Photometric Test Report

ECLCTPLUS PRL70

High quality six colours full spectrum ellipsoidal LED

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:

7430 lm

Peak candela output:

7641 cd

PRODUCT NAME:

ECLCTPLUS

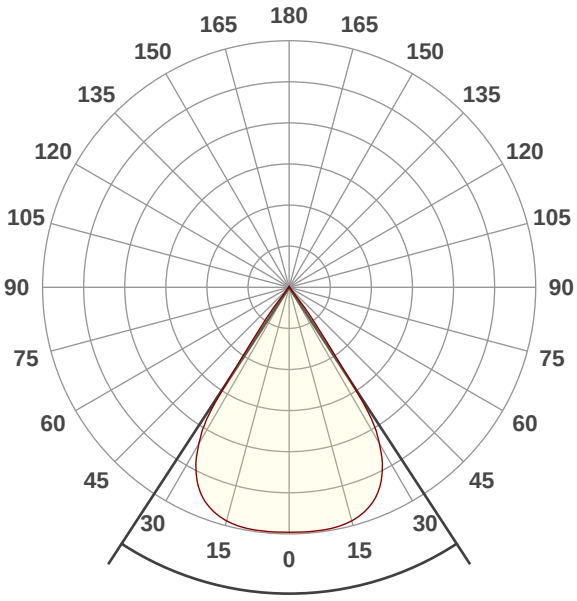
MEASURAMENT CONDITIONS:

Beam angle:
PRL70

Target:
Full On HQ

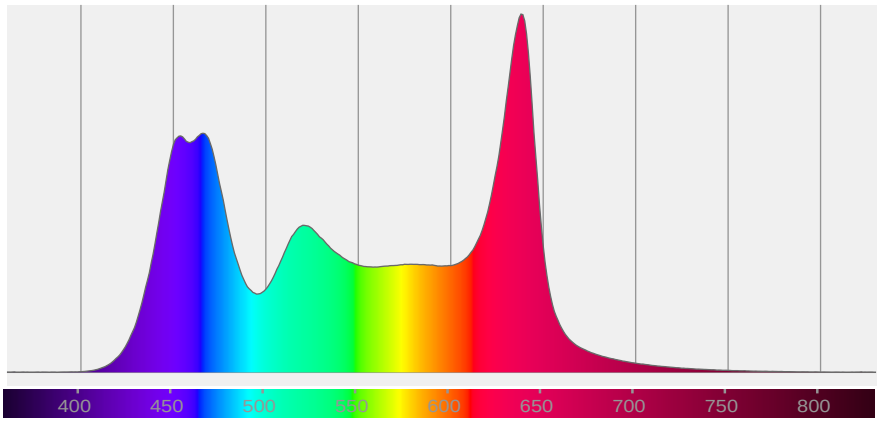
Operator:
Paolo Carvone

Date and time:
15/07/2020 09:53:30



Beam angle 50%: 66,3°
Field angle 10%: 75°
Cut off angle 2.5%: 79,1°

Spectra



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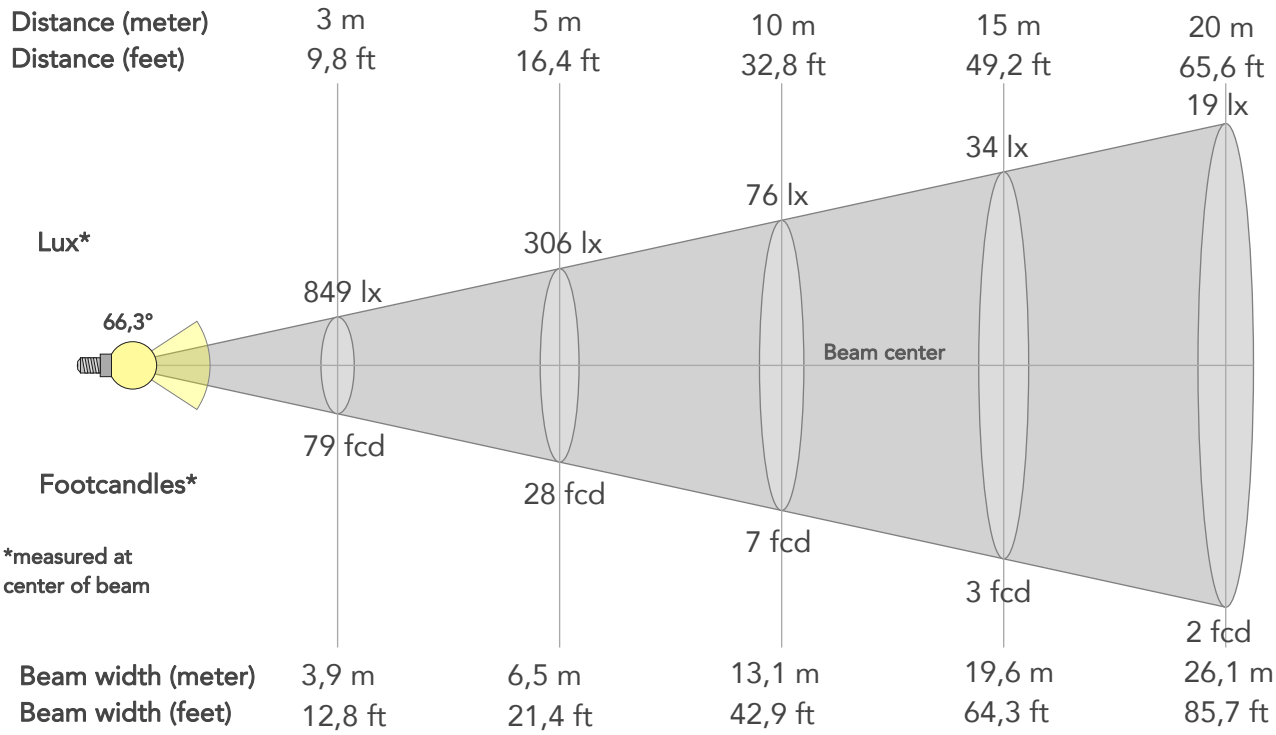
BEAM DETAILS

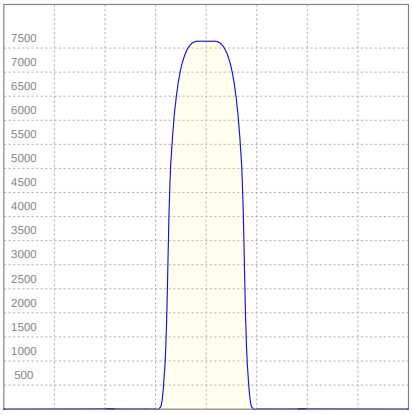
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
66,3°	75°	79,1°	99,4%	99,3%



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	7641lx	1910lx	849lx	478lx	306lx	136lx	76lx	34lx	19lx	12lx	8lx	5lx	3lx
Footcand.	710fcd	177fcd	79fcd	44fcd	28fcd	13fcd	7fcd	3fcd	2fcd	1fcd	1fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	3,9m	5,2m	6,5m	9,8m	13,1m	19,6m	26,1m	32,7m	39,2m	52,3m	65,3m
Beam wid.	4,3ft	8,6ft	12,8ft	17,1ft	21,4ft	32,1ft	42,9ft	64,3ft	85,7ft	107,2ft	128,6ft	171,4ft	214,3ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	1,22A	263,9W	28lm/W

Power FC
0,96

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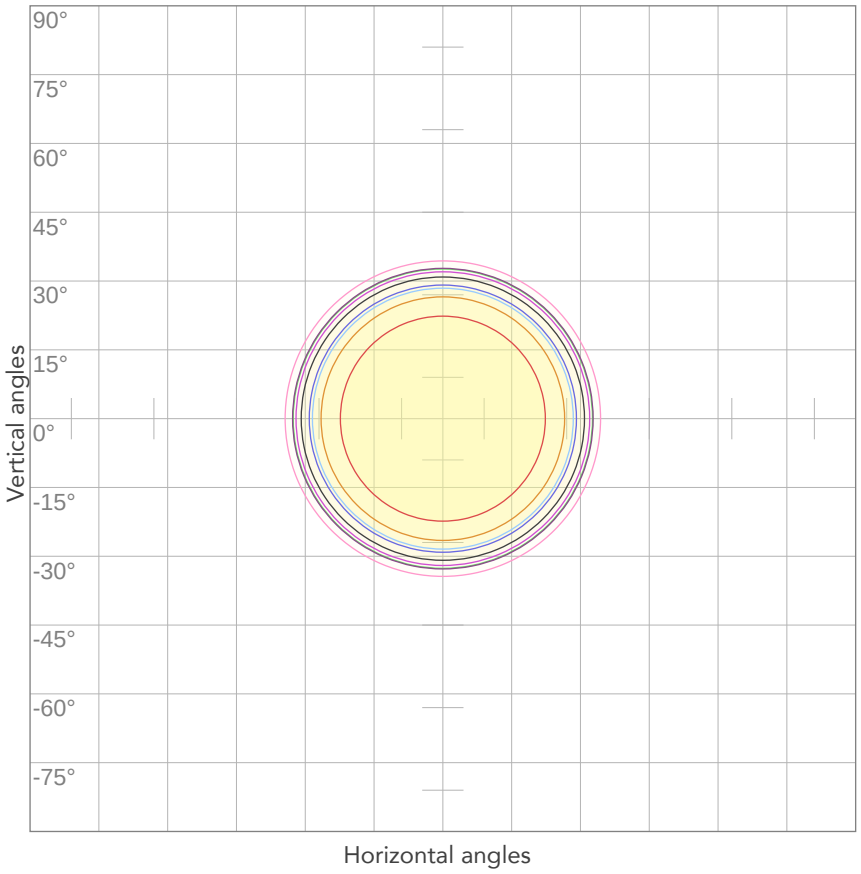
ISO DIAGRAMS

ISO CANDELA DIAGRAM



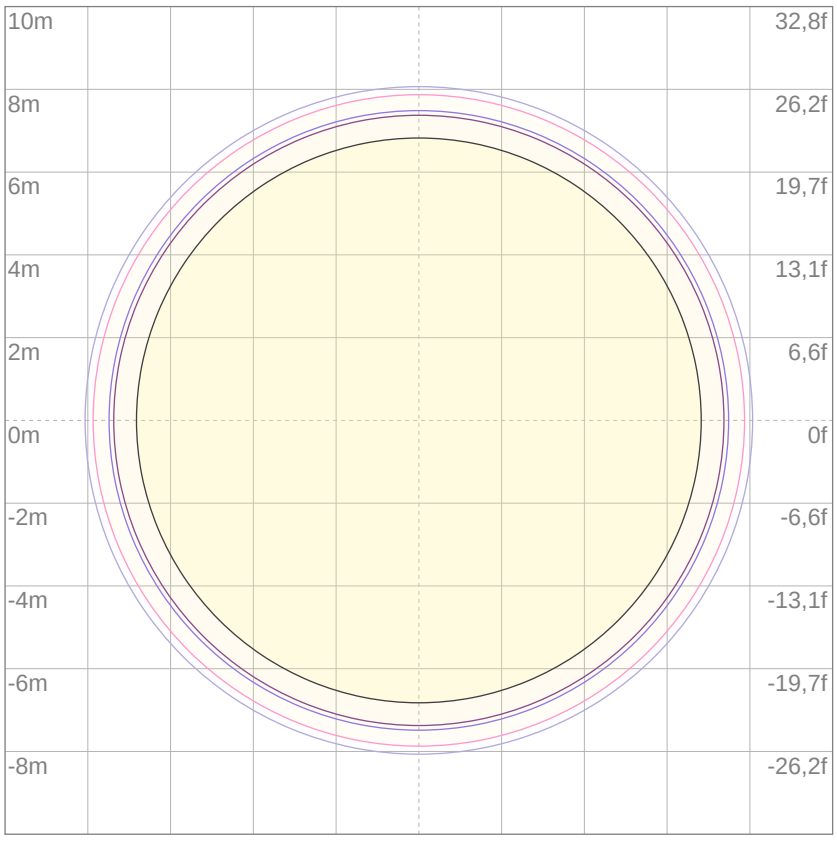
10%	764 cd
20%	1528 cd
30%	2292 cd
40%	3057 cd
50%	3821 cd
60%	4585 cd
70%	5349 cd
80%	6113 cd

Conditions:

Number of c-planes: 2

Candela at center: 7641 cd

ISO LUX DIAGRAM



3%	2,29 lx
5%	3,82 lx
10%	7,64 lx
30%	22,9 lx
50%	38,2 lx

Conditions:

Number of c-planes: 2

Lux at center: 76,4 lx

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

Total lumen output:

1135 lm

Peak candela output:

1180 cd

PRODUCT NAME:

ECLCTPLUS

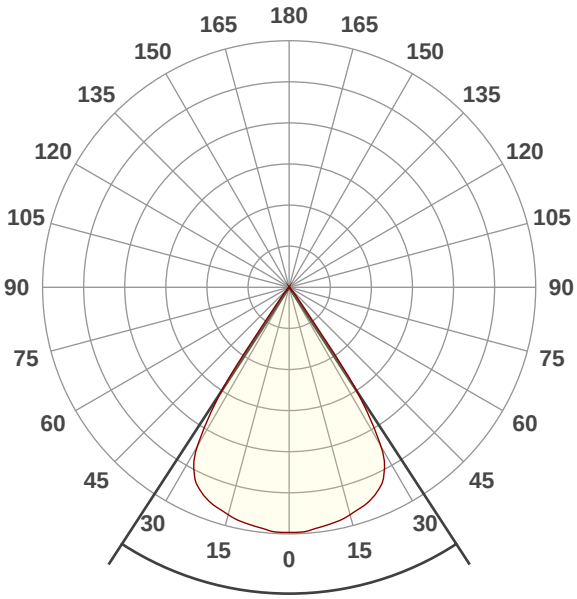
MEASURAMENT CONDITIONS:

Beam angle:
PRL70

Target:
Red HQ

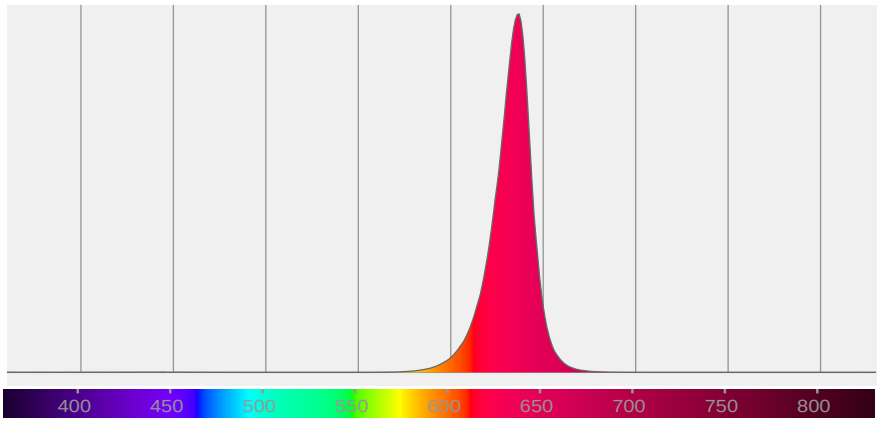
Operator:
Paolo Carvone

Date and time:
15/07/2020 09:55:35



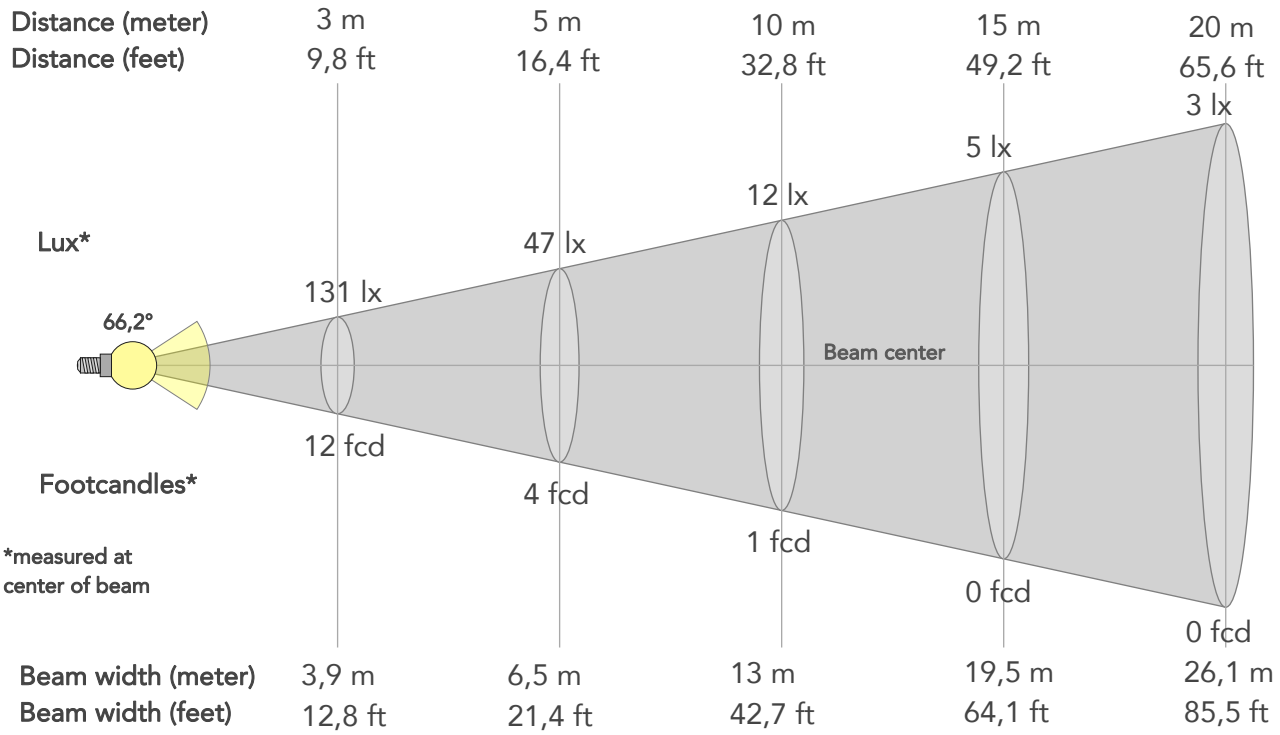
Beam angle 50%: 66,2°
Field angle 10%: 73,1°
Cut off angle 2.5%: 78,7°

Spectra



BEAM DETAILS

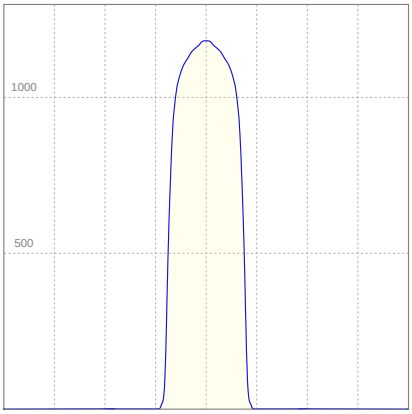
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
66,2°	73,1°	78,7°	99,2%	99,1%



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	1180lx	295lx	131lx	74lx	47lx	21lx	12lx	5lx	3lx	2lx	1lx	1lx	0lx
Footcand.	110fcd	27fcd	12fcd	7fcd	4fcd	2fcd	1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	3,9m	5,2m	6,5m	9,8m	13m	19,5m	26,1m	32,6m	39,1m	52,1m	65,1m
Beam wid.	4,3ft	8,6ft	12,8ft	17,1ft	21,4ft	32ft	42,7ft	64,1ft	85,5ft	106,8ft	128,2ft	170,9ft	213,7ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
227V	0,323A	53,2W	21lm/W

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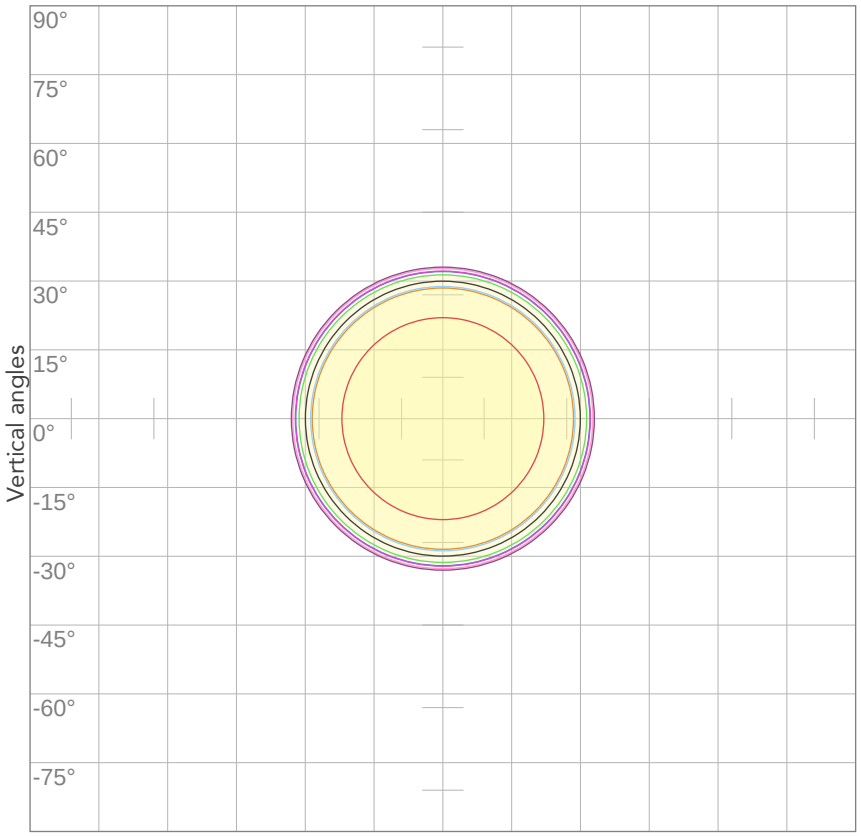
ISO DIAGRAMS

ISO CANDELA DIAGRAM



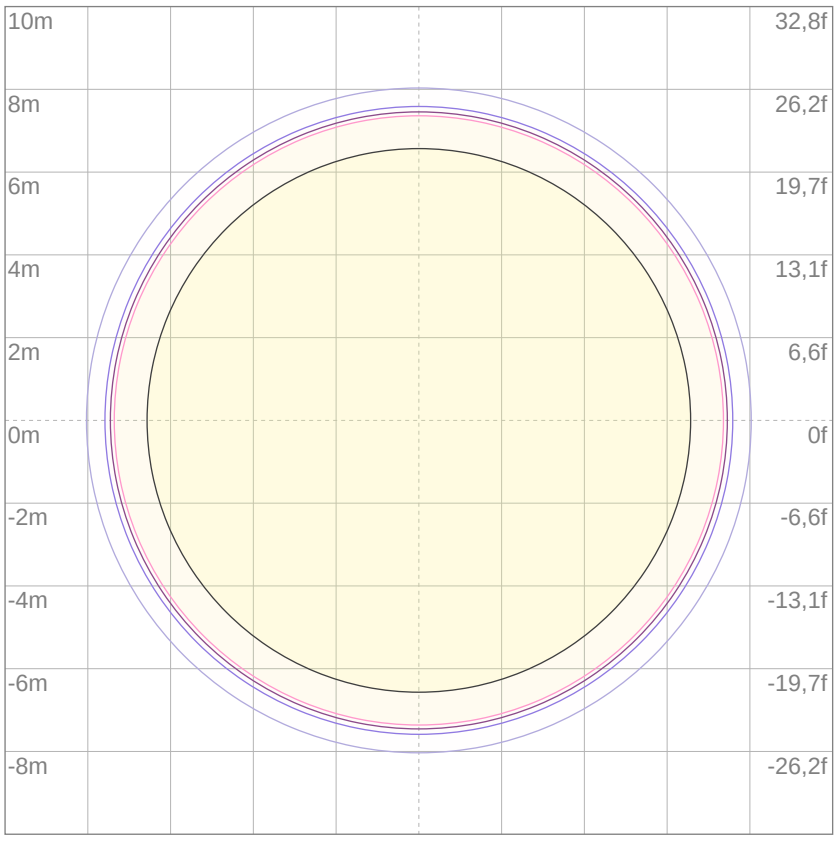
10%	118 cd
20%	236 cd
30%	354 cd
40%	472 cd
50%	590 cd
60%	708 cd
70%	826 cd
80%	944 cd

Conditions:

Number of c-planes: 2

Candela at center: 1180 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	0,354 lx
5%	0,590 lx
10%	1,18 lx
30%	3,54 lx
50%	5,90 lx

Conditions:

Number of c-planes: 2

Lux at center: 11,8 lx

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

Total lumen output:

1242 lm

Peak candela output:

1352 cd

PRODUCT NAME:

ECLCTPLUS

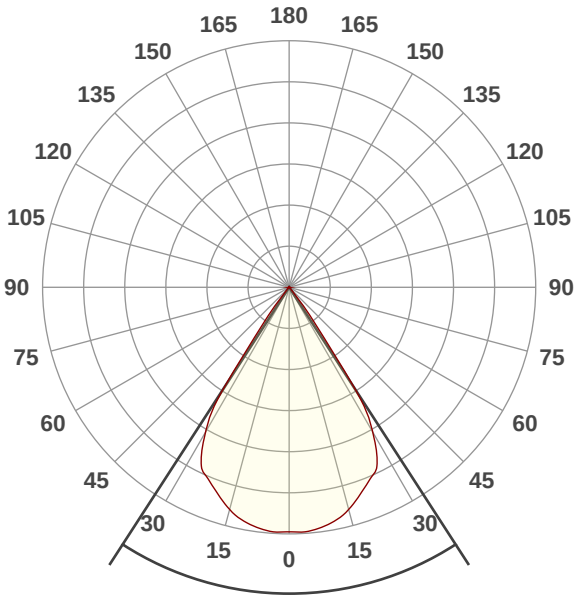
MEASURAMENT CONDITIONS:

Beam angle:
PRL70

Target:
Green HQ

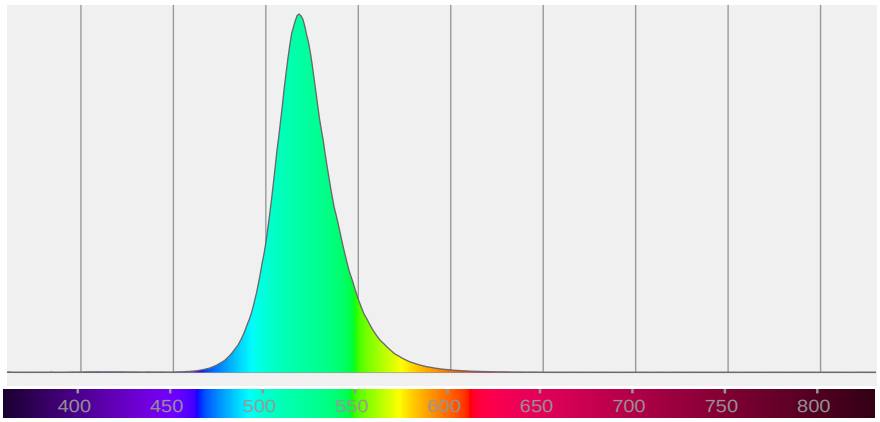
Operator:
Paolo Carvone

Date and time:
15/07/2020 09:57:08



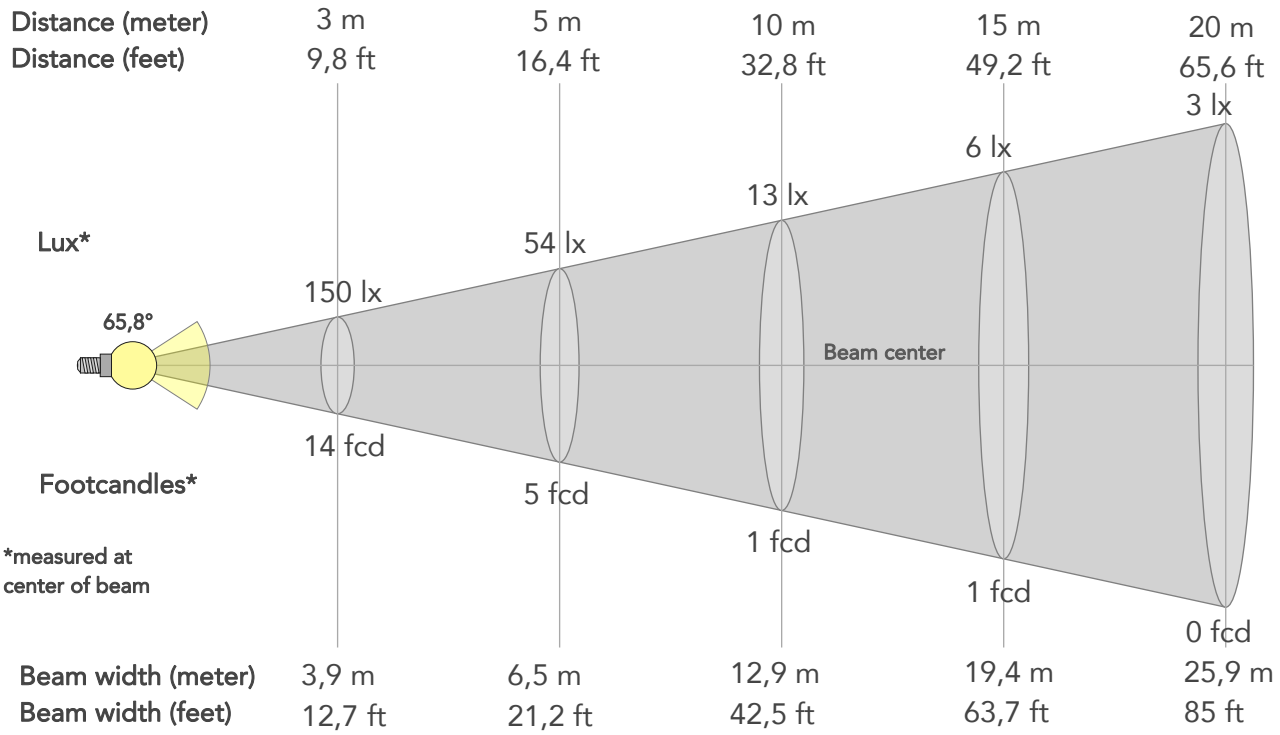
Beam angle 50%: 65,8°
Field angle 10%: 74,7°
Cut off angle 2.5%: 78,7°

Spectra



BEAM DETAILS

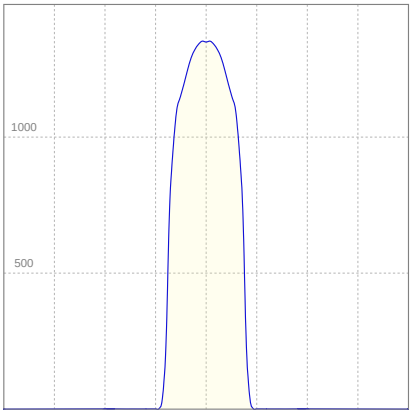
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
65,8°	74,7°	78,7°	99,4%	99,3%



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	1350lx	337lx	150lx	84lx	54lx	24lx	13lx	6lx	3lx	2lx	1lx	1lx	1lx
Footcand.	125fcd	31fcd	14fcd	8fcd	5fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	3,9m	5,2m	6,5m	9,7m	12,9m	19,4m	25,9m	32,4m	38,8m	51,8m	64,7m
Beam wid.	4,3ft	8,5ft	12,7ft	17ft	21,2ft	31,9ft	42,5ft	63,7ft	85ft	106,2ft	127,4ft	169,9ft	212,4ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
228V	0,298A	47,2W	26lm/W

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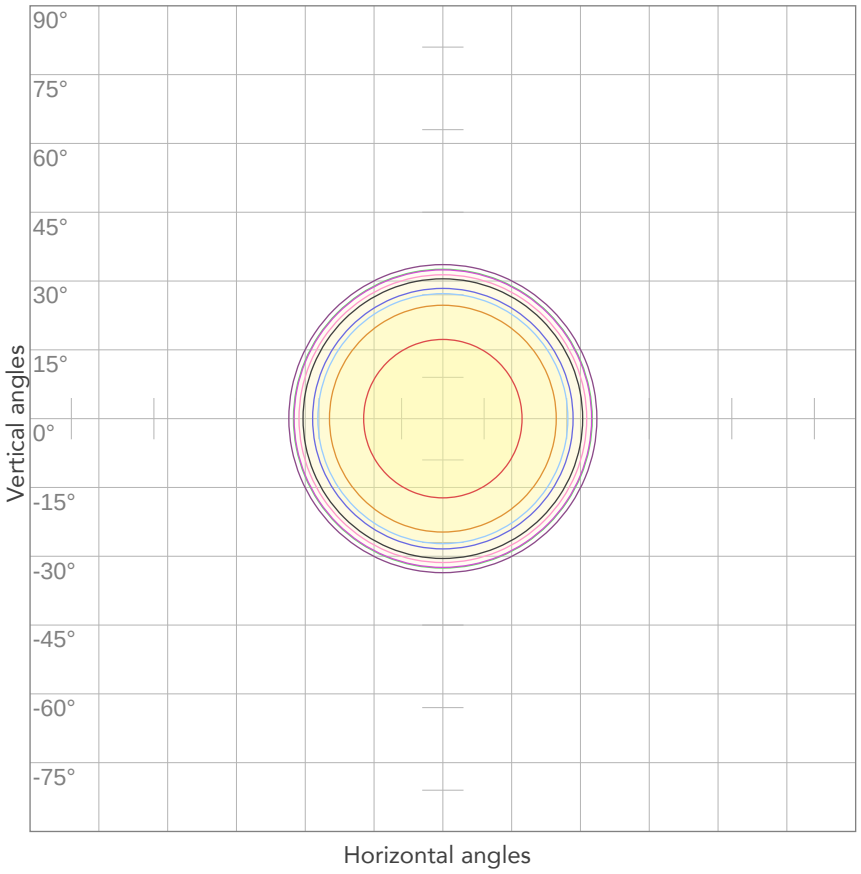
ISO DIAGRAMS

ISO CANDELA DIAGRAM



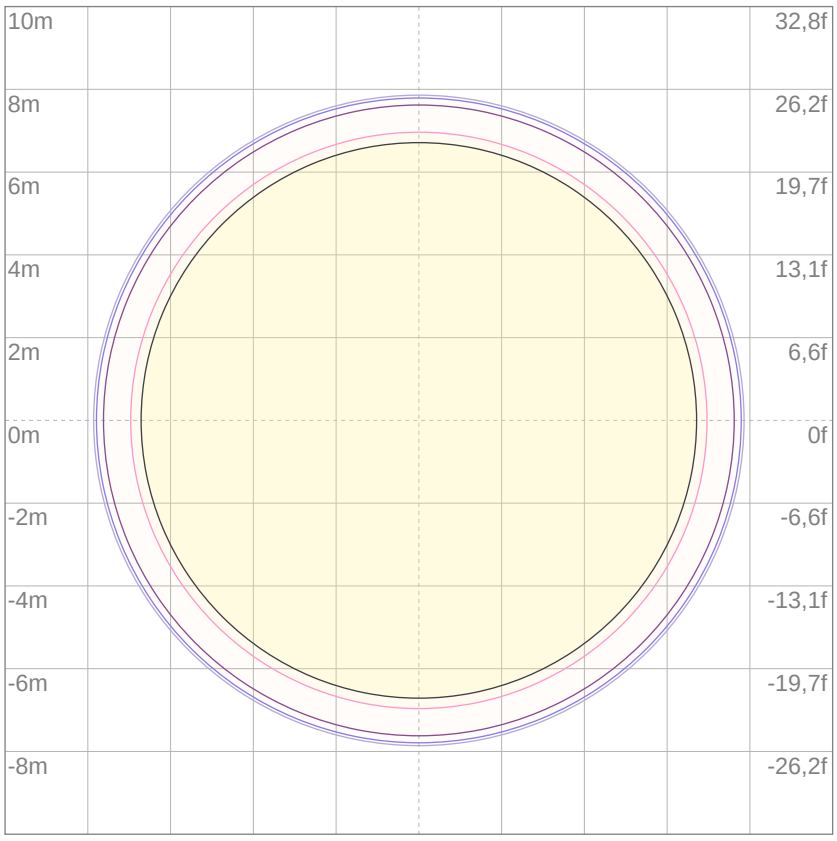
10%	135 cd
20%	270 cd
30%	405 cd
40%	540 cd
50%	675 cd
60%	810 cd
70%	945 cd
80%	1080 cd

Conditions:

Number of c-planes: 2

Candela at center: 1350 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	0,405 lx
5%	0,675 lx
10%	1,35 lx
30%	4,05 lx
50%	6,75 lx

Conditions:

Number of c-planes: 2

Lux at center: 13,5 lx

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

Total lumen output:

139 lm

Peak candela output:

152 cd

PRODUCT NAME:

ECLCTPLUS

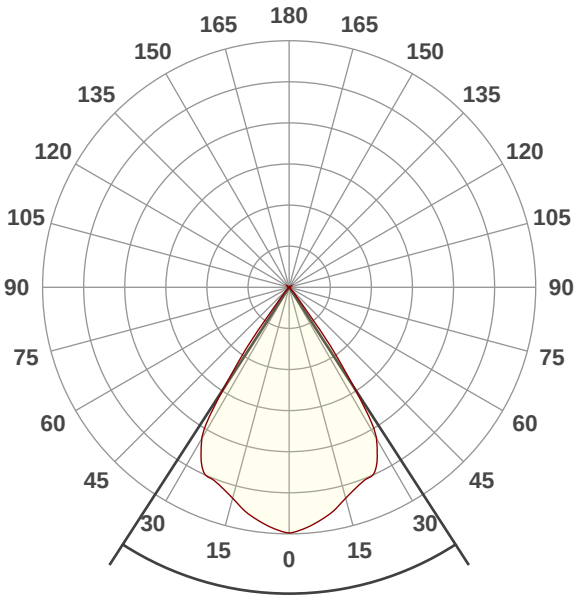
MEASURAMENT CONDITIONS:

Beam angle:
PRL70

Target:
Blue HQ

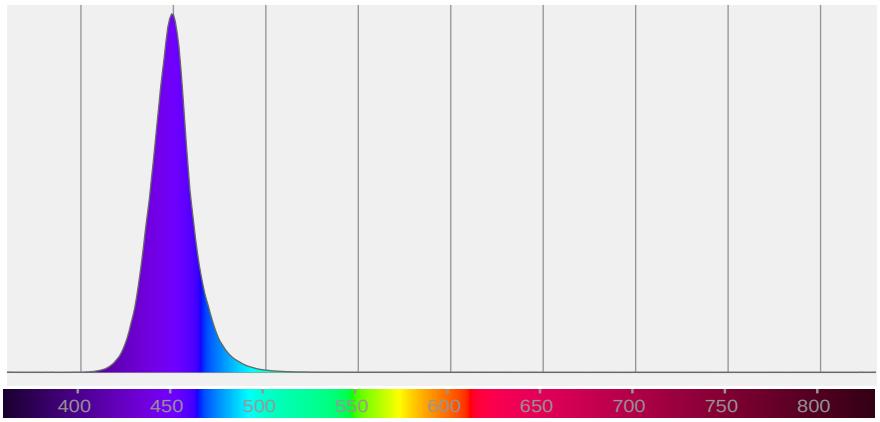
Operator:
Paolo Carvone

Date and time:
15/07/2020 09:58:43



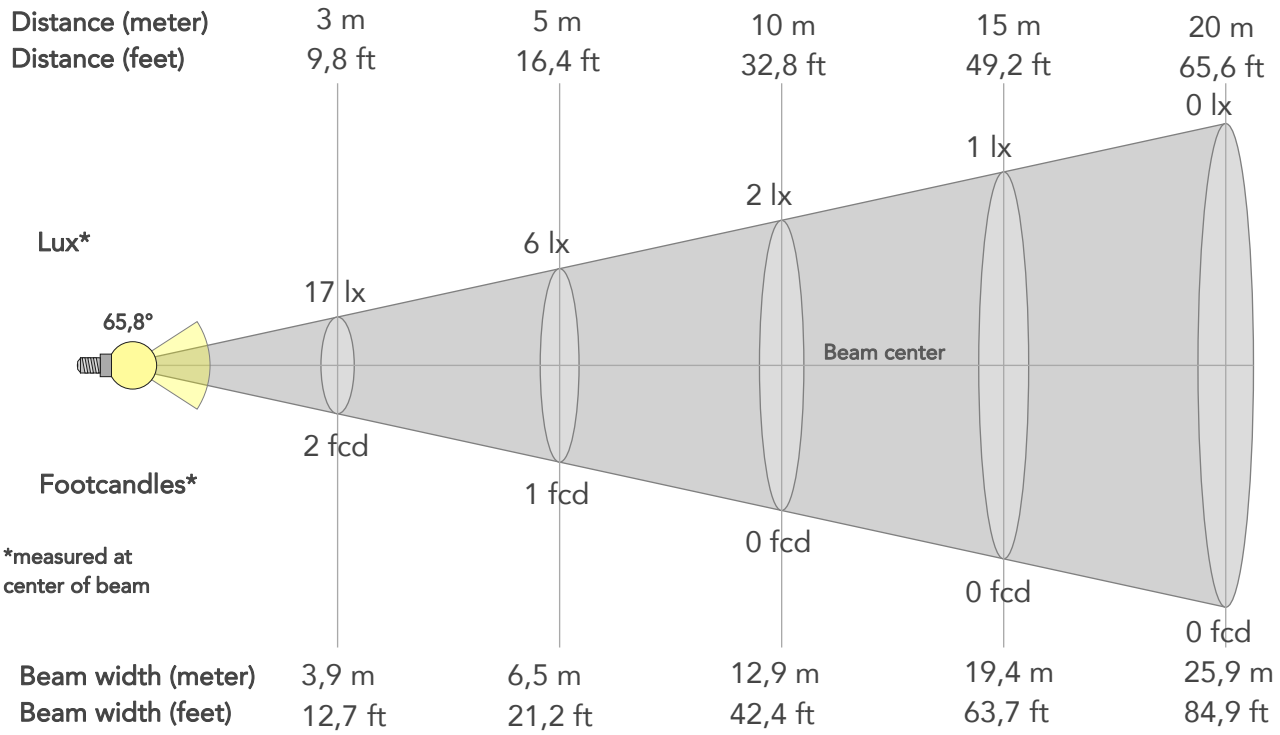
Beam angle 50%: 65,8°
Field angle 10%: 75,3°
Cut off angle 2.5%: 80,4°

Spectra



BEAM DETAILS

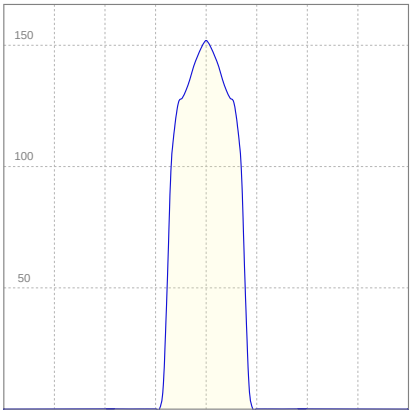
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
65,8°	75,3°	80,4°	99,4%	99,3%



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	152lx	38lx	17lx	9lx	6lx	3lx	2lx	1lx	0lx	0lx	0lx	0lx	0lx
Footcand.	14fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	3,9m	5,2m	6,5m	9,7m	12,9m	19,4m	25,9m	32,4m	38,8m	51,8m	64,7m
Beam wid.	4,3ft	8,5ft	12,7ft	17ft	21,2ft	31,8ft	42,4ft	63,7ft	84,9ft	106,1ft	127,3ft	169,8ft	212,2ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
228V	0,234A	31,9W	4lm/W

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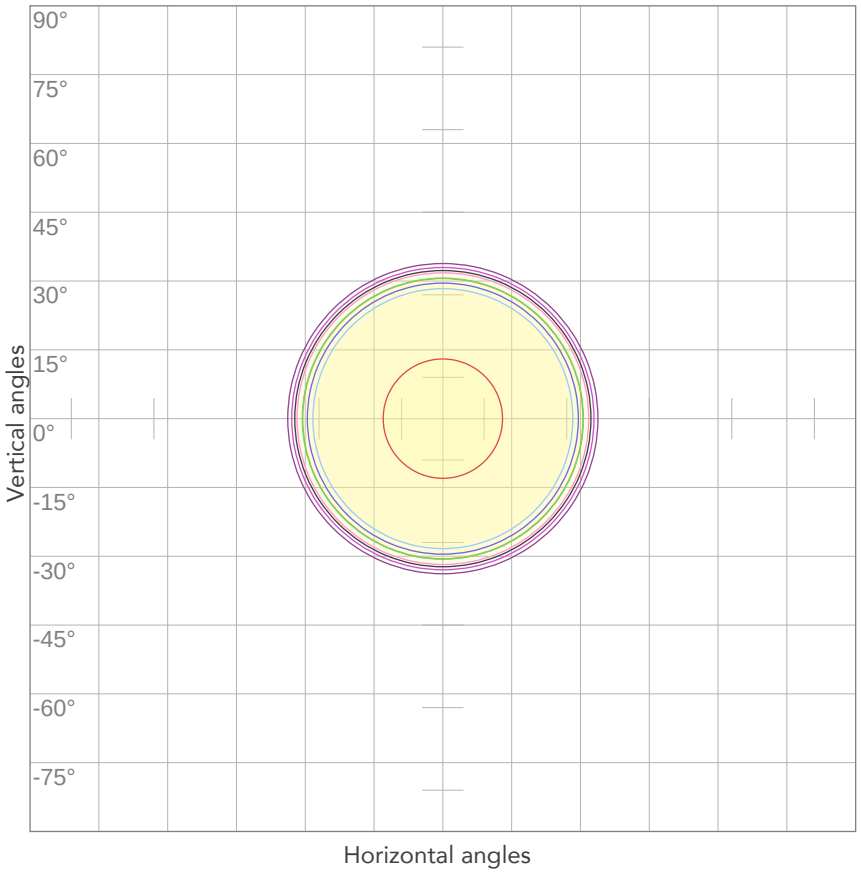
ISO DIAGRAMS

ISO CANDELA DIAGRAM



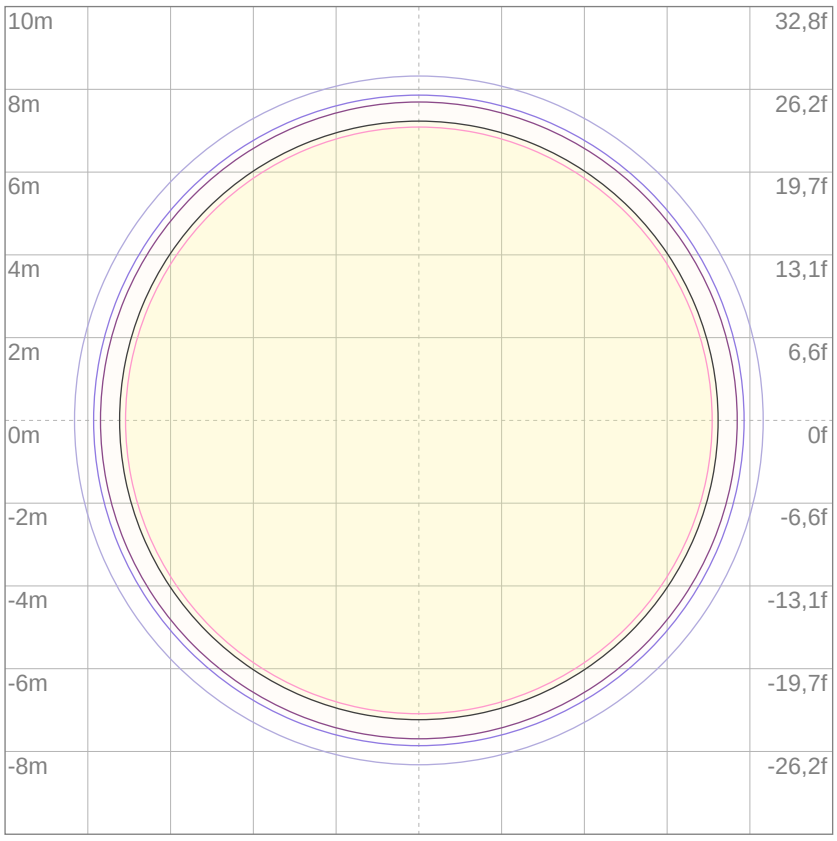
10%	15 cd
20%	30 cd
30%	45 cd
40%	61 cd
50%	76 cd
60%	91 cd
70%	106 cd
80%	121 cd

Conditions:

Number of c-planes: 2

Candela at center: 152 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	45,5m lx
5%	75,8m lx
10%	0,152 lx
30%	0,455 lx
50%	0,758 lx

Conditions:

Number of c-planes: 2

Lux at center: 1,52 lx

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

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Total lumen output:

6062 lm

Peak candela output:

6165 cd

Light quality:

CRI: 92,1

Color temperature:

2831 K

PRODUCT NAME:

ECLCTPLUS

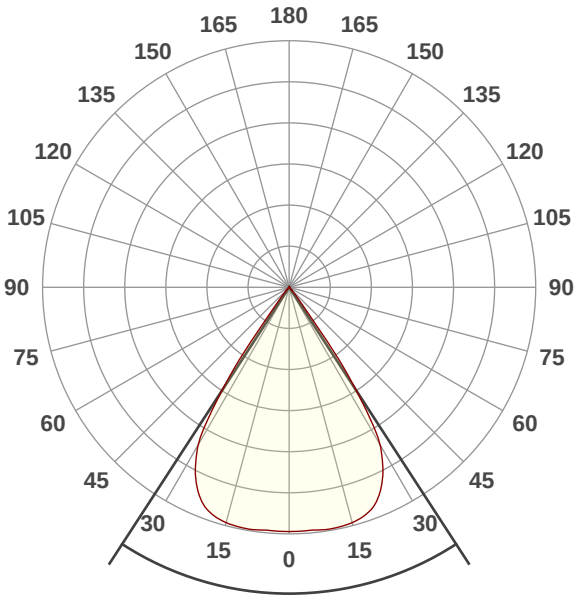
MEASURAMENT CONDITIONS:

Beam angle:
PRL70

Target:
2800K HQ

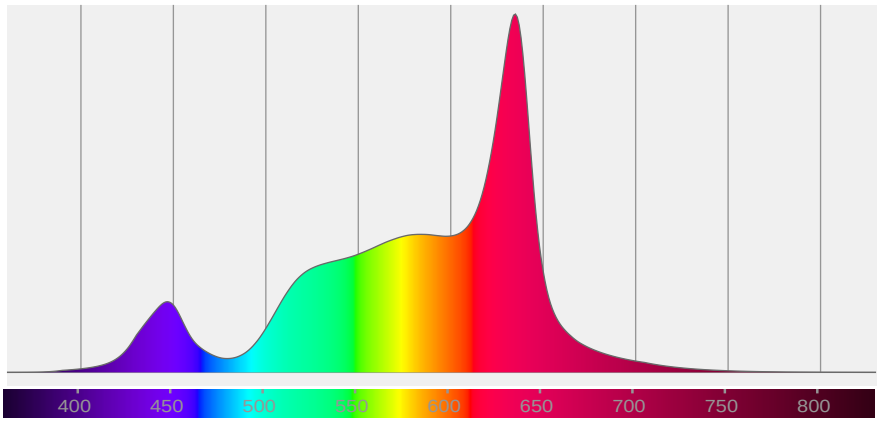
Operator:
Paolo Carvone

Date and time:
15/07/2020 10:00:35



Beam angle 50%: 66,1°
Field angle 10%: 74,4°
Cut off angle 2.5%: 79,3°

Spectra



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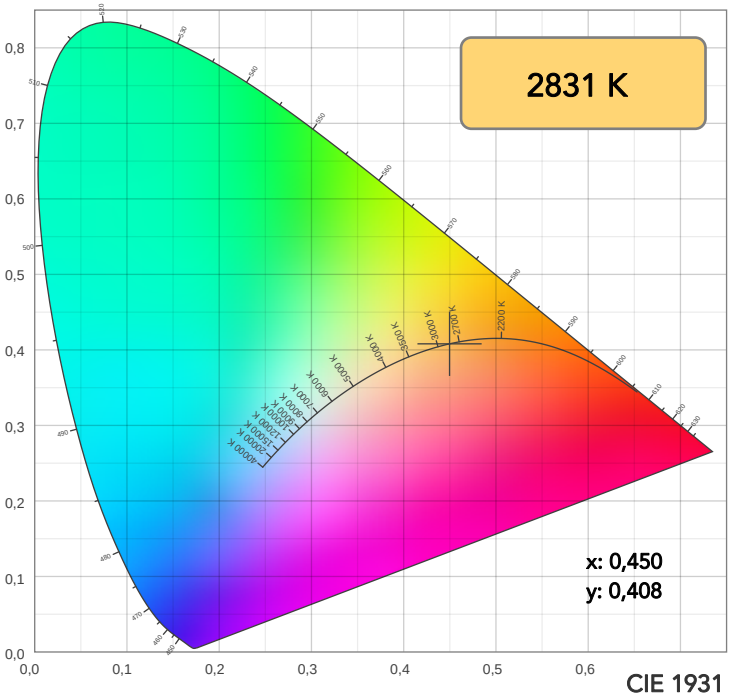
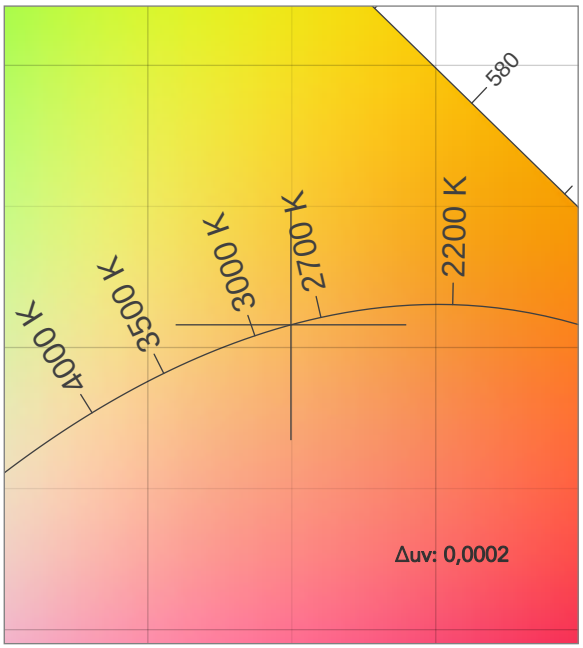
COLOR DETAILS

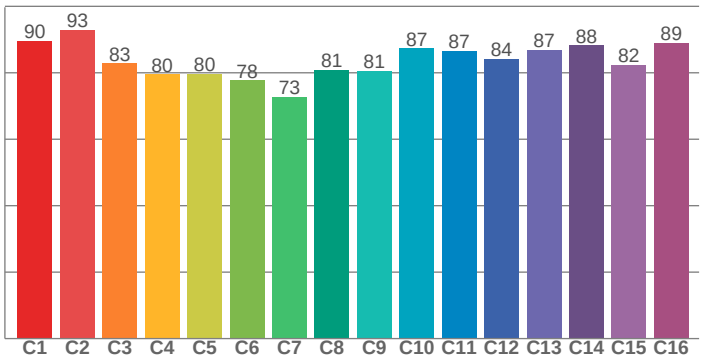


CIE 1931

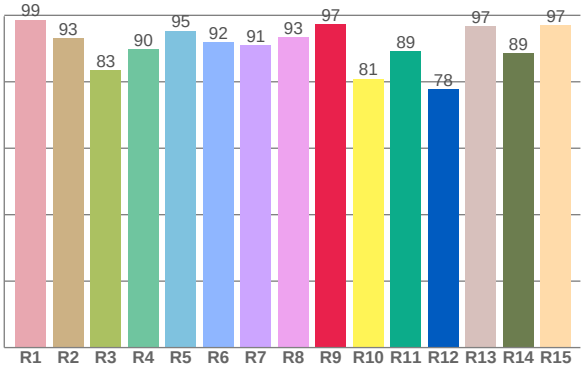


CIE 1931 ZOOM

TM30: 84,4



CRI: 92,1 (R1-R8)



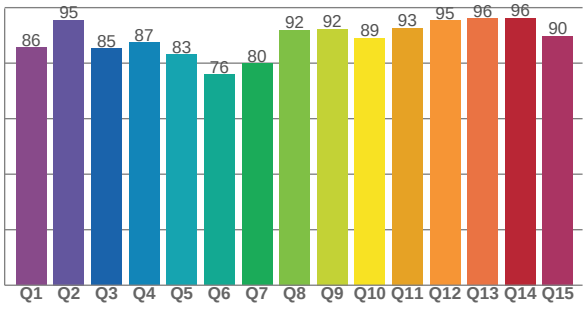
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
98,7	93,2	83,4	89,8	95,4	91,9	91,1	93,5	97,3	81,0	89,2	77,7	96,7	88,7	97,0

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

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
89,5	92,9	82,8	79,6	79,7	77,8	72,8	80,8	80,6	87,3	86,7	84,3	86,8	88,2	82,4	89,0

CQS: 87,2



CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
85,5	95,5	85,2	87,4	83,1	75,8	79,9	91,9	92,4	88,9	92,6	95,3	96,1	96,2	89,8

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
2831 K	92,1	97,3	84,4	107,7	87,2	71	0,450	0,408	0,0002

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TM30 DETAILS

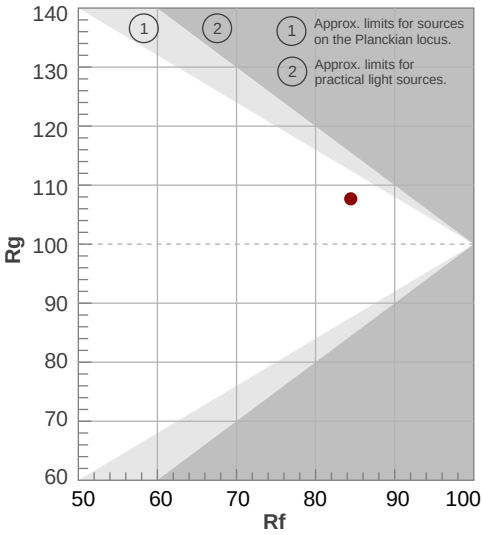
Rf 84,4

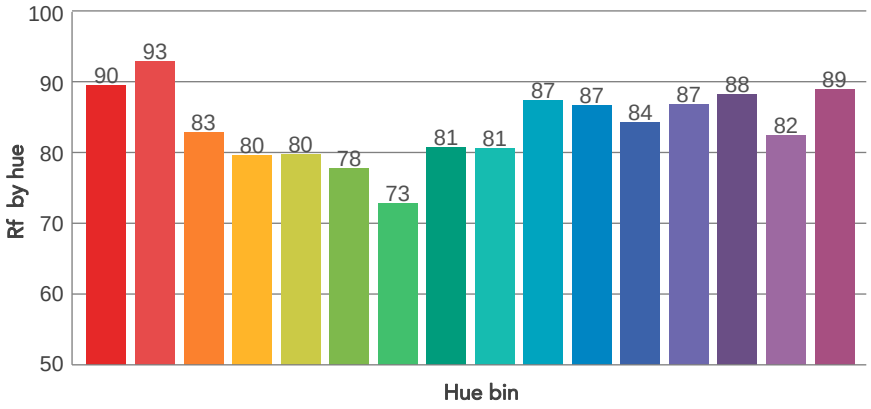
Fidelity index Rf

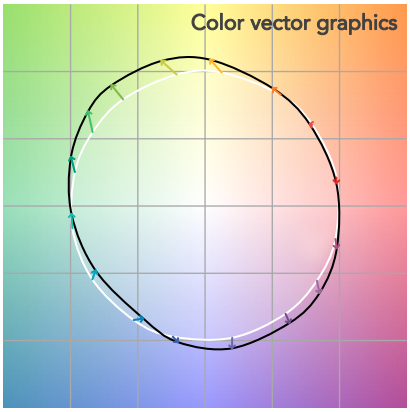
Rg 107,7

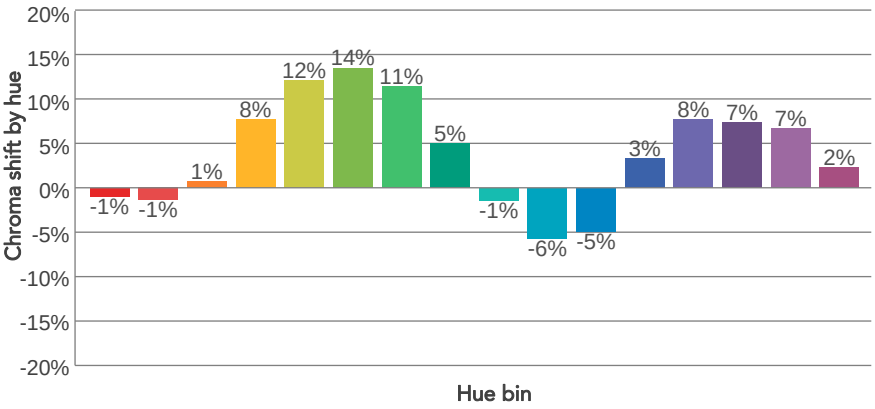
Gammut index

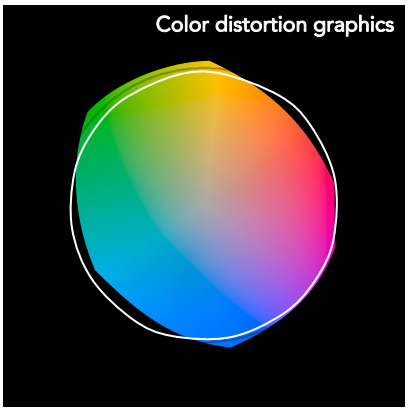
Hue Bin	R_f	Graphic shifts (%) Chroma	Hue
1	90	-1%	-4%
2	93	-1%	1%
3	83	1%	8%
4	80	8%	10%
5	80	12%	9%
6	78	14%	1%
7	73	11%	-11%
8	81	5%	-10%
9	81	-1%	-10%
10	87	-6%	-4%
11	87	-5%	5%
12	84	3%	4%
13	87	8%	-2%
14	88	7%	-1%
15	82	7%	-6%
16	89	2%	-7%

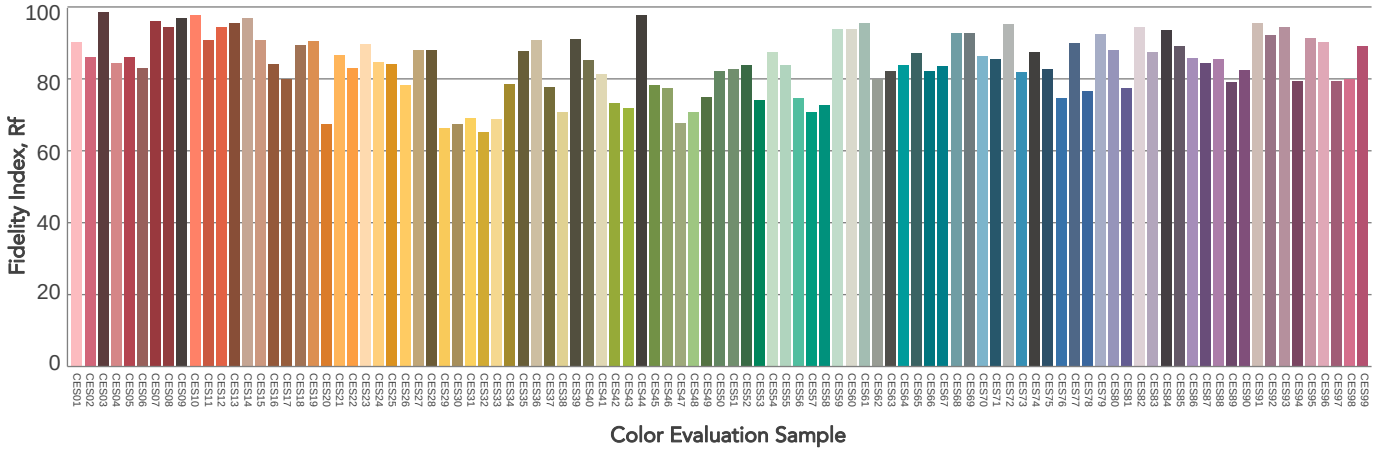












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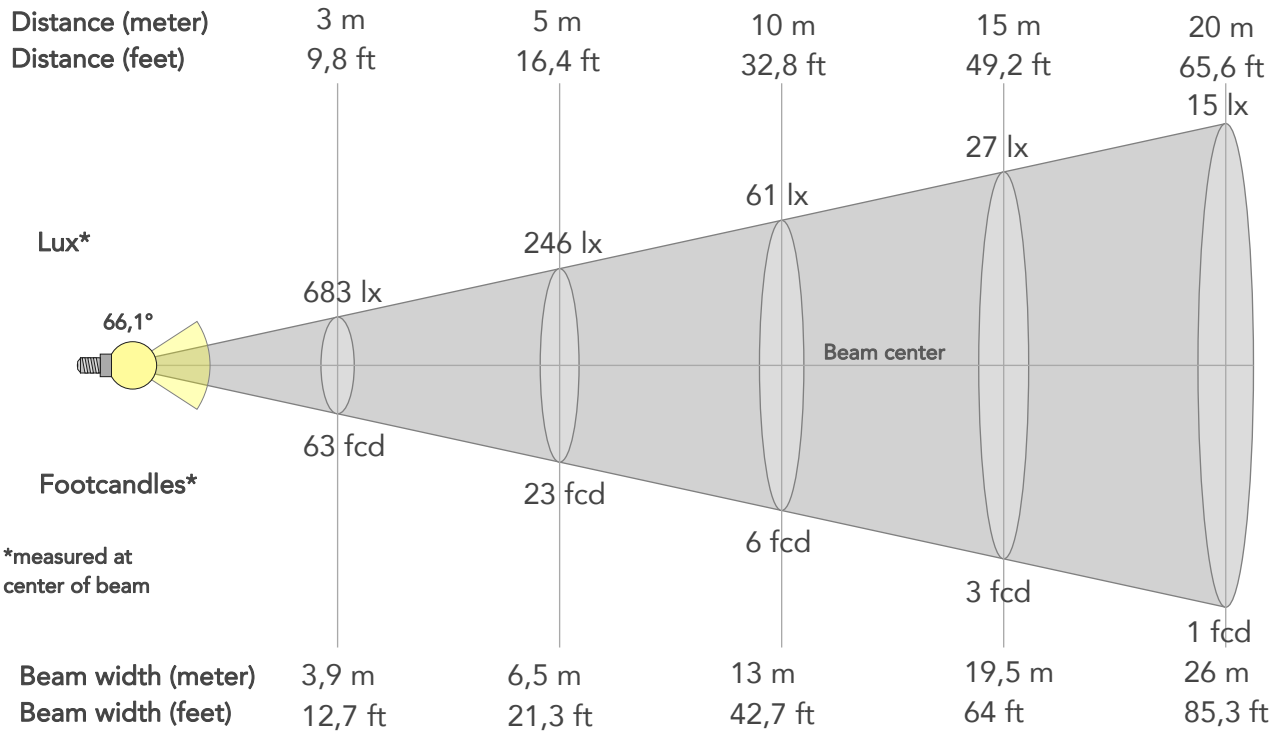
BEAM DETAILS

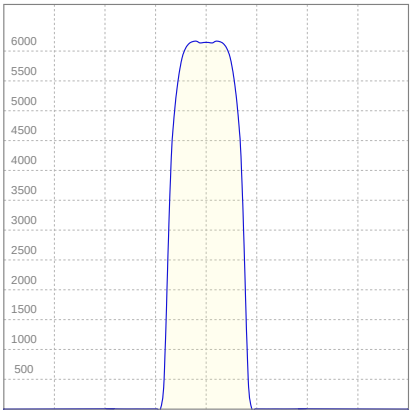
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
66,1°	74,4°	79,3°	99,3%	99,2%



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	6144lx	1536lx	683lx	384lx	246lx	109lx	61lx	27lx	15lx	10lx	7lx	4lx	2lx
Footcand.	571fcd	143fcd	63fcd	36fcd	23fcd	10fcd	6fcd	3fcd	1fcd	1fcd	1fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	3,9m	5,2m	6,5m	9,8m	13m	19,5m	26m	32,5m	39m	52m	65m
Beam wid.	4,3ft	8,6ft	12,7ft	17ft	21,3ft	32ft	42,7ft	64ft	85,3ft	106,6ft	128ft	170,6ft	213,3ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
227V	0,802A	168,4W	36lm/W

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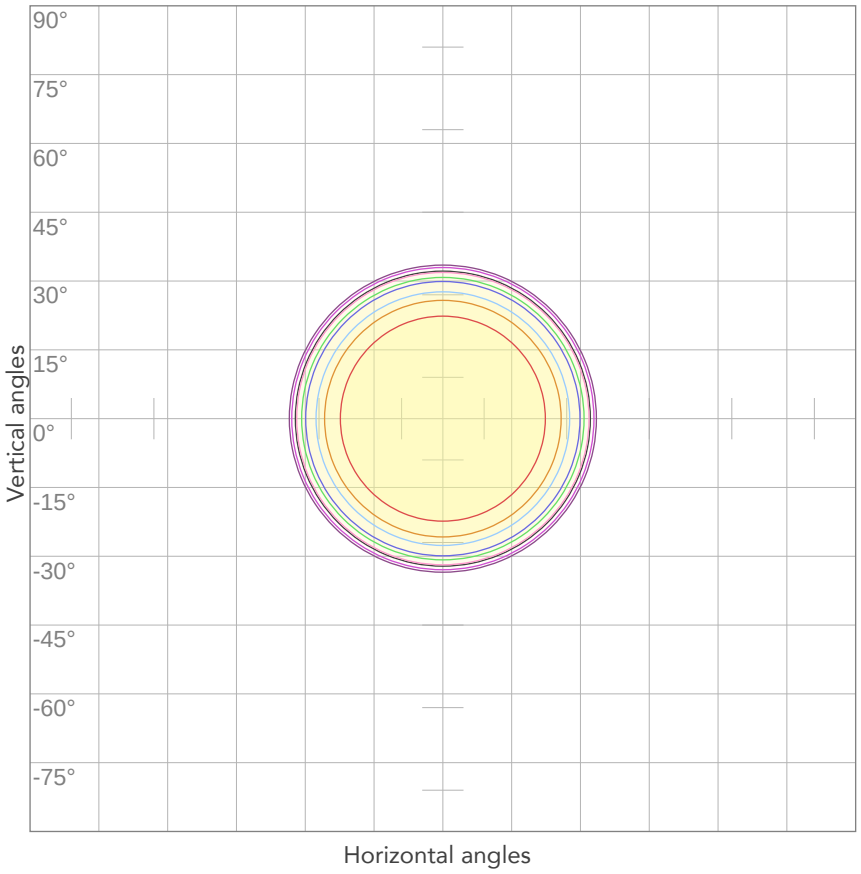
ISO DIAGRAMS

ISO CANDELA DIAGRAM



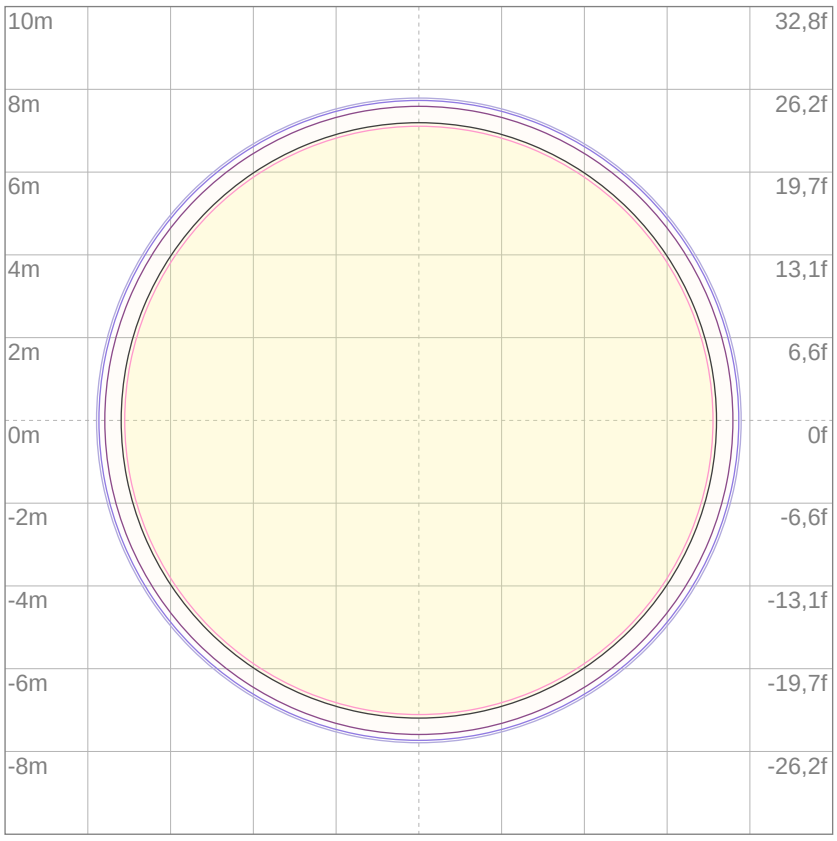
10%	614 cd
20%	1229 cd
30%	1843 cd
40%	2458 cd
50%	3072 cd
60%	3686 cd
70%	4301 cd
80%	4915 cd

Conditions:

Number of c-planes: 2

Candela at center: 6144 cd

ISO LUX DIAGRAM



3%	1,84 lx
5%	3,07 lx
10%	6,14 lx
30%	18,4 lx
50%	30,7 lx

Conditions:

Number of c-planes: 2

Lux at center: 61,4 lx

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

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Total lumen output:

6297 lm

Peak candela output:

6414 cd

Light quality:

CRI: 93,4

Color temperature:

3218 K

PRODUCT NAME:

ECLCTPLUS

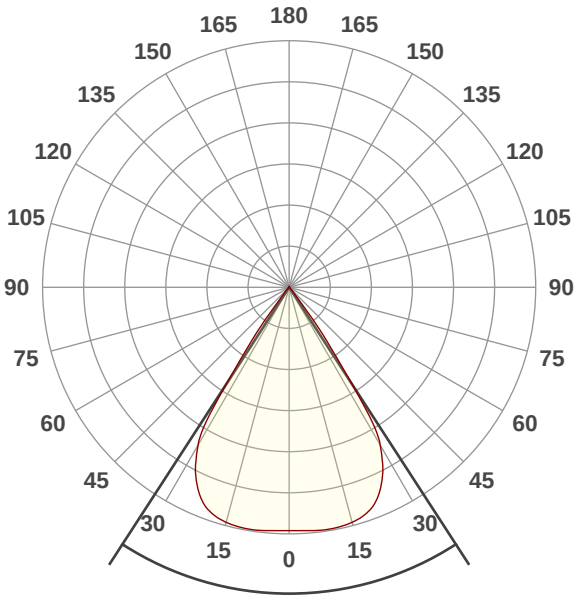
MEASURAMENT CONDITIONS:

Beam angle:
PRL70

Target:
3200K HQ

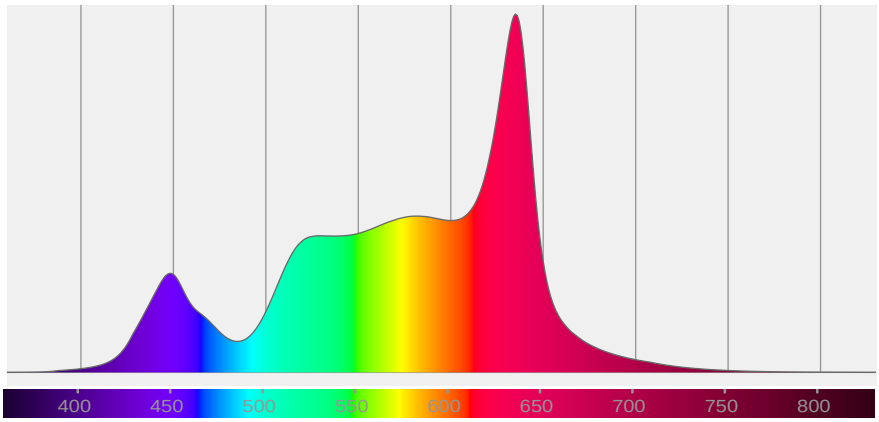
Operator:
Paolo Carvone

Date and time:
15/07/2020 10:02:37



Beam angle 50%: 65,9°
Field angle 10%: 75,3°
Cut off angle 2.5%: 80,2°

Spectra



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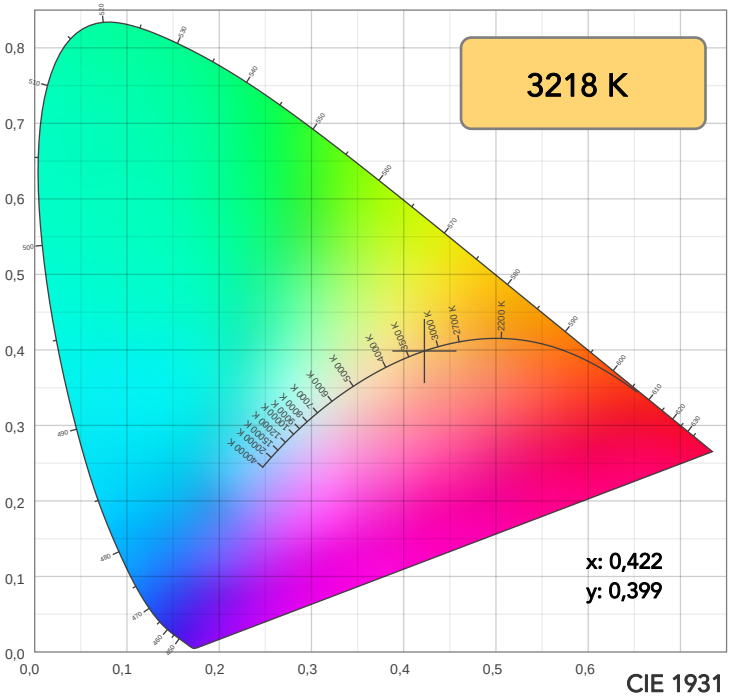
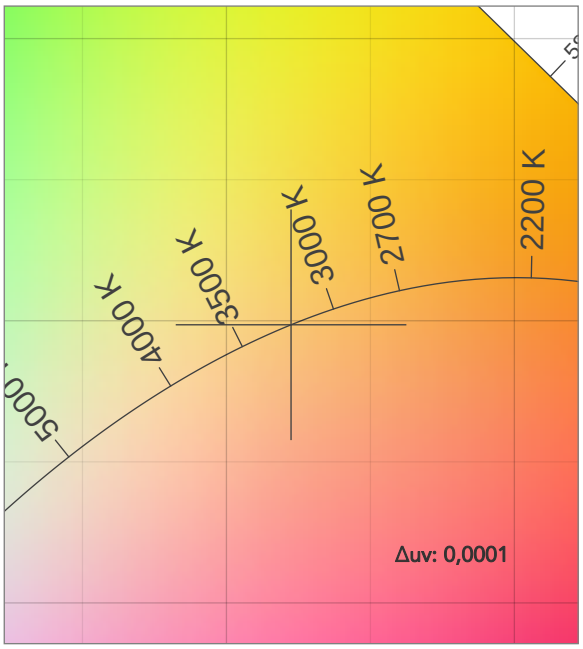
COLOR DETAILS

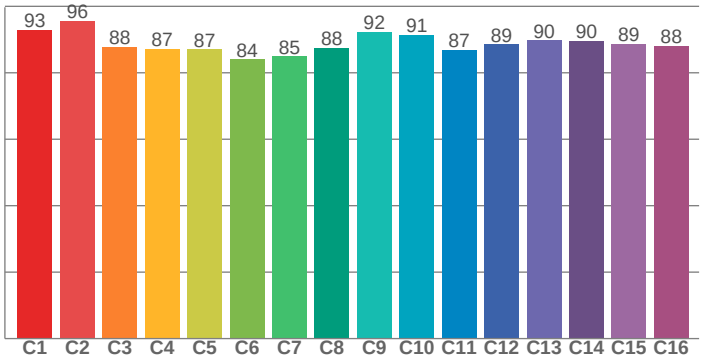


CIE 1931

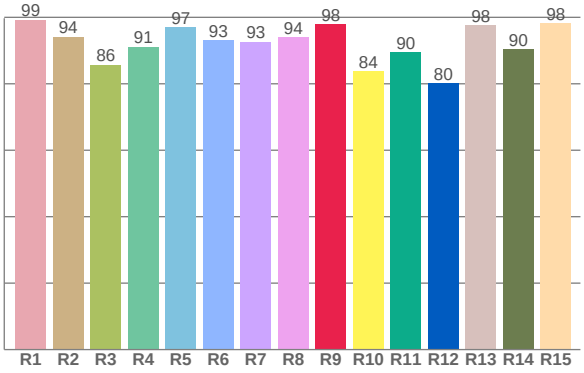


CIE 1931 ZOOM

TM30: 89,2



CRI: 93,4 (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
99,3	94,1	85,8	91,2	96,9	93,1	92,6	93,9	98,0	83,9	89,6	80,1	97,7	90,4	98,3

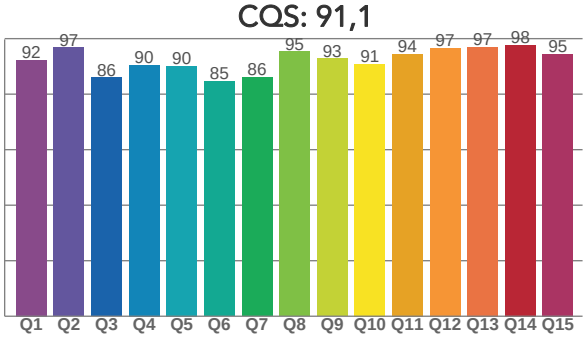
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
92,9	95,6	87,8	87,1	87,1	84,0	84,9	87,5	92,3	91,4	86,8	88,6	89,8	89,7	88,6	88,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
92,4	96,8	86,0	90,5	90,2	84,6	86,1	95,3	92,9	90,9	94,4	96,6	96,9	97,6	94,5

CQS: 91,1



COLOR PARAMETERS

Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
3218 K	93,4	98,0	89,2	105,8	91,1	85	0,422	0,399	0,0001

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TM30 DETAILS

PROLiGHTS

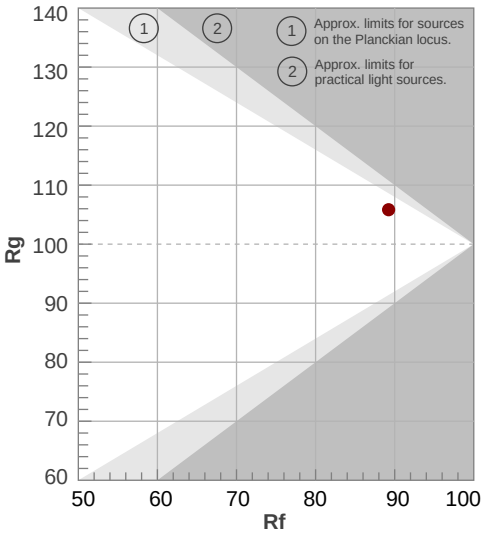
Rf 89,2

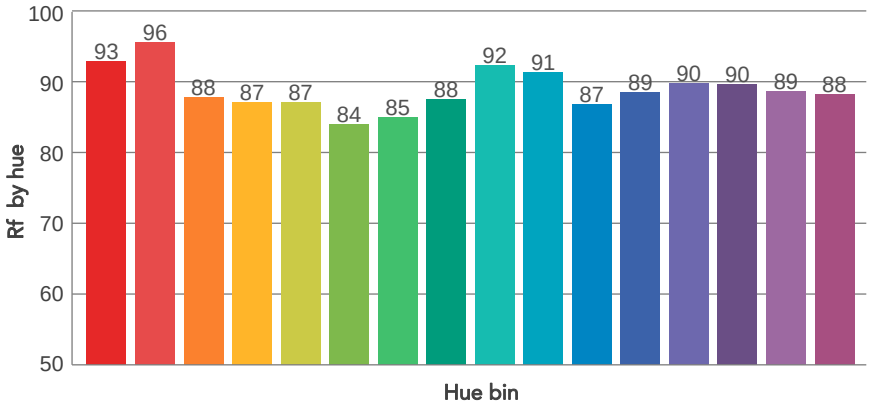
Fidelity index Rf

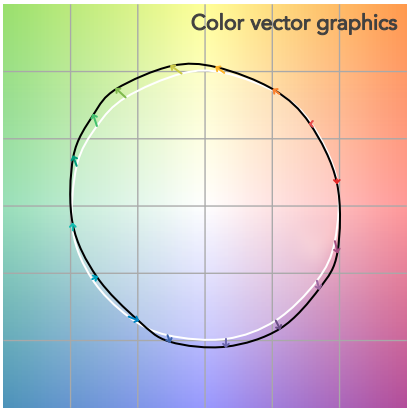
Rg 105,8

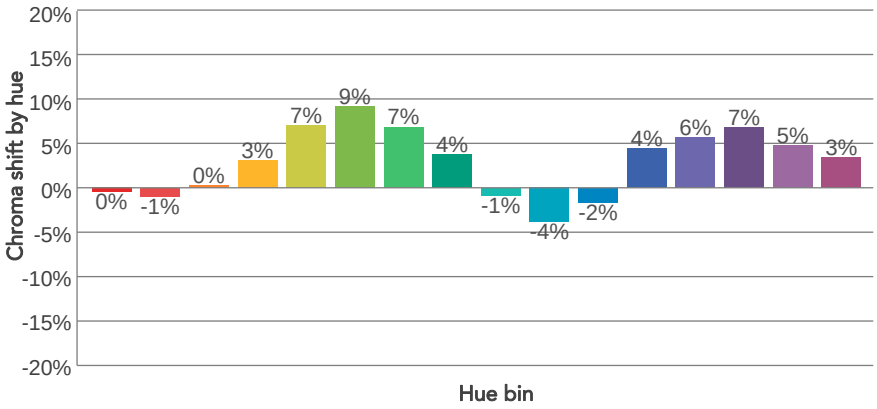
Gammut index

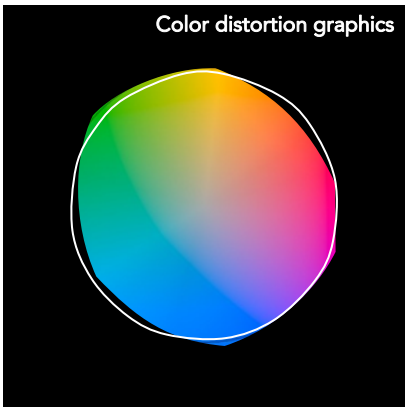
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	93	0%	-3%
2	96	-1%	1%
3	88	0%	5%
4	87	3%	7%
5	87	7%	6%
6	84	9%	2%
7	85	7%	-5%
8	88	4%	-6%
9	92	-1%	-5%
10	91	-4%	0%
11	87	-2%	7%
12	89	4%	3%
13	90	6%	-1%
14	90	7%	-1%
15	89	5%	-4%
16	88	3%	-8%

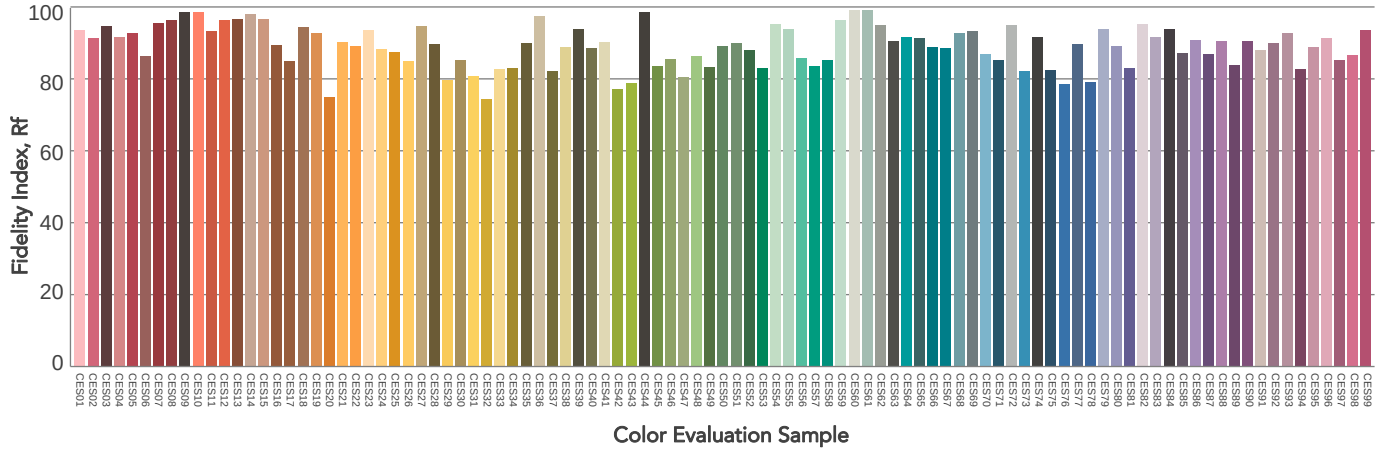












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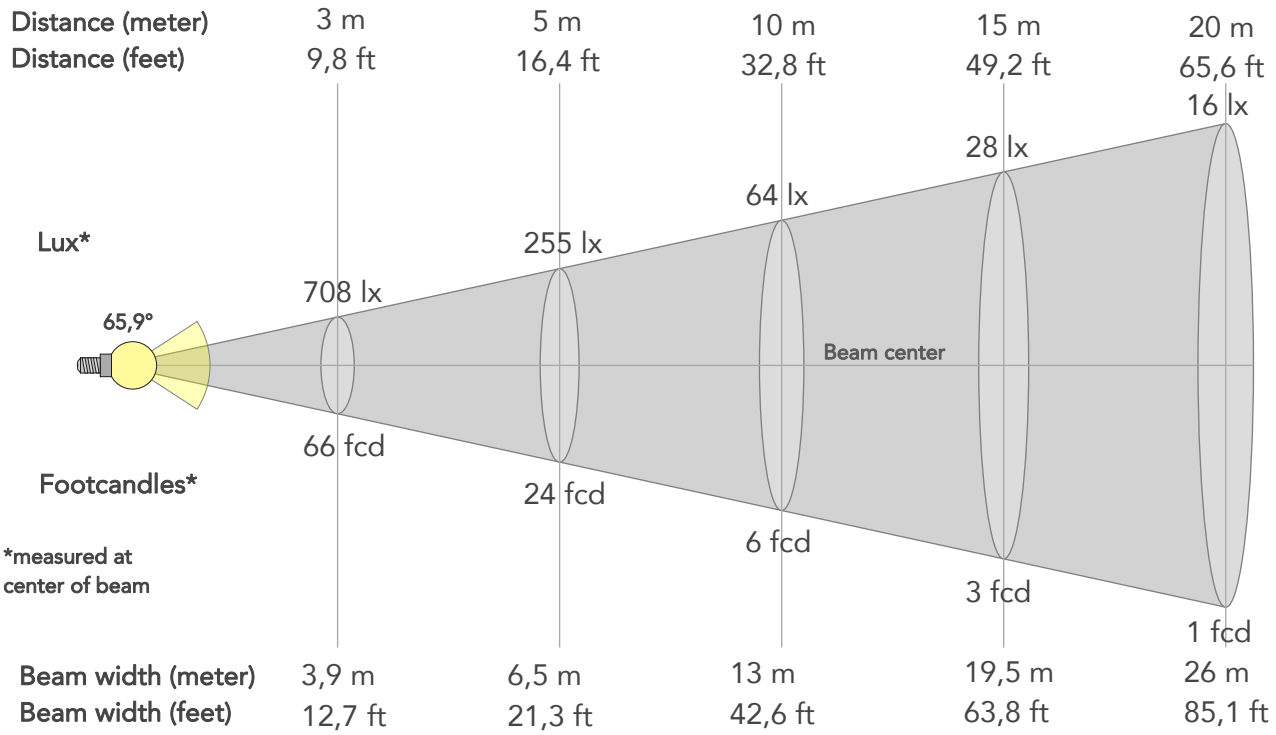
BEAM DETAILS

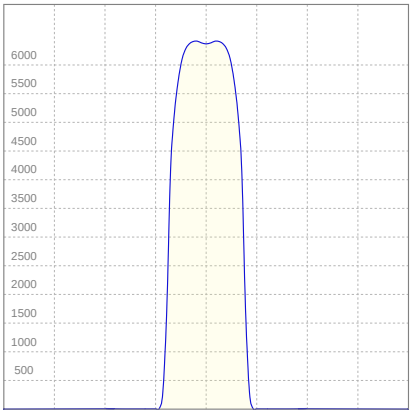
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
65,9°	75,3°	80,2°	99,2%	99,1%



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	6369lx	1592lx	708lx	398lx	255lx	113lx	64lx	28lx	16lx	10lx	7lx	4lx	3lx
Footcand.	592fcd	148fcd	66fcd	37fcd	24fcd	11fcd	6fcd	3fcd	1fcd	1fcd	1fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	3,9m	5,2m	6,5m	9,7m	13m	19,5m	26m	32,4m	38,9m	51,9m	64,9m
Beam wid.	4,3ft	8,6ft	12,7ft	17ft	21,3ft	31,9ft	42,6ft	63,8ft	85,1ft	106,4ft	127,7ft	170,2ft	212,8ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
227V	0,850A	179,7W	35lm/W

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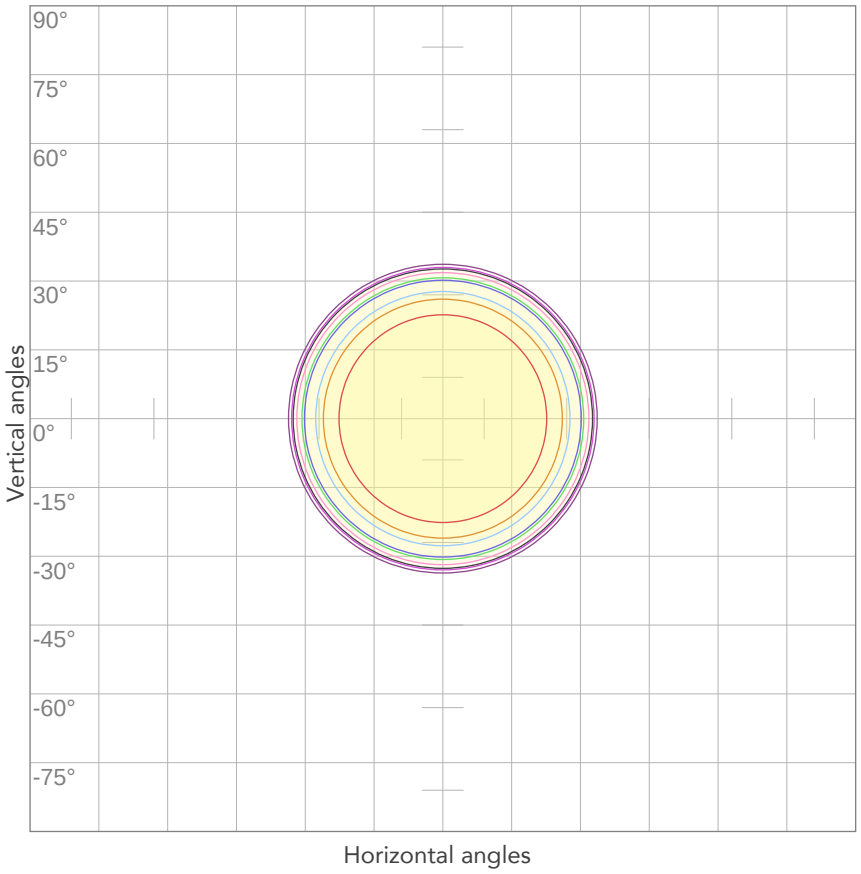
ISO DIAGRAMS

ISO CANDELA DIAGRAM



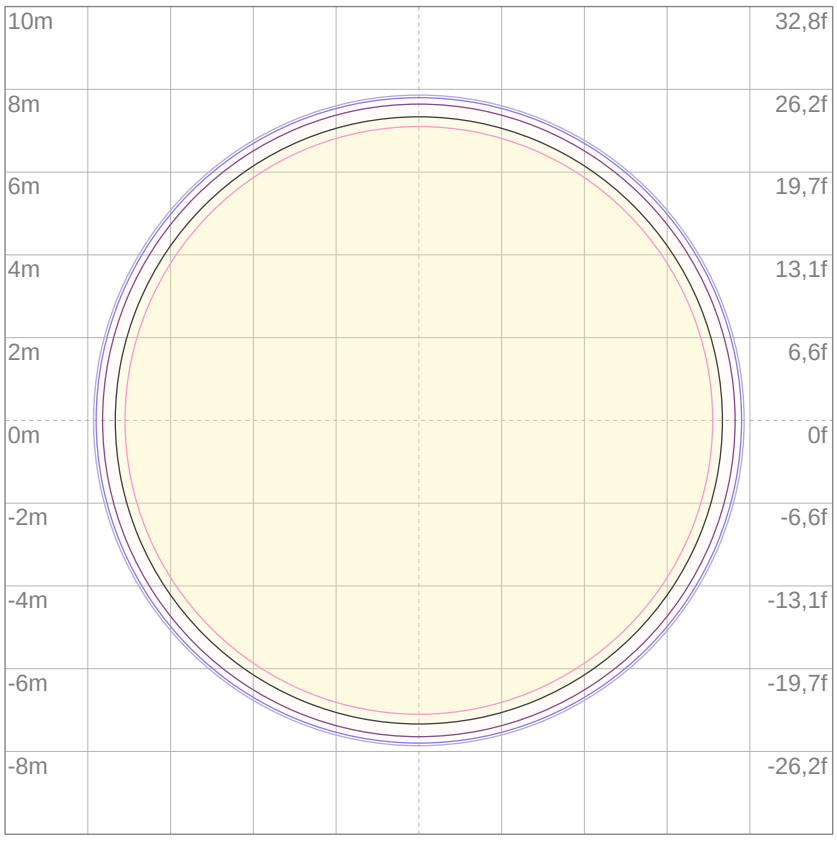
10%	637 cd
20%	1274 cd
30%	1911 cd
40%	2548 cd
50%	3185 cd
60%	3821 cd
70%	4458 cd
80%	5095 cd

Conditions:

Number of c-planes: 2

Candela at center: 6369 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	1,91 lx
5%	3,18 lx
10%	6,37 lx
30%	19,1 lx
50%	31,8 lx

Conditions:

Number of c-planes: 2

Lux at center: 63,7 lx

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

Total lumen output:

6607 lm

Peak candela output:

6736 cd

Light quality:

CRI: 95,8

Color temperature:

4014 K

PRODUCT NAME:

ECLCTPLUS

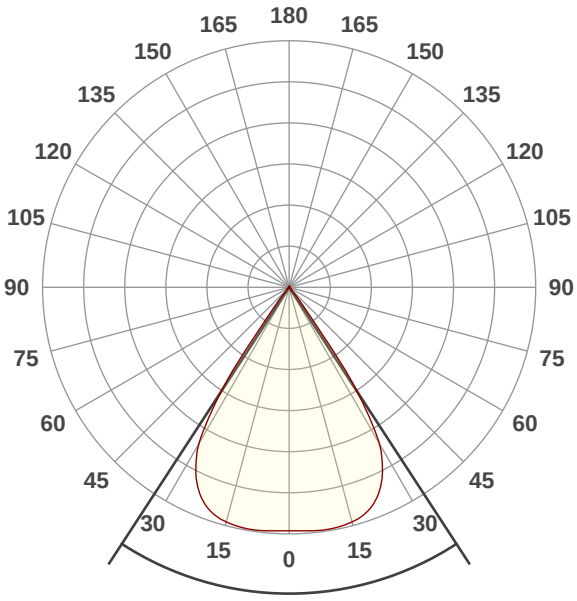
MEASURAMENT CONDITIONS:

Beam angle:
PRL70

Target:
4000K HQ

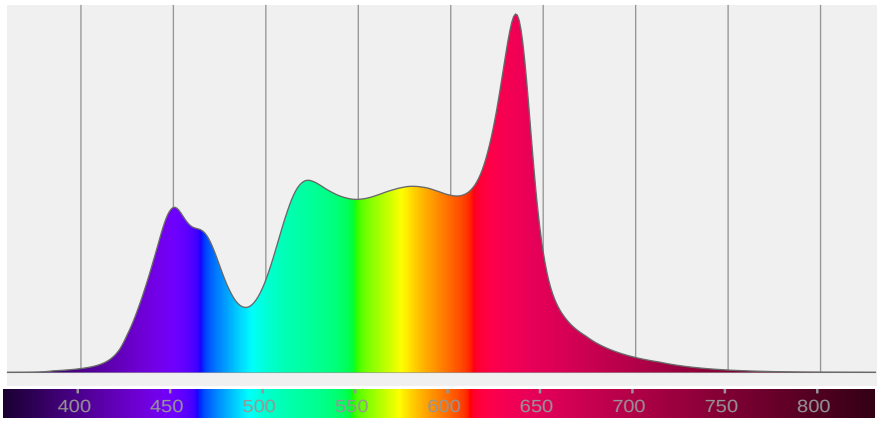
Operator:
Paolo Carvone

Date and time:
15/07/2020 10:04:28



Beam angle 50%: 66,2°
Field angle 10%: 74,2°
Cut off angle 2.5%: 79,2°

Spectra



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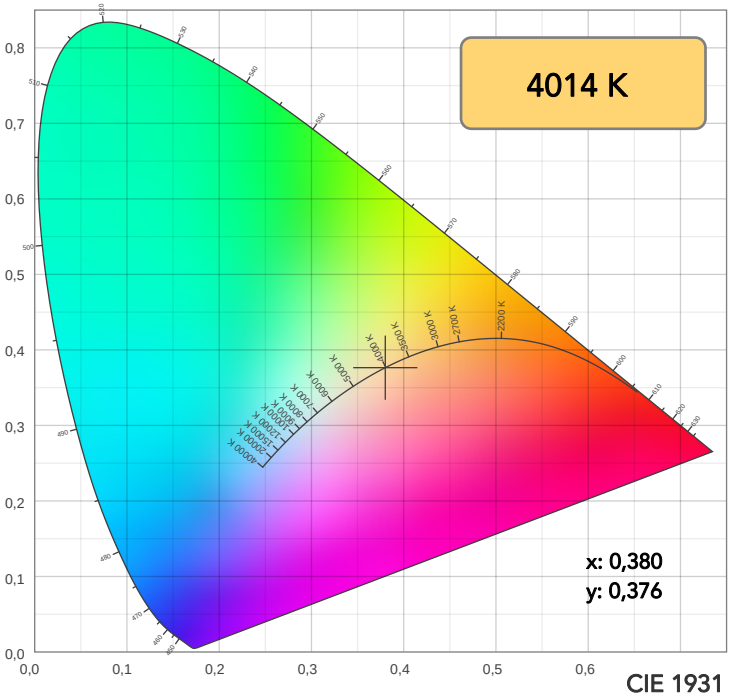
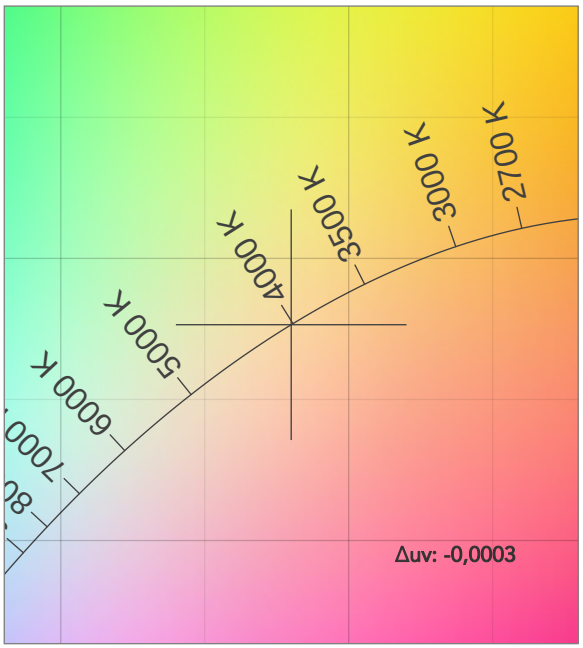
COLOR DETAILS

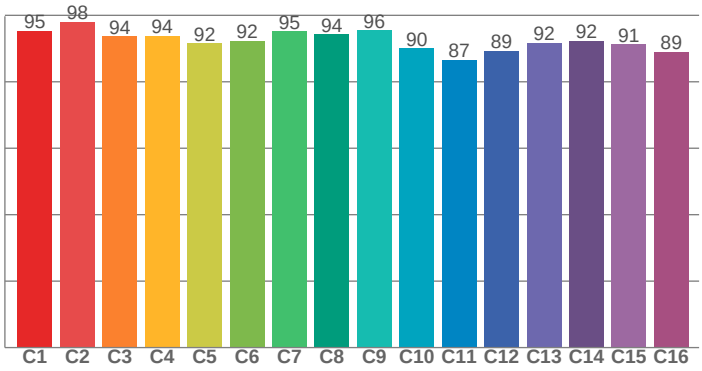


CIE 1931

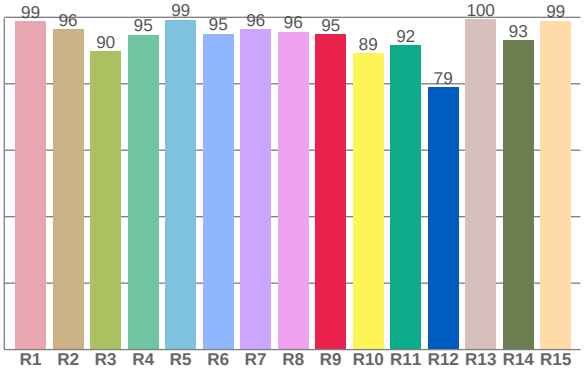


CIE 1931 ZOOM

TM30: 92,5



CRI: 95,8 (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
98,9	96,3	89,9	94,8	99,3	95,1	96,4	95,7	94,9	89,2	91,6	78,9	99,5	93,0	99,0

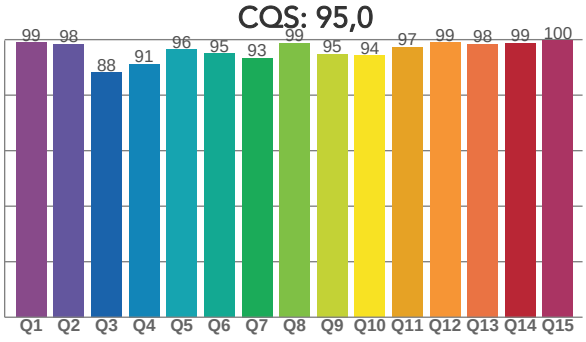
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
95,3	98,0	93,7	93,8	91,5	92,3	95,2	94,3	95,5	90,0	86,7	89,3	91,7	92,3	91,3	89,1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
99,0	98,4	88,1	91,2	96,4	95,0	93,3	98,7	94,8	94,3	97,2	99,0	98,4	98,7	99,7

CQS: 95,0



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
4014 K	95,8	94,9	92,5	102,8	95,0	91	0,380	0,376	-0,0003

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TM30 DETAILS

PROLiGHTS

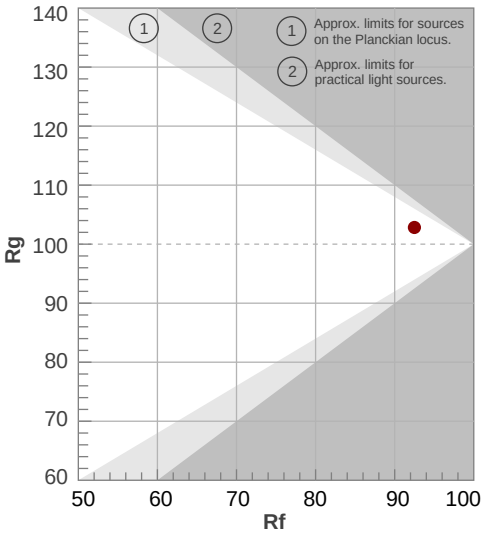
Rf 92,5

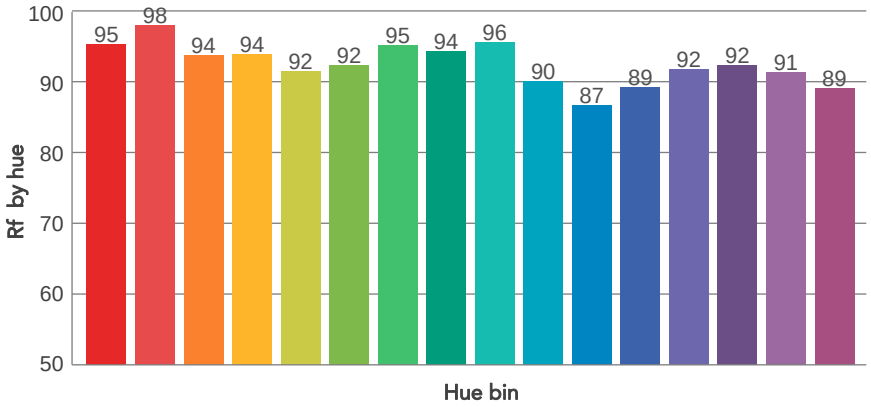
Fidelity index Rf

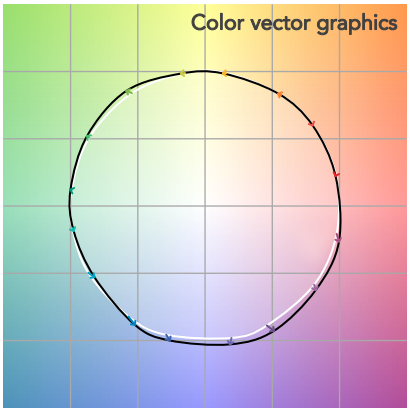
Rg 102,8

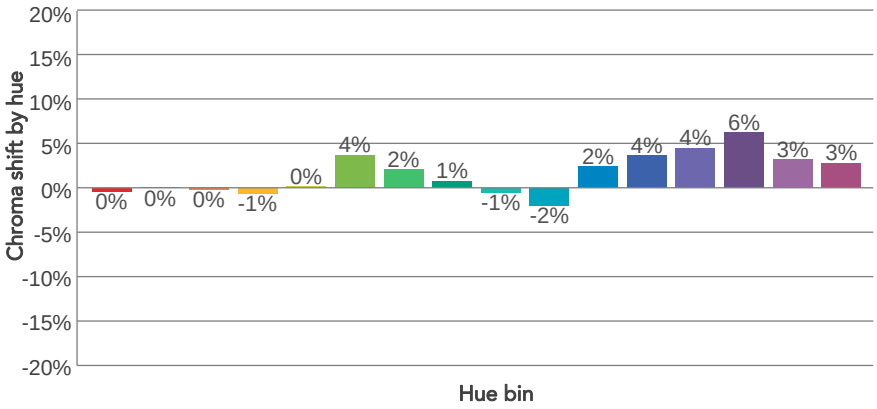
Gammut index

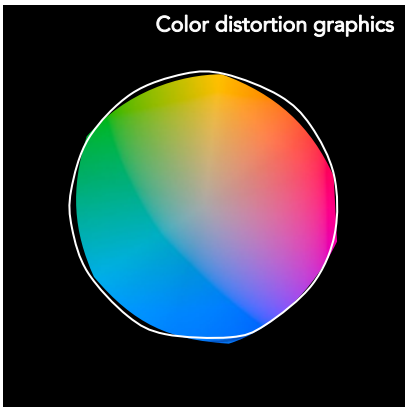
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	95	0%	-1%
2	98	0%	0%
3	94	0%	2%
4	94	-1%	2%
5	92	0%	3%
6	92	4%	2%
7	95	2%	0%
8	94	1%	0%
9	96	-1%	2%
10	90	-2%	5%
11	87	2%	7%
12	89	4%	3%
13	92	4%	-2%
14	92	6%	2%
15	91	3%	-3%
16	89	3%	-5%

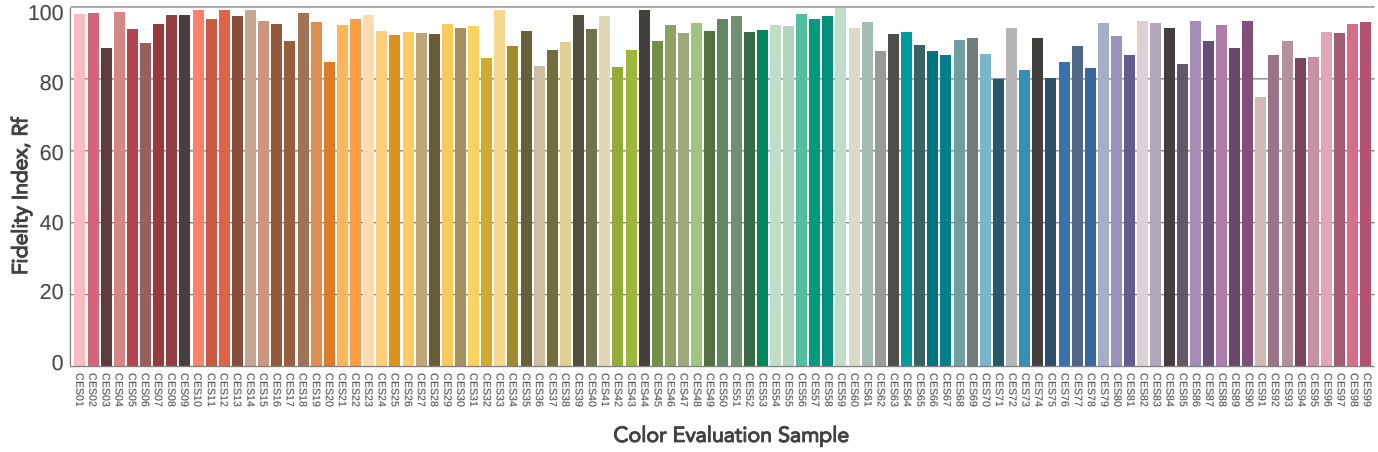












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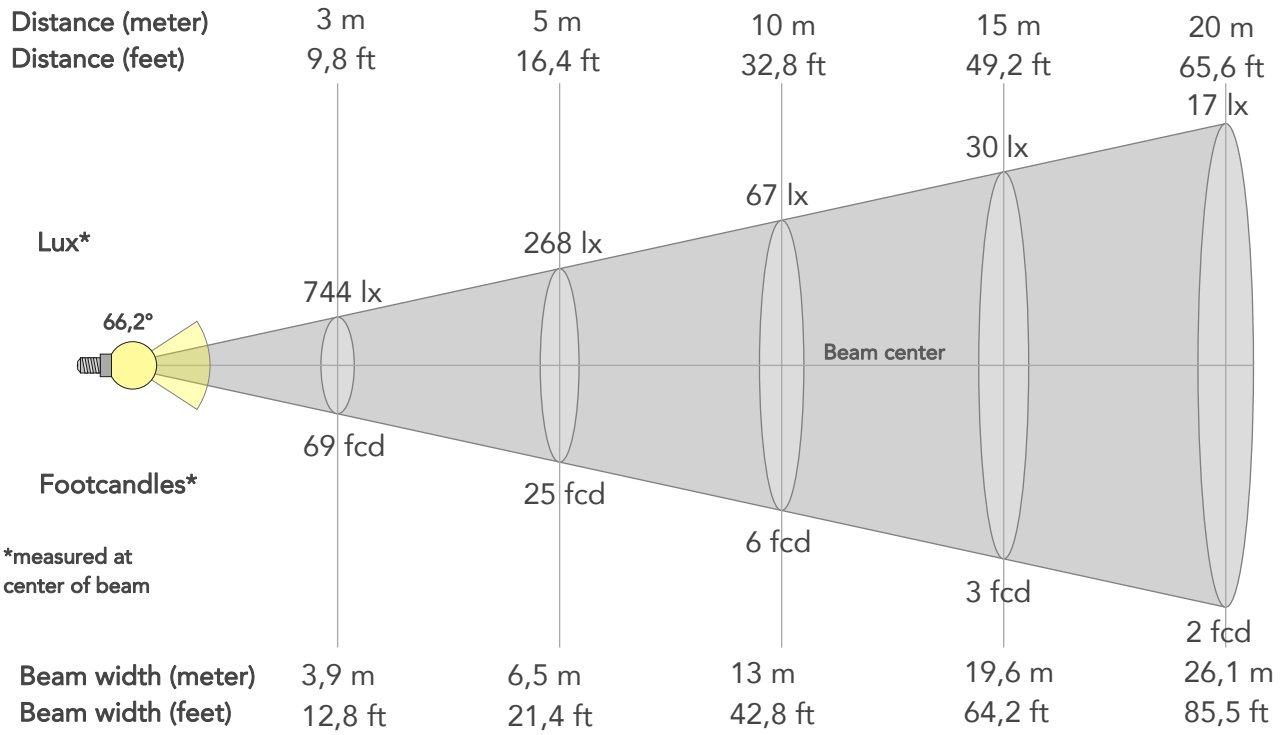
BEAM DETAILS

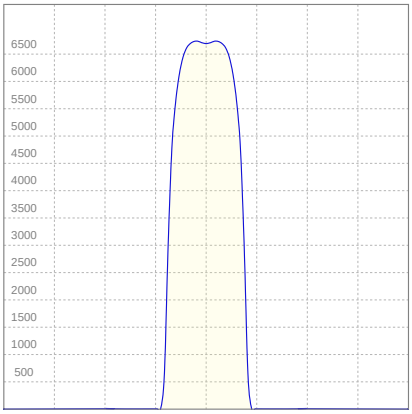
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
66,2°	74,2°	79,2°	99,2%	99,1%



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	6693lx	1673lx	744lx	418lx	268lx	119lx	67lx	30lx	17lx	11lx	7lx	4lx	3lx
Footcand.	622fcd	155fcd	69fcd	39fcd	25fcd	11fcd	6fcd	3fcd	2fcd	1fcd	1fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	3,9m	5,2m	6,5m	9,8m	13m	19,6m	26,1m	32,6m	39,1m	52,2m	65,2m
Beam wid.	4,3ft	8,6ft	12,8ft	17,1ft	21,4ft	32,1ft	42,8ft	64,2ft	85,5ft	106,9ft	128,3ft	171,1ft	213,8ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
227V	0,924A	196,7W	34lm/W

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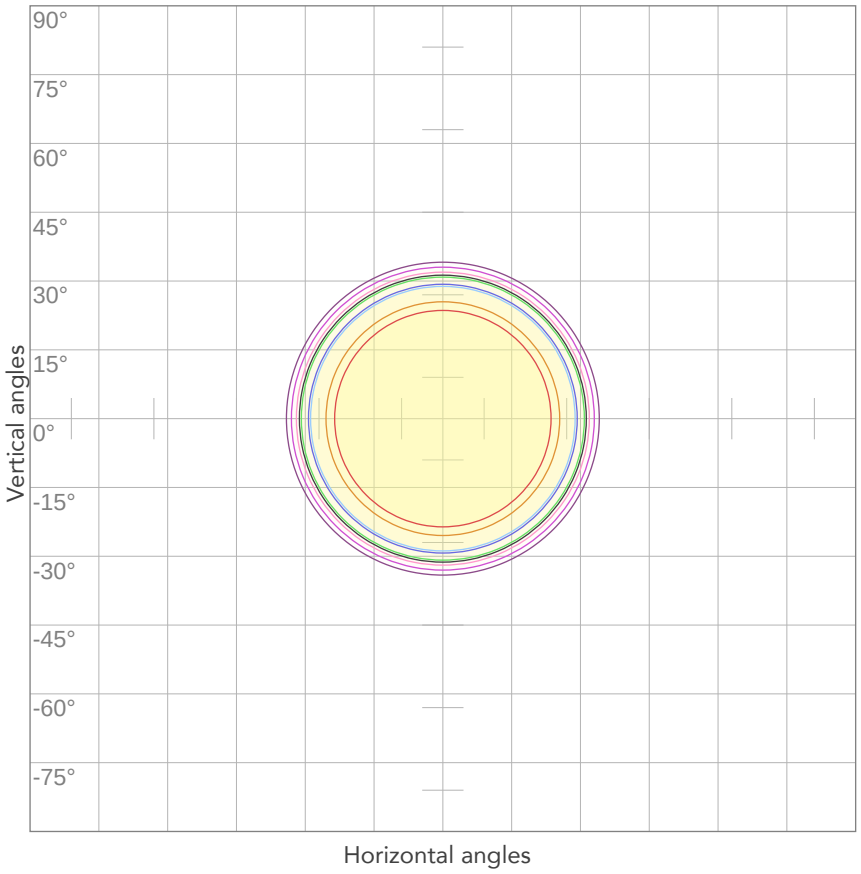
ISO DIAGRAMS

ISO CANDELA DIAGRAM



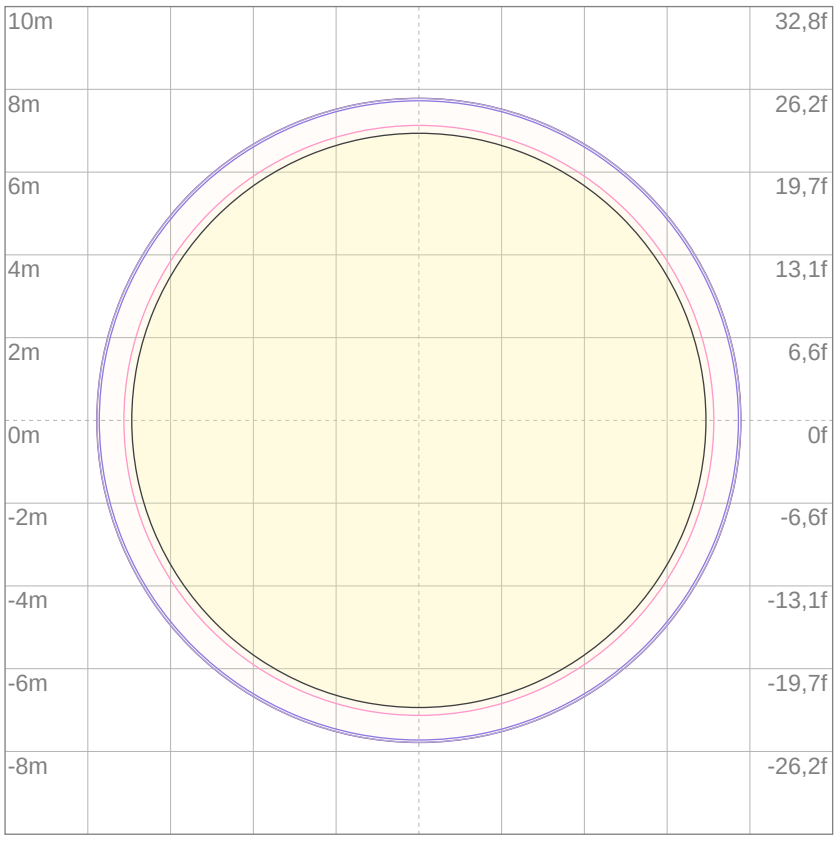
10%	669 cd
20%	1339 cd
30%	2008 cd
40%	2677 cd
50%	3347 cd
60%	4016 cd
70%	4685 cd
80%	5355 cd

Conditions:

Number of c-planes: 2

Candela at center: 6693 cd

ISO LUX DIAGRAM



3%	2,01 lx
5%	3,35 lx
10%	6,69 lx
30%	20,1 lx
50%	33,5 lx

Conditions:

Number of c-planes: 2

Lux at center: 66,9 lx

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

Total lumen output:

7140 lm

Peak candela output:

7303 cd

Light quality:

CRI: 97,5

Color temperature:

5658 K

PRODUCT NAME:

ECLCTPLUS

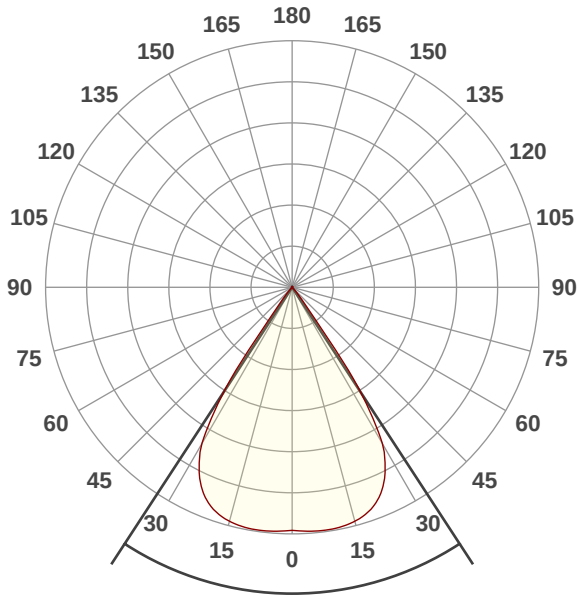
MEASURAMENT CONDITIONS:

Beam angle:
PRL70

Target:
5600K HQ

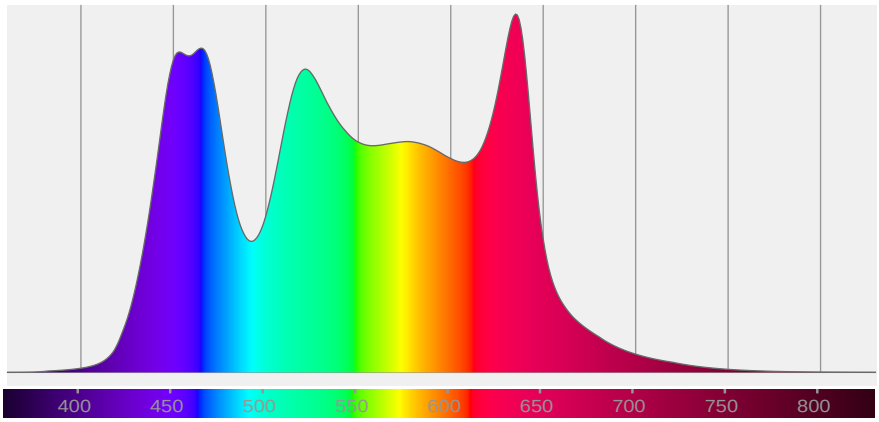
Operator:
Paolo Carvone

Date and time:
15/07/2020 10:06:19

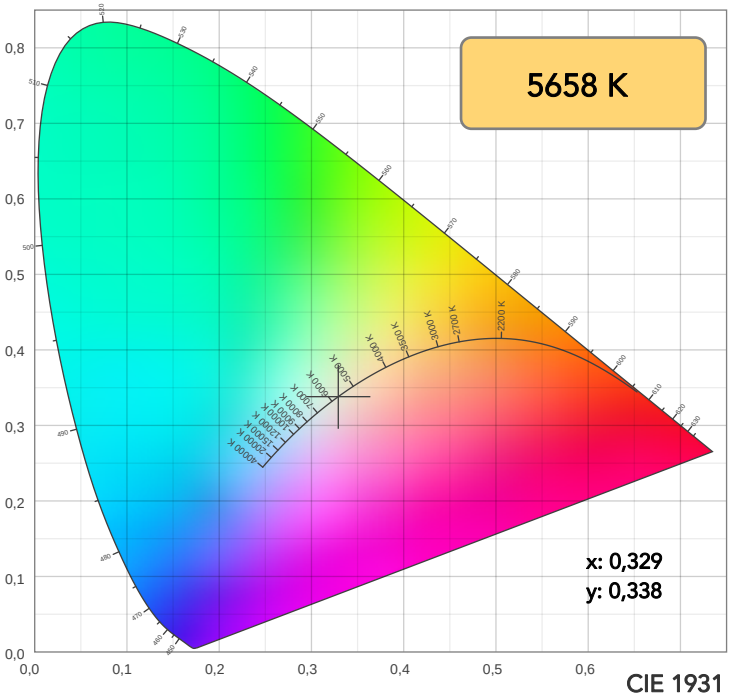


Beam angle 50%: 66,3°
Field angle 10%: 74°
Cut off angle 2.5%: 79,2°

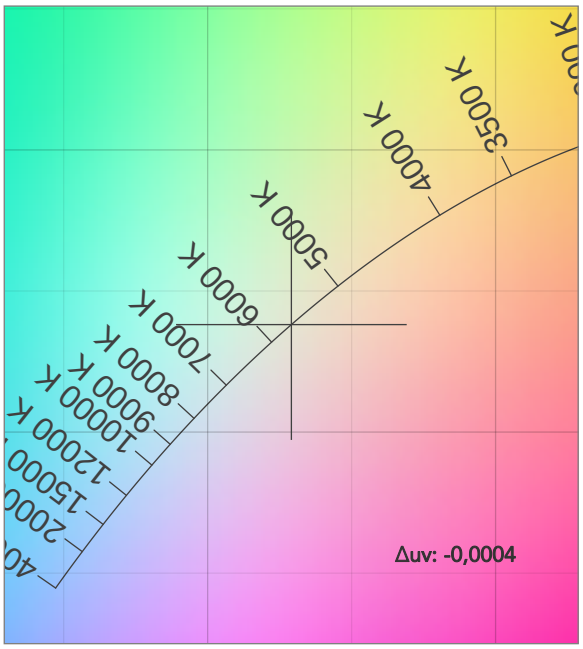
Spectra



COLOR DETAILS

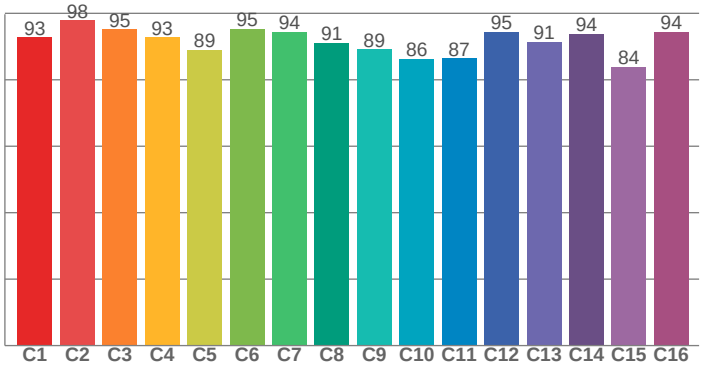


CIE 1931

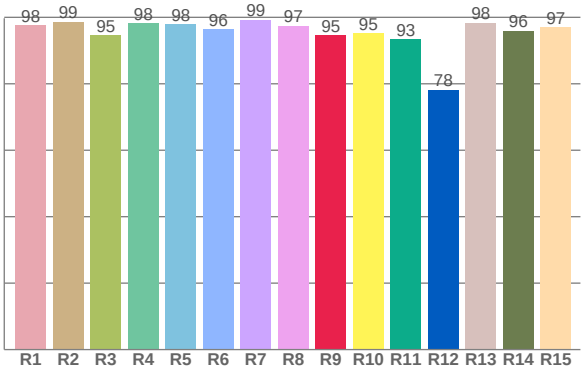


CIE 1931 ZOOM

TM30: 91,7



CRI: 97,5 (R1-R8)



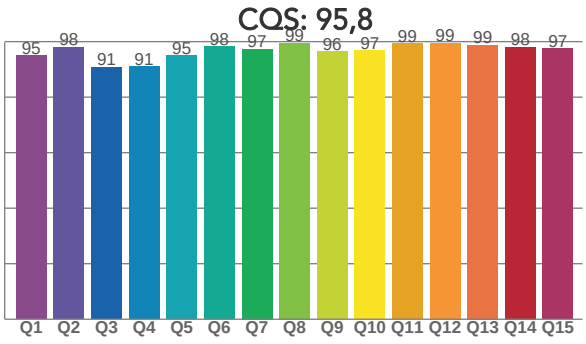
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
97,6	98,7	94,6	98,3	97,9	96,4	99,3	97,5	94,5	95,3	93,5	78,2	98,4	96,0	97,0

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

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
92,7	97,9	95,2	92,8	89,1	95,3	94,4	91,1	89,2	86,3	86,5	94,5	91,4	93,8	83,9	94,4

CQS: 95,8



CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
94,9	98,0	90,7	91,0	95,0	98,2	97,3	99,5	96,4	96,8	99,3	99,5	98,7	98,1	97,4

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 diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5658 K	97,5	94,5	91,7	100,0	95,8	95	0,329	0,338	-0,0004

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TM30 DETAILS

PROLiGHTS

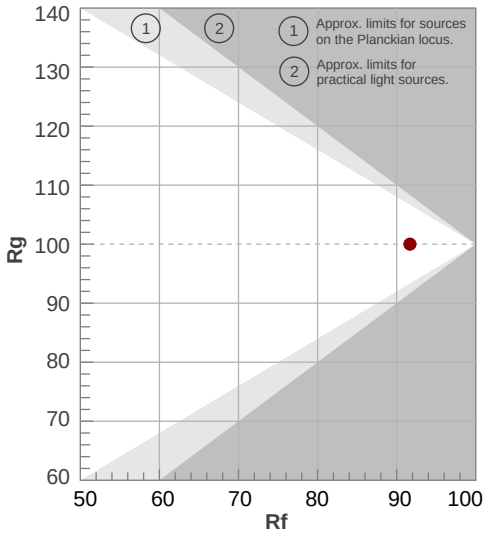
Rf 91,7

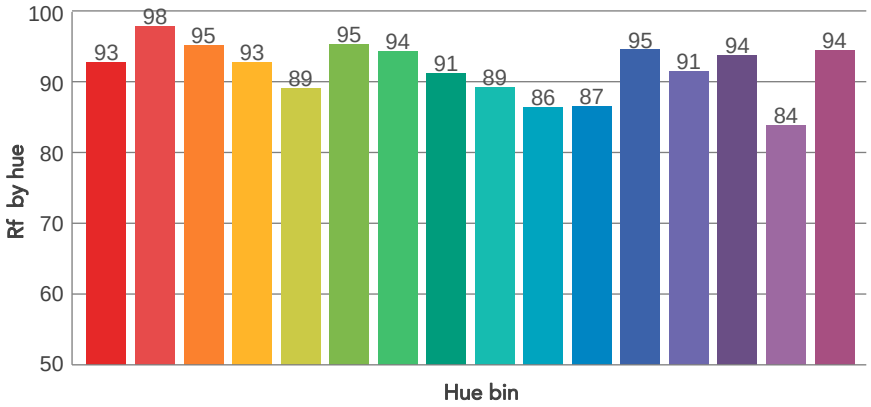
Fidelity index Rf

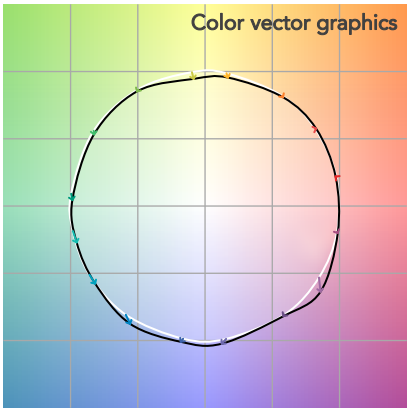
Rg 100,0

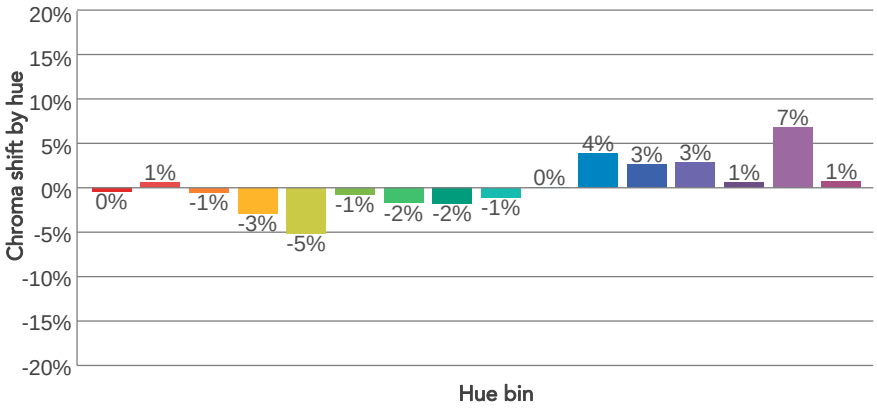
Gammut index

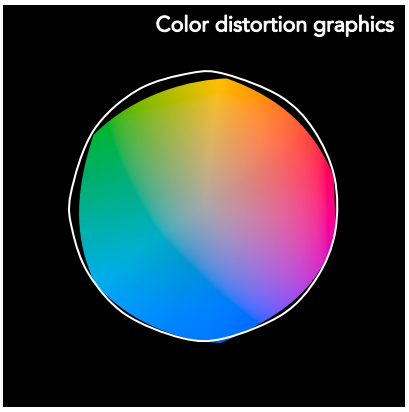
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	93	0%	1%
2	98	1%	0%
3	95	-1%	-1%
4	93	-3%	-2%
5	89	-5%	0%
6	95	-1%	2%
7	94	-2%	2%
8	91	-2%	4%
9	89	-1%	9%
10	86	0%	8%
11	87	4%	6%
12	95	3%	-1%
13	91	3%	-4%
14	94	1%	-1%
15	84	7%	-8%
16	94	1%	-1%

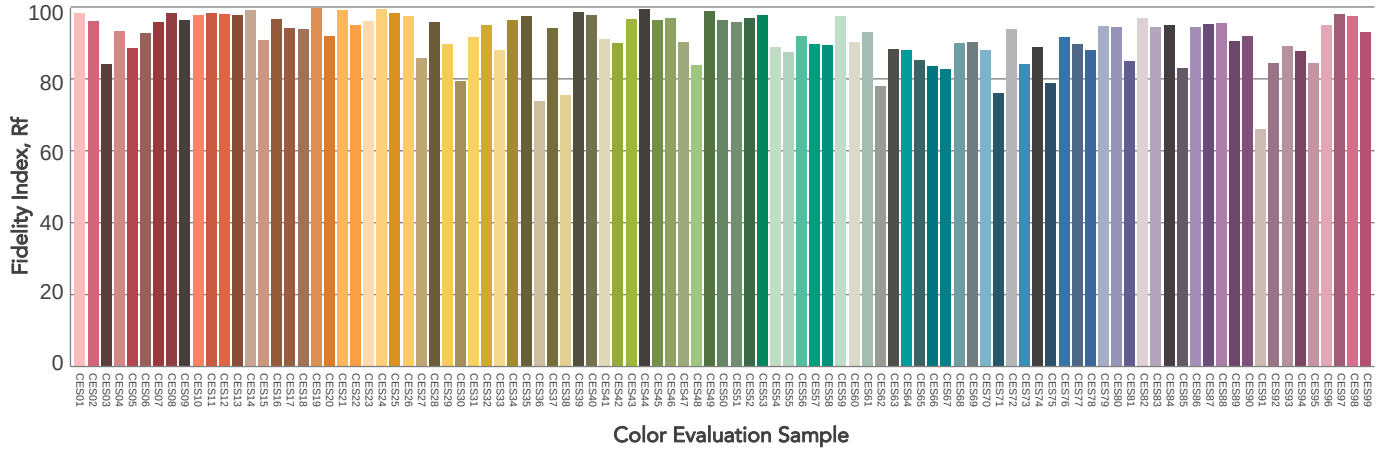












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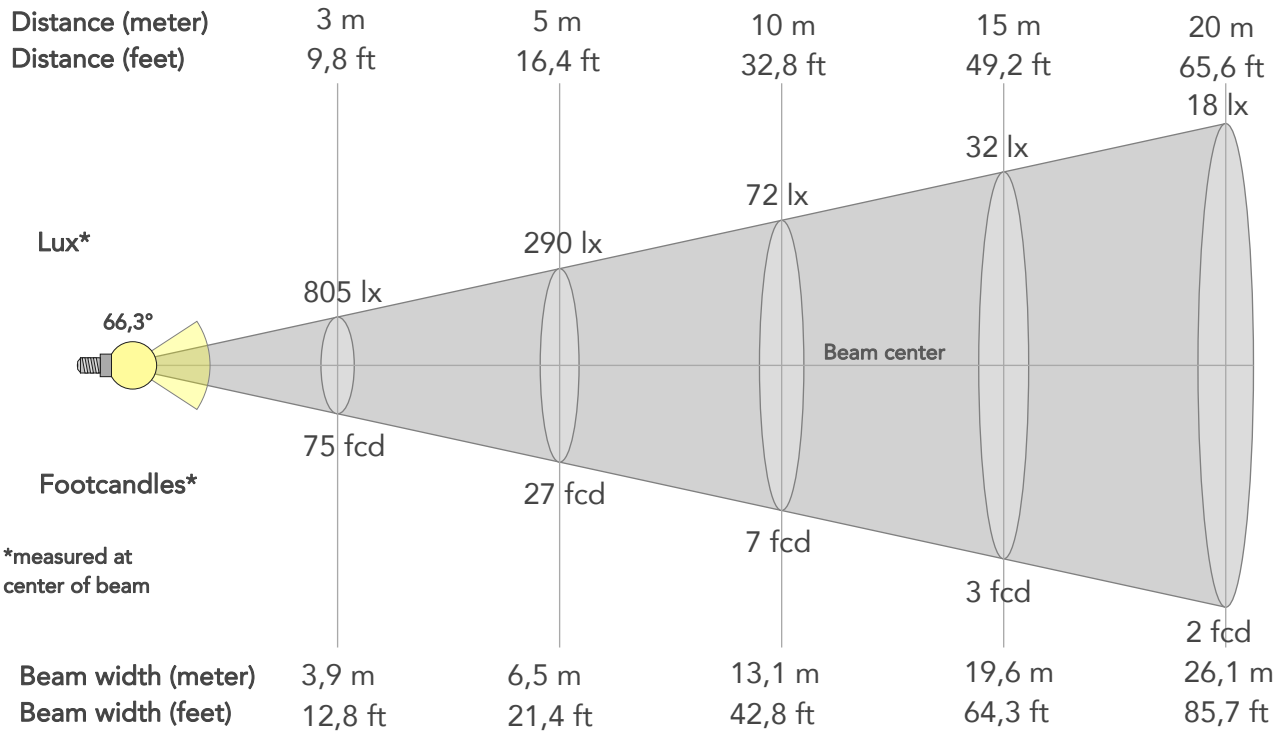
BEAM DETAILS

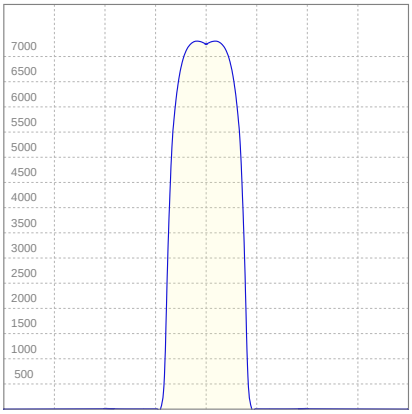
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
66,3°	74°	79,2°	99,2%	99,1%



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	7246lx	1812lx	805lx	453lx	290lx	129lx	72lx	32lx	18lx	12lx	8lx	5lx	3lx
Footcand.	673fcd	168fcd	75fcd	42fcd	27fcd	12fcd	7fcd	3fcd	2fcd	1fcd	1fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	3,9m	5,2m	6,5m	9,8m	13,1m	19,6m	26,1m	32,6m	39,2m	52,2m	65,3m
Beam wid.	4,3ft	8,6ft	12,8ft	17,1ft	21,4ft	32,1ft	42,8ft	64,3ft	85,7ft	107,1ft	128,5ft	171,3ft	214,2ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
227V	1,05A	225,9W	32lm/W

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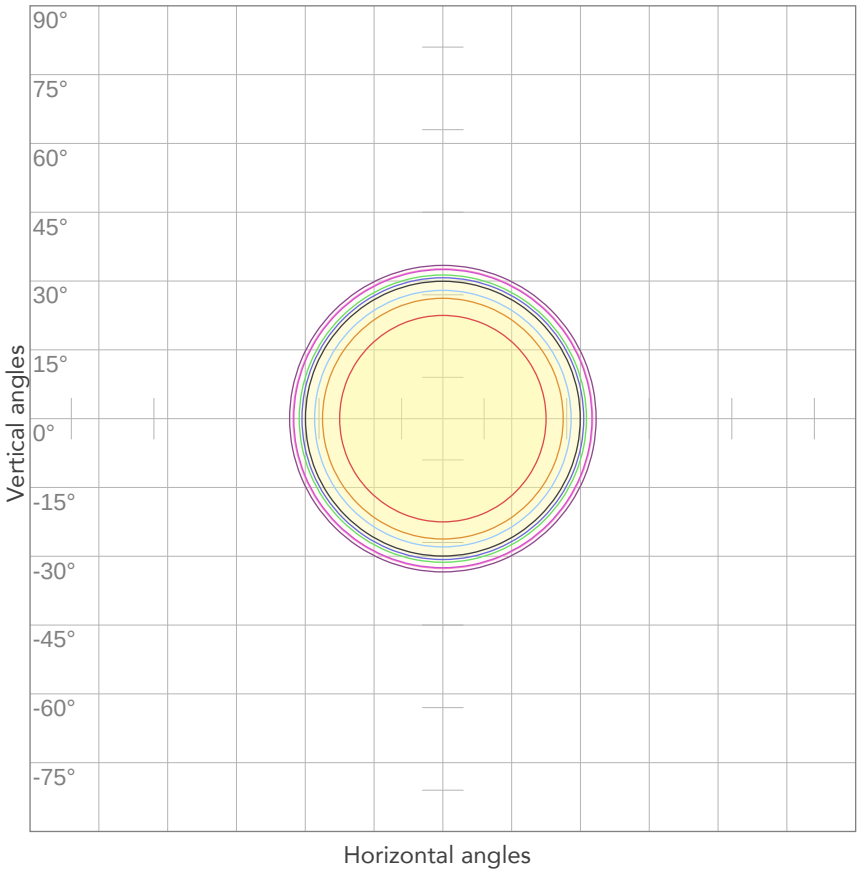
ISO DIAGRAMS

ISO CANDELA DIAGRAM



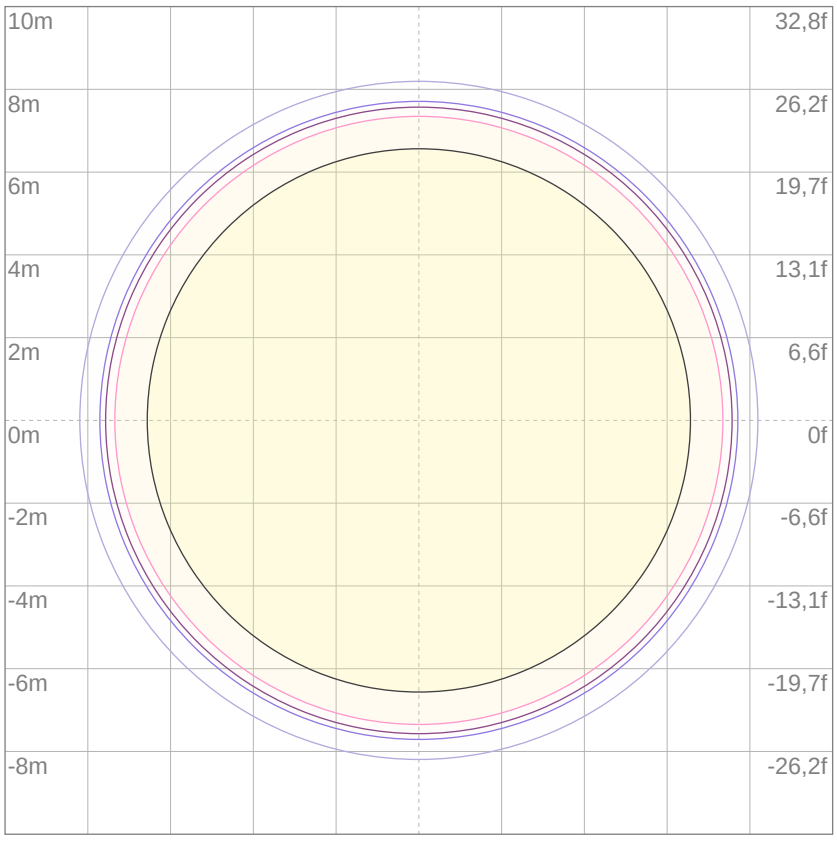
10%	725 cd
20%	1449 cd
30%	2174 cd
40%	2898 cd
50%	3623 cd
60%	4348 cd
70%	5072 cd
80%	5797 cd

Conditions:

Number of c-planes: 2

Candela at center: 7246 cd

ISO LUX DIAGRAM



3%	2,17 lx
5%	3,62 lx
10%	7,25 lx
30%	21,7 lx
50%	36,2 lx

Conditions:

Number of c-planes: 2

Lux at center: 72,5 lx

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

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Total lumen output:

7082 lm

Peak candela output:

7247 cd

Light quality:

CRI: 97,4

Color temperature:

5920 K

PRODUCT NAME:

ECLCTPLUS

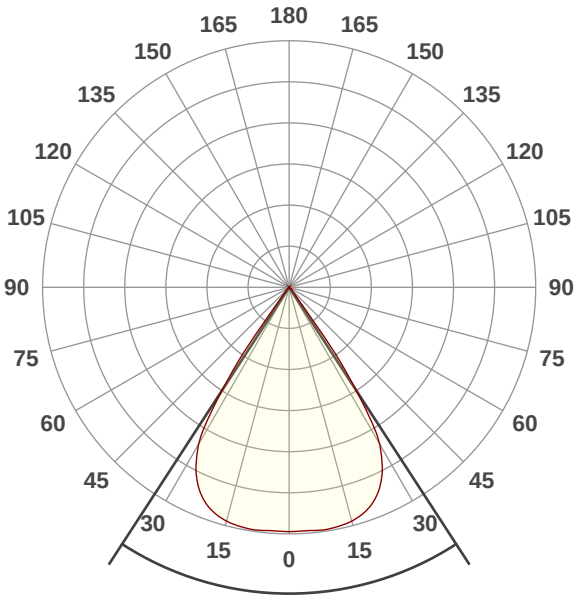
MEASURAMENT CONDITIONS:

Beam angle:
PRL70

Target:
6000K HQ

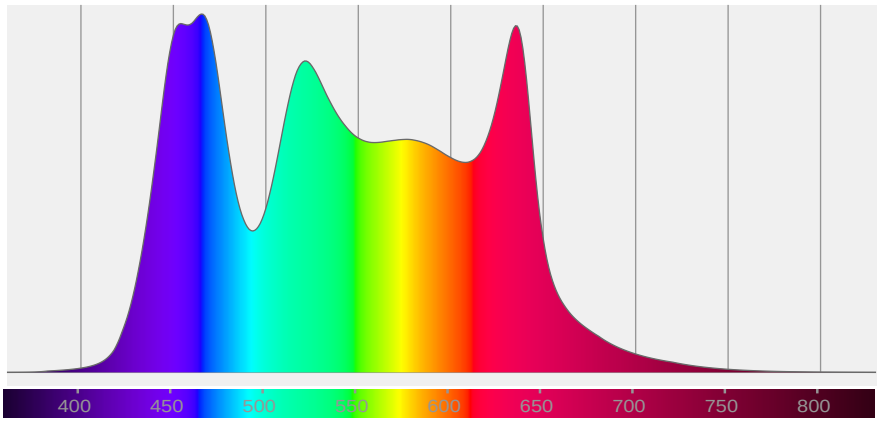
Operator:
Paolo Carvone

Date and time:
15/07/2020 10:08:08



Beam angle 50%: 66,1°
Field angle 10%: 74,4°
Cut off angle 2.5%: 78,8°

Spectra



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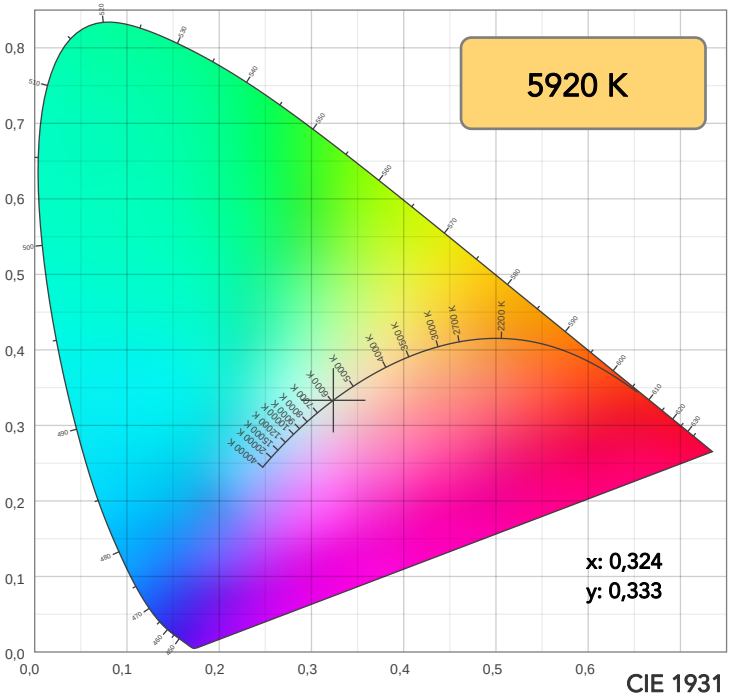
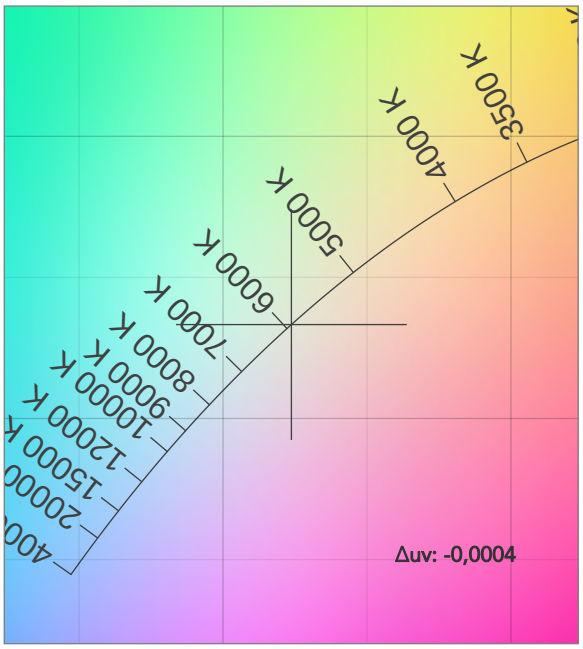
COLOR DETAILS

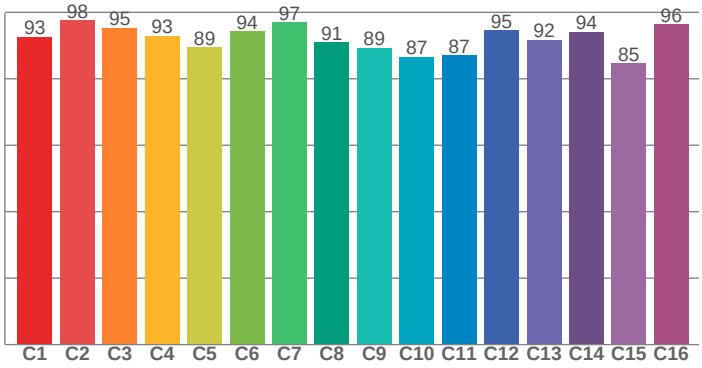


CIE 1931

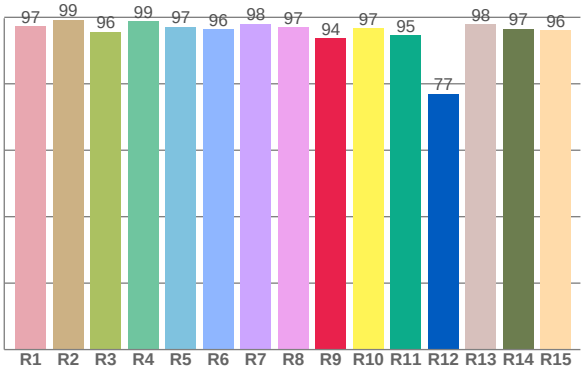


CIE 1931 ZOOM

TM30: 91,9



CRI: 97,4 (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
97,3	99,3	95,6	98,8	97,1	96,3	98,1	97,0	93,8	96,7	94,7	77,0	97,9	96,5	96,1

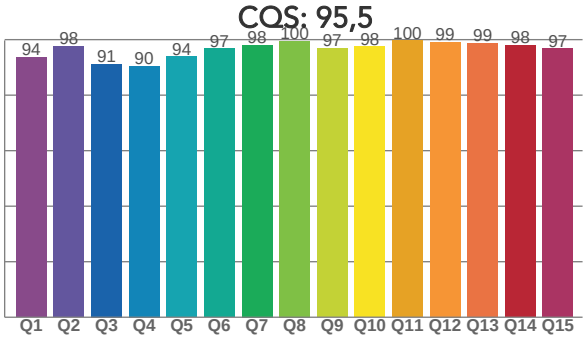
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
92,6	97,6	95,3	93,0	89,4	94,3	97,0	91,0	89,2	86,5	87,0	94,5	91,7	94,1	84,7	96,4

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
93,6	97,6	91,3	90,4	93,9	96,8	98,0	99,6	96,9	97,5	99,6	99,2	98,7	98,0	96,8

CQS: 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
5920 K	97,4	93,8	91,9	100,1	95,5	95	0,324	0,333	-0,0004

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TM30 DETAILS

PROLiGHTS

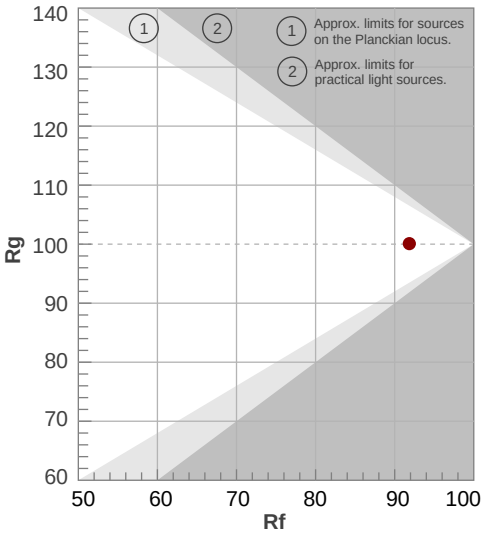
Rf 91,9

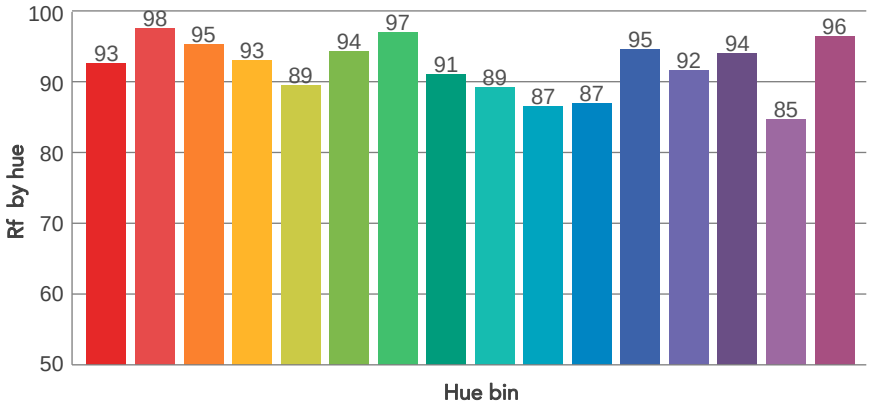
Fidelity index Rf

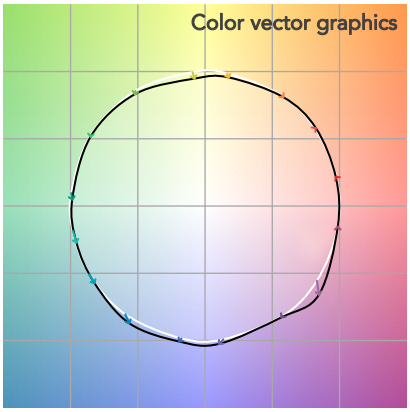
Rg 100,1

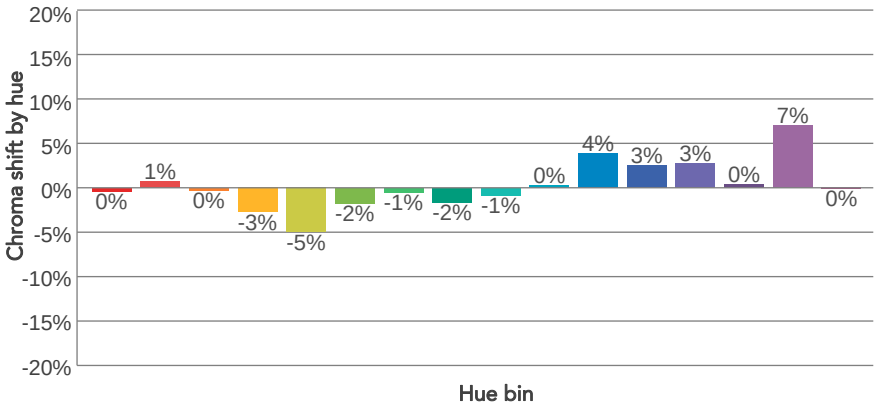
Gammut index

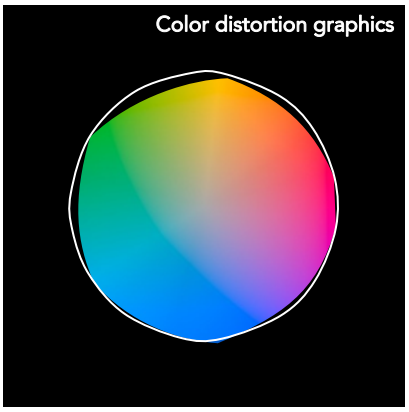
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	93	0%	1%
2	98	1%	0%
3	95	0%	-1%
4	93	-3%	-2%
5	89	-5%	0%
6	94	-2%	2%
7	97	-1%	1%
8	91	-2%	5%
9	89	-1%	9%
10	87	0%	8%
11	87	4%	6%
12	95	3%	-1%
13	92	3%	-4%
14	94	0%	-1%
15	85	7%	-8%
16	96	0%	1%

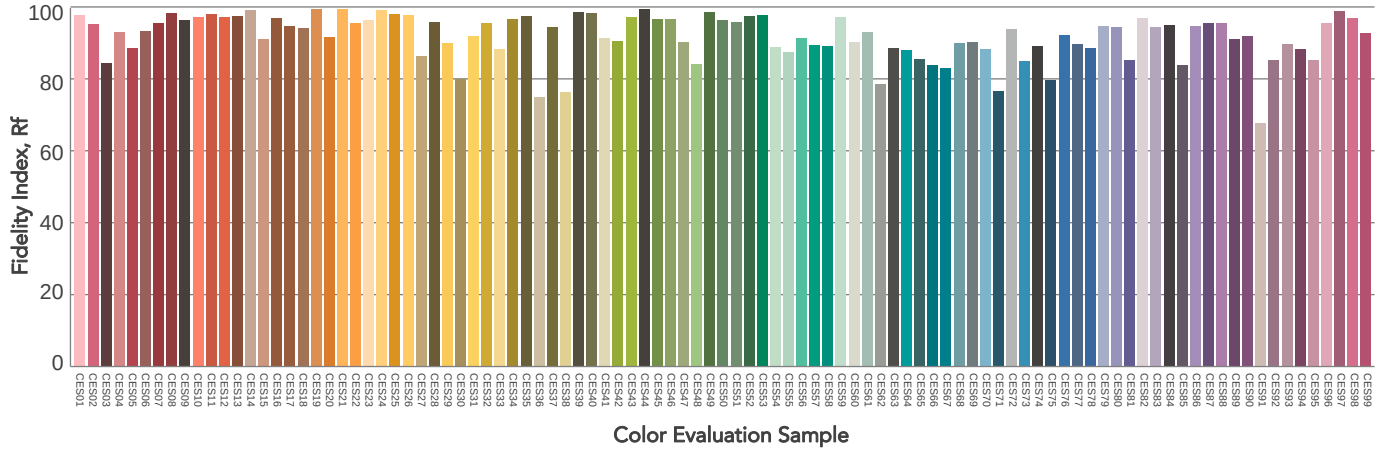












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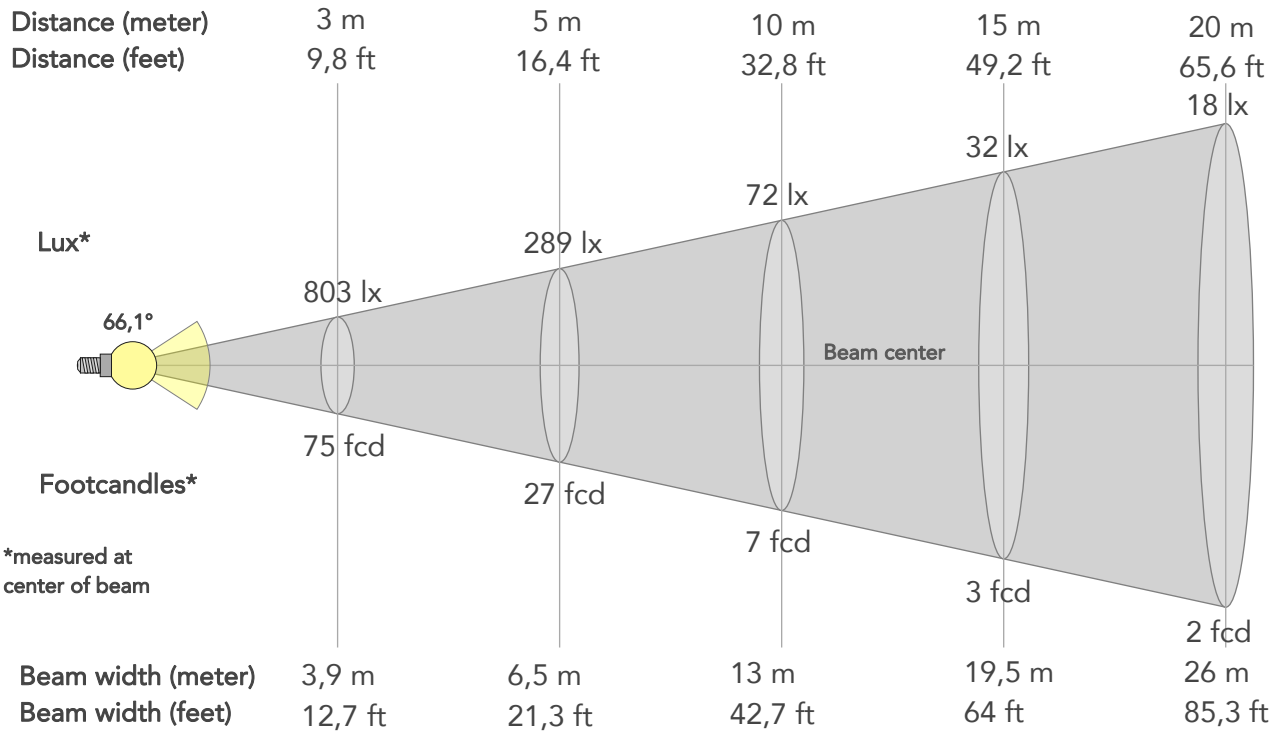
BEAM DETAILS

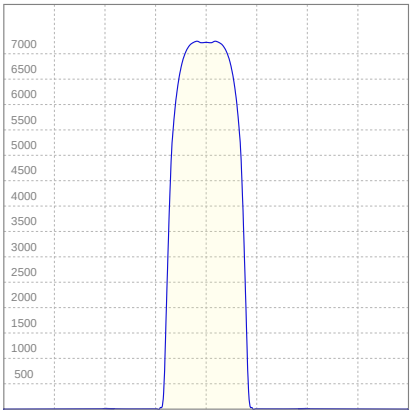
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
66,1°	74,4°	78,8°	99,2%	99,0%



BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	7223lx	1806lx	803lx	451lx	289lx	128lx	72lx	32lx	18lx	12lx	8lx	5lx	3lx
Footcand.	671fcd	168fcd	75fcd	42fcd	27fcd	12fcd	7fcd	3fcd	2fcd	1fcd	1fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	3,9m	5,2m	6,5m	9,8m	13m	19,5m	26m	32,5m	39m	52m	65m
Beam wid.	4,3ft	8,6ft	12,7ft	17ft	21,3ft	32ft	42,7ft	64ft	85,3ft	106,7ft	128ft	170,7ft	213,4ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
227V	1,06A	228,7W	31lm/W

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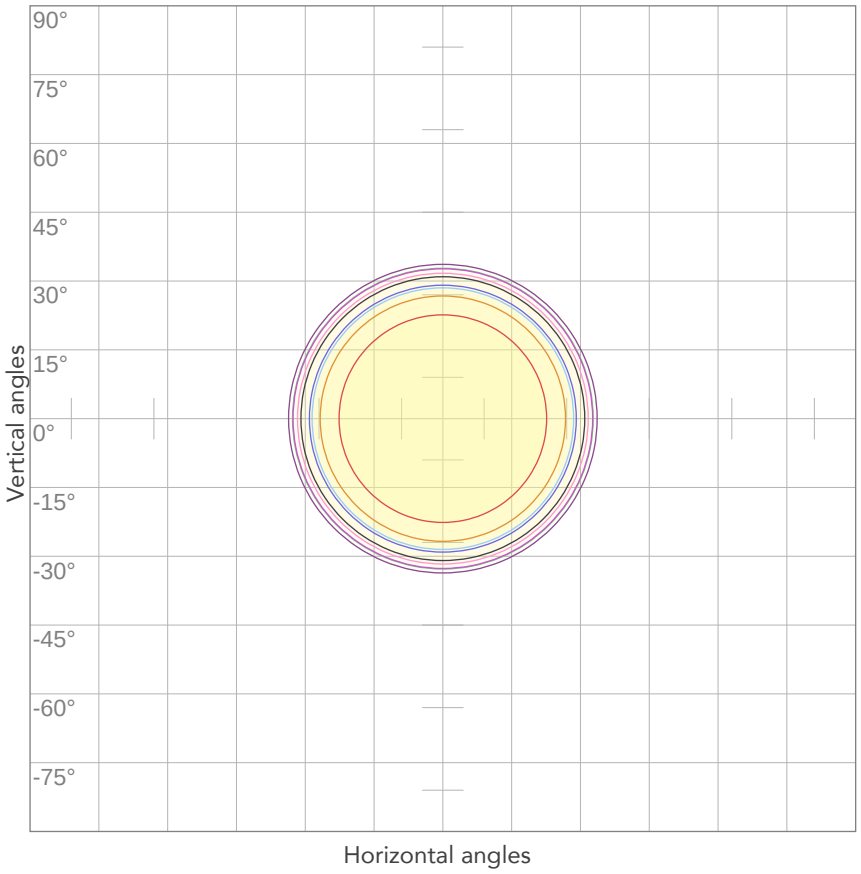
ISO DIAGRAMS

ISO CANDELA DIAGRAM



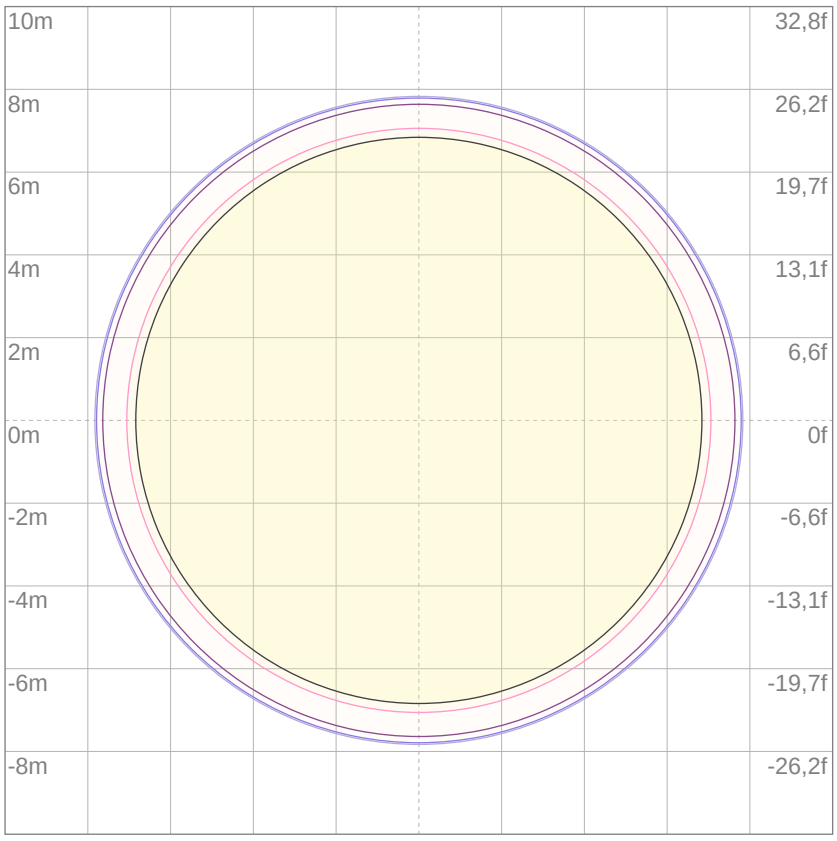
10%	722 cd
20%	1445 cd
30%	2167 cd
40%	2889 cd
50%	3611 cd
60%	4334 cd
70%	5056 cd
80%	5778 cd

Conditions:

Number of c-planes: 2

Candela at center: 7223 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	2,17 lx
5%	3,61 lx
10%	7,22 lx
30%	21,7 lx
50%	36,1 lx

Conditions:

Number of c-planes: 2

Lux at center: 72,2 lx

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