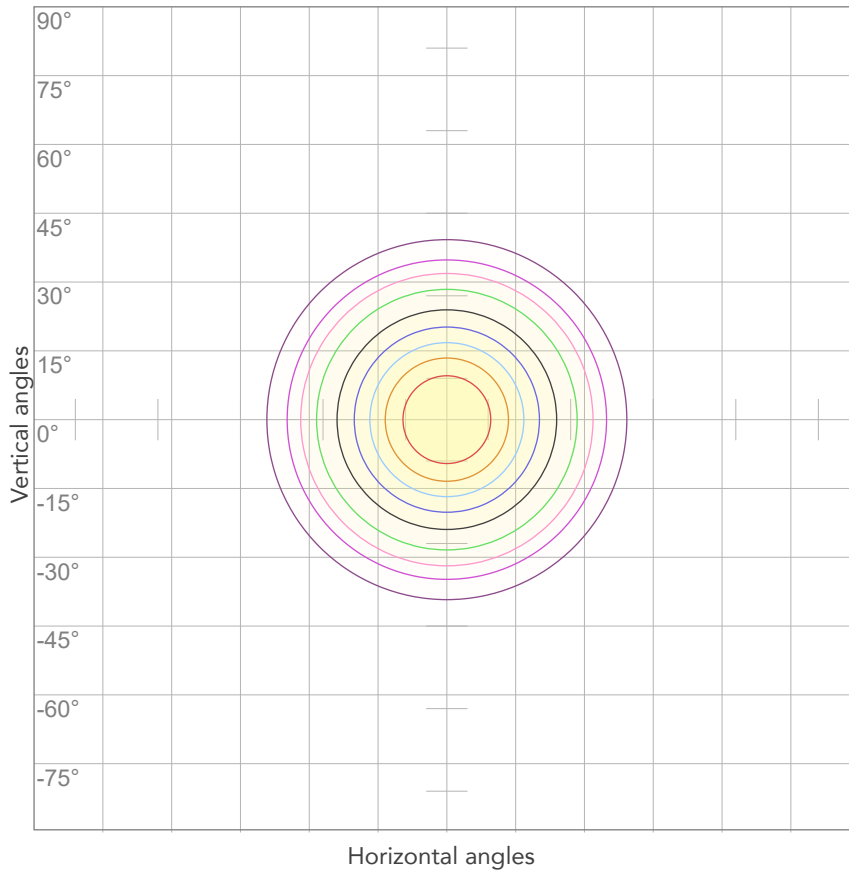


ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Power FC	Effeciency
227V	0,230A	51,1W	0,98	49lm/W

ISO DIAGRAMS

ISO CANDELA DIAGRAM



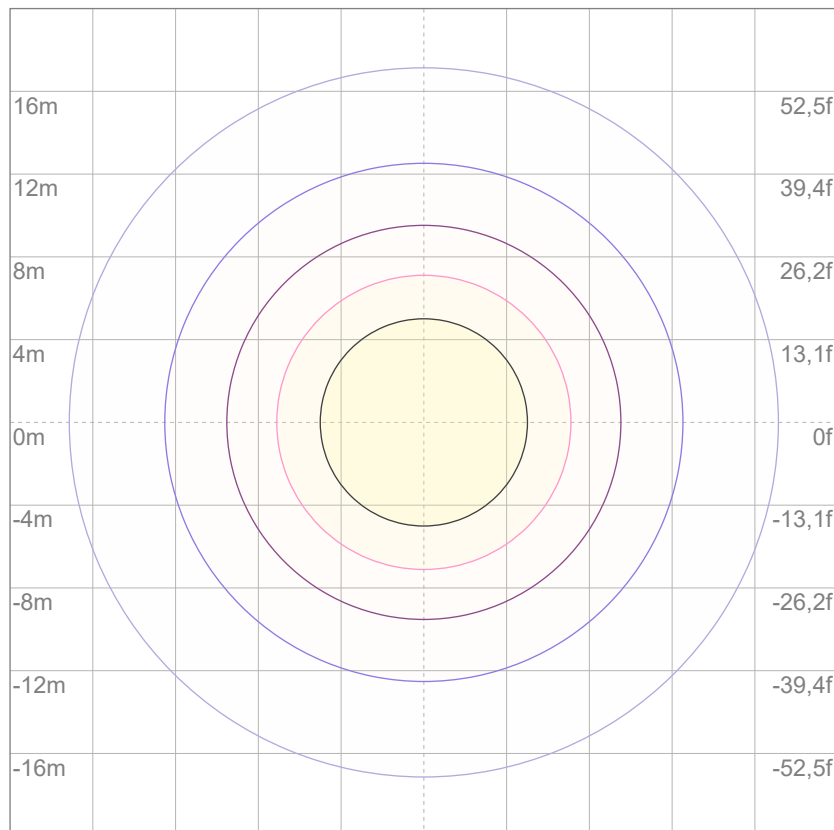
10%	283 cd
20%	567 cd
30%	850 cd
40%	1134 cd
50%	1417 cd
60%	1701 cd
70%	1984 cd
80%	2268 cd

Conditions:

Number of c-planes: 2

Candela at center: 2835 cd

ISO LUX DIAGRAM



3%	0,850 lx
5%	1,42 lx
10%	2,83 lx
30%	8,50 lx
50%	14,2 lx

Conditions:

Number of c-planes: 2

Lux at center: 28,3 lx

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