PROLiGHTS

Photometric Test Report

ECLFS PRL14

High power RGBL 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:

4619 lm

Peak candela output:

108013 cd

PRODUCT NAME:

ECLFS

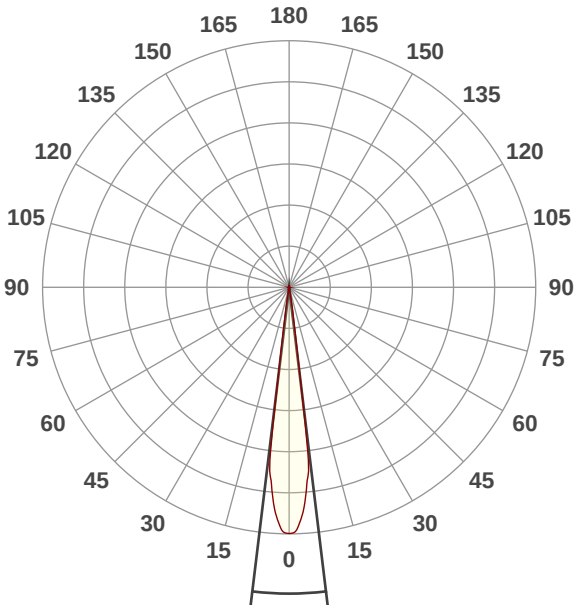
MEASURAMENT CONDITIONS:

Beam angle:
PRL14

Target:
Full on

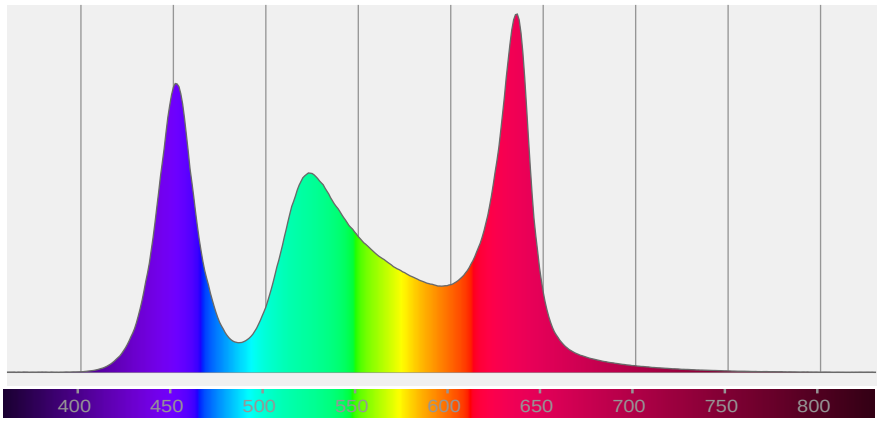
Operator:
Paolo Carvone

Date and time:
30/04/2020 09:56:16



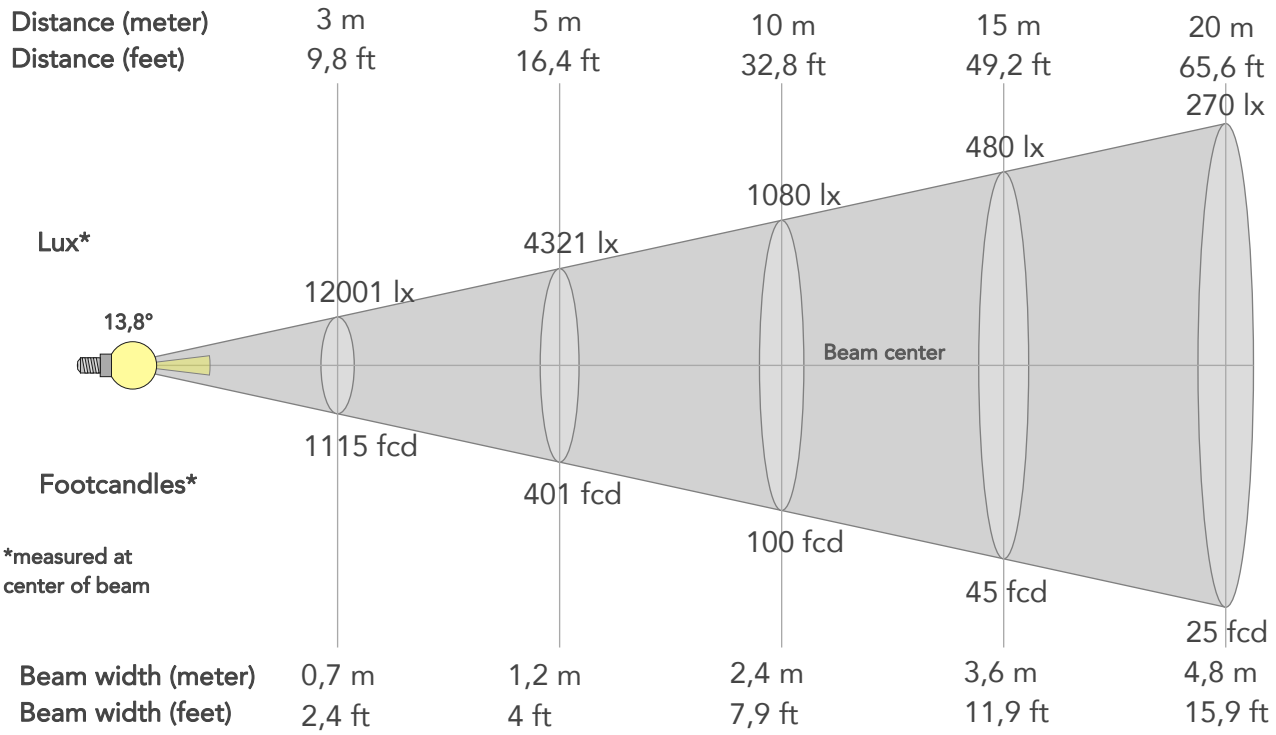
Beam angle 50%: 13,8°
Field angle 10%: 16,5°
Cut off angle 2.5%: 17,9°

Spectra



BEAM DETAILS

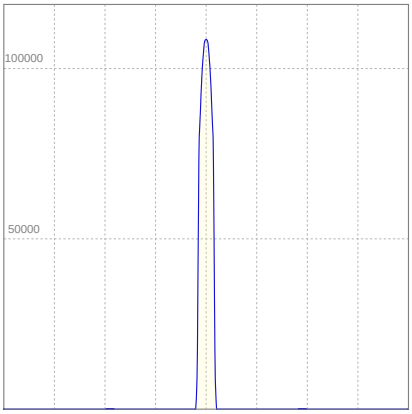
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
13,8°	16,5°	17,9°	99,8%	99,8%



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	108013lx	27003lx	12001lx	6751lx	4321lx	1920lx	1080lx	480lx	270lx	173lx	120lx	68lx	43lx
Footcand.	10035fcd	2509fcd	1115fcd	627fcd	401fcd	178fcd	100fcd	45fcd	25fcd	16fcd	11fcd	6fcd	4fcd
Beam wid.	0,2m	0,5m	0,7m	1m	1,2m	1,8m	2,4m	3,6m	4,8m	6,1m	7,3m	9,7m	12,1m
Beam wid.	0,8ft	1,6ft	2,4ft	3,2ft	4ft	6ft	7,9ft	11,9ft	15,9ft	19,9ft	23,8ft	31,8ft	39,7ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
228V	0,922A	199,9W	23lm/W

Power FC
0,95

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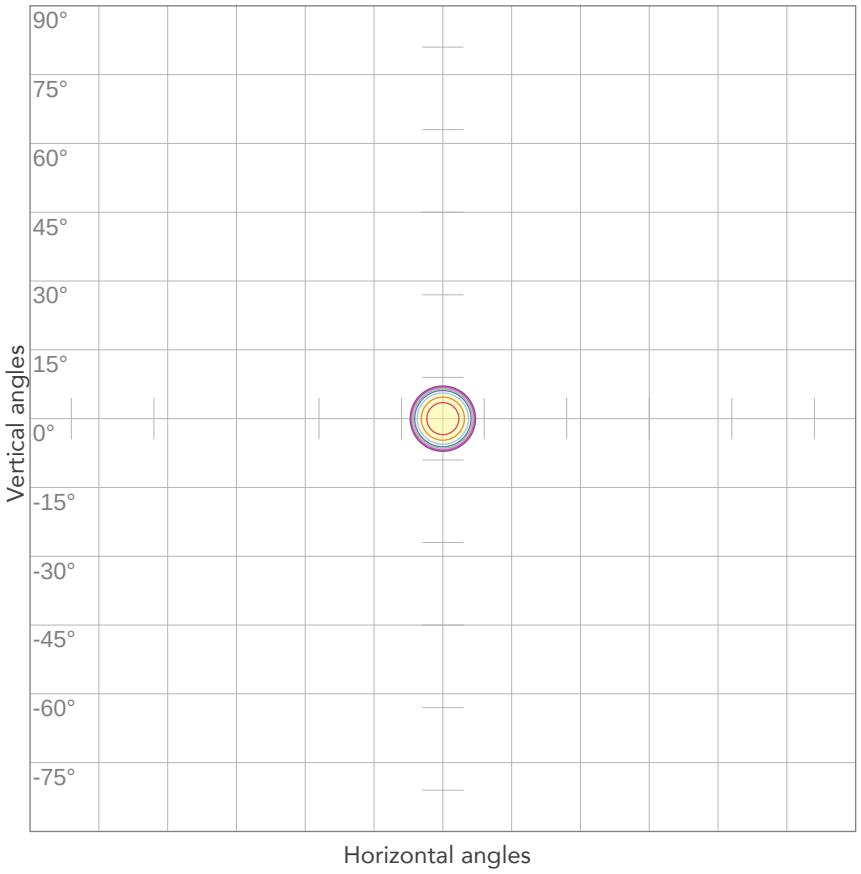
ISO DIAGRAMS

ISO CANDELA DIAGRAM



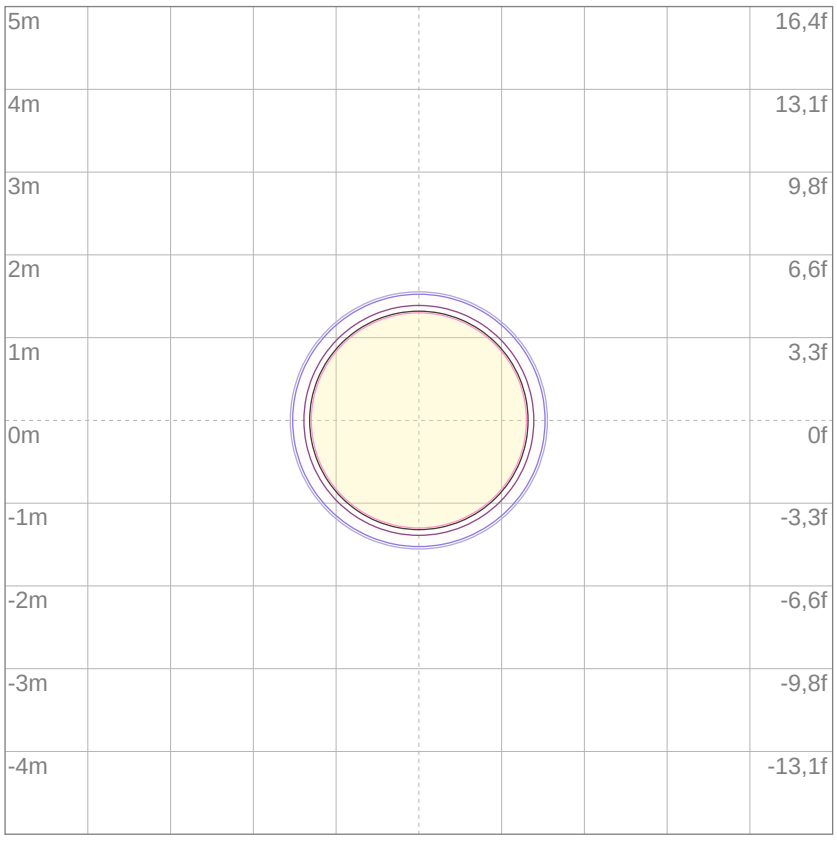
10%	10801 cd
20%	21603 cd
30%	32404 cd
40%	43205 cd
50%	54007 cd
60%	64808 cd
70%	75609 cd
80%	86411 cd

Conditions:

Number of c-planes: 2

Candela at center: 108013 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	32,4 lx
5%	54,0 lx
10%	108 lx
30%	324 lx
50%	540 lx

Conditions:

Number of c-planes: 2

Lux at center: 1080 lx

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

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Total lumen output:

753 lm

Peak candela output:

17606 cd

PRODUCT NAME:

ECLFS

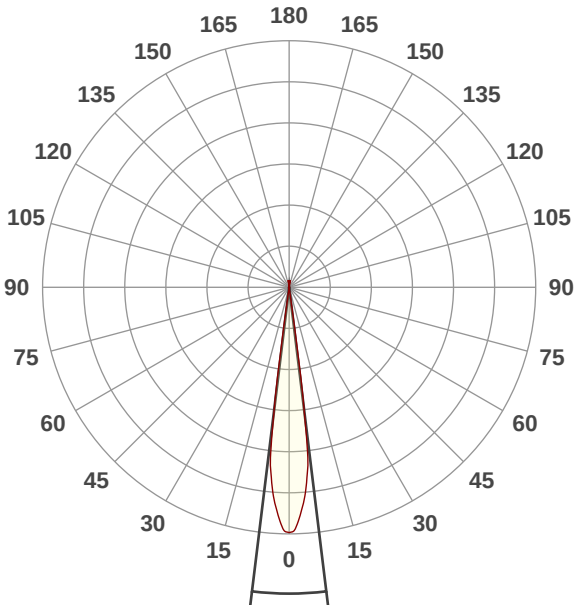
MEASURAMENT CONDITIONS:

Beam angle:
PRL14

Target:
Red

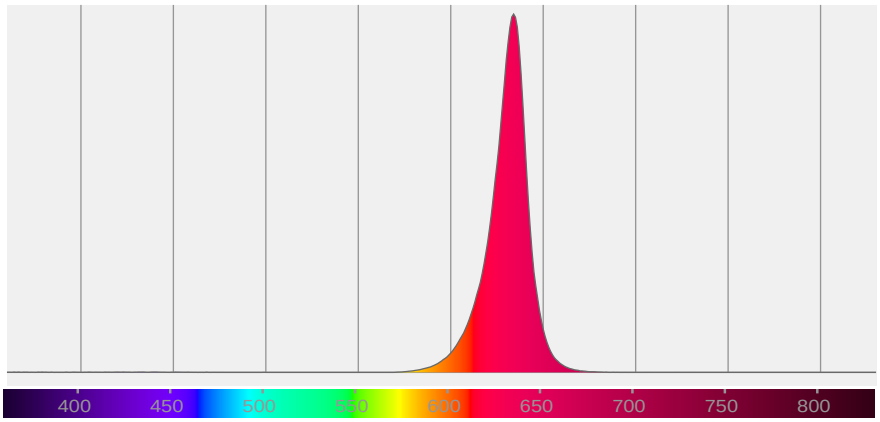
Operator:
Paolo Carvone

Date and time:
30/04/2020 09:58:20



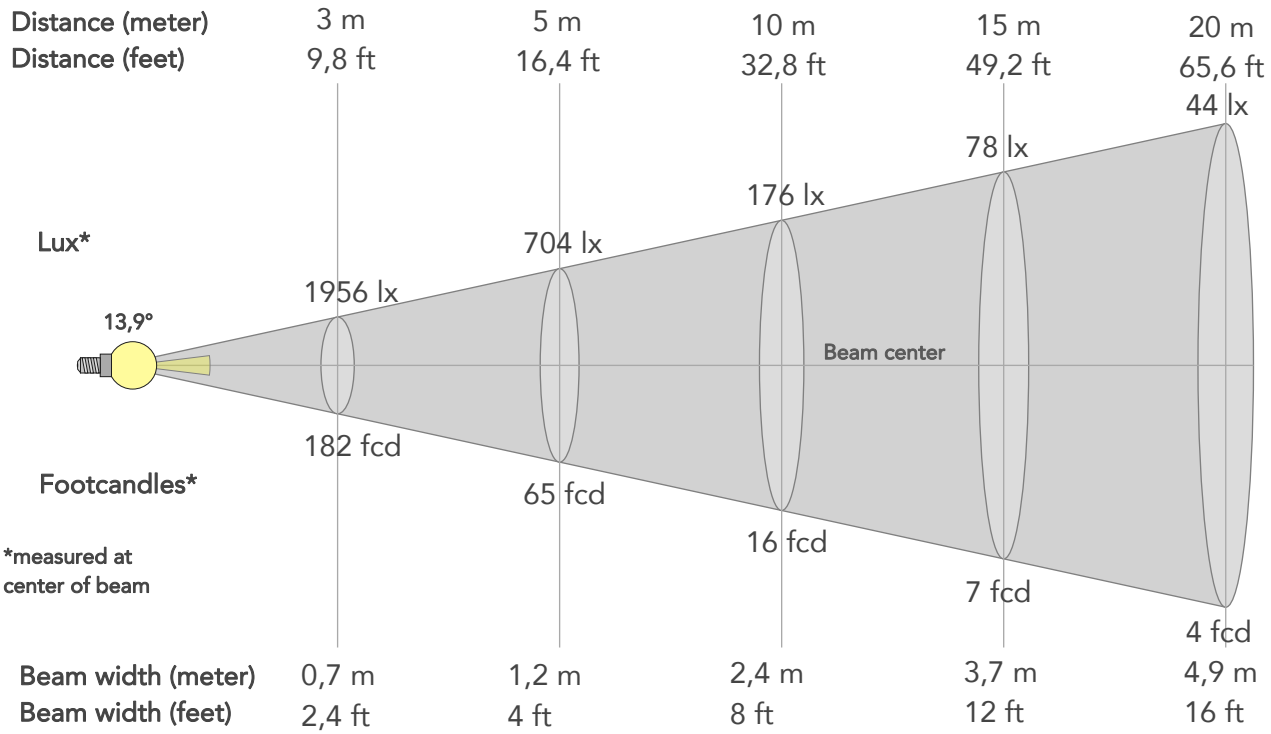
Beam angle 50%: 13,9°
Field angle 10%: 16,3°
Cut off angle 2.5%: 16,8°

Spectra



BEAM DETAILS

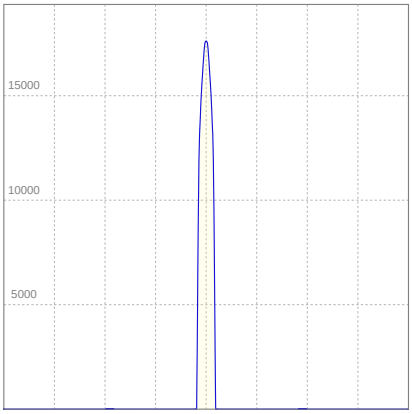
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
13,9°	16,3°	16,8°	99,4%	99,3%



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	17606lx	4402lx	1956lx	1100lx	704lx	313lx	176lx	78lx	44lx	28lx	20lx	11lx	7lx
Footcand.	1636fcd	409fcd	182fcd	102fcd	65fcd	29fcd	16fcd	7fcd	4fcd	3fcd	2fcd	1fcd	1fcd
Beam wid.	0,2m	0,5m	0,7m	1m	1,2m	1,8m	2,4m	3,7m	4,9m	6,1m	7,3m	9,8m	12,2m
Beam wid.	0,8ft	1,6ft	2,4ft	3,2ft	4ft	6ft	8ft	12ft	16ft	20ft	24,1ft	32,1ft	40,1ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
228V	0,279A	47,5W	16lm/W

Power FC
0,95

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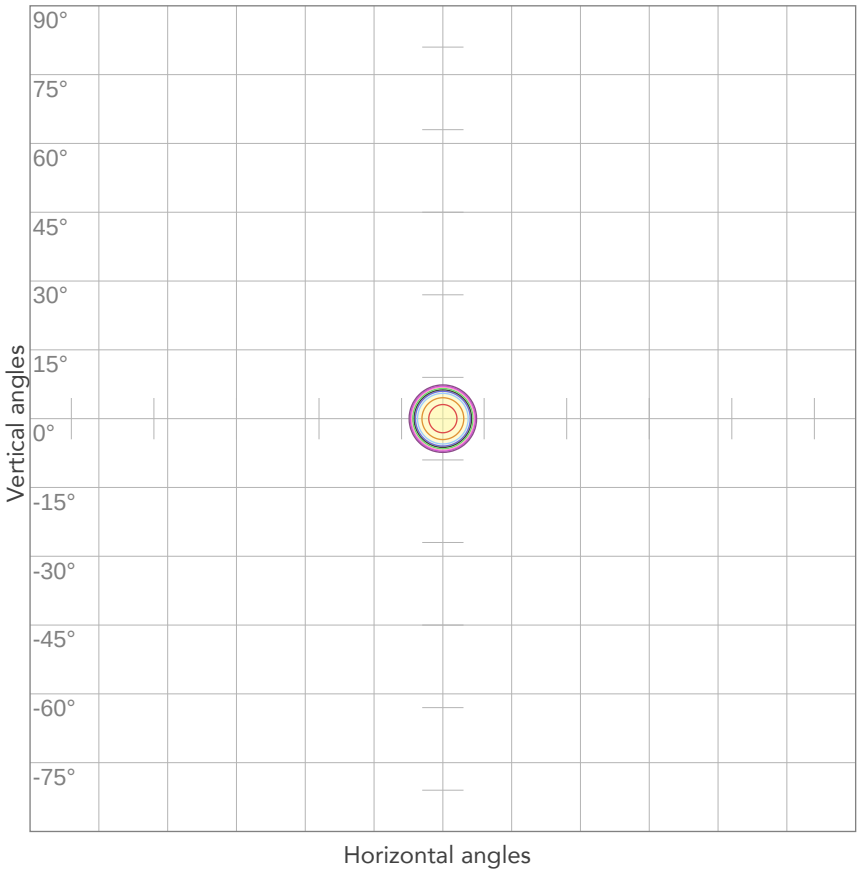
ISO DIAGRAMS

ISO CANDELA DIAGRAM



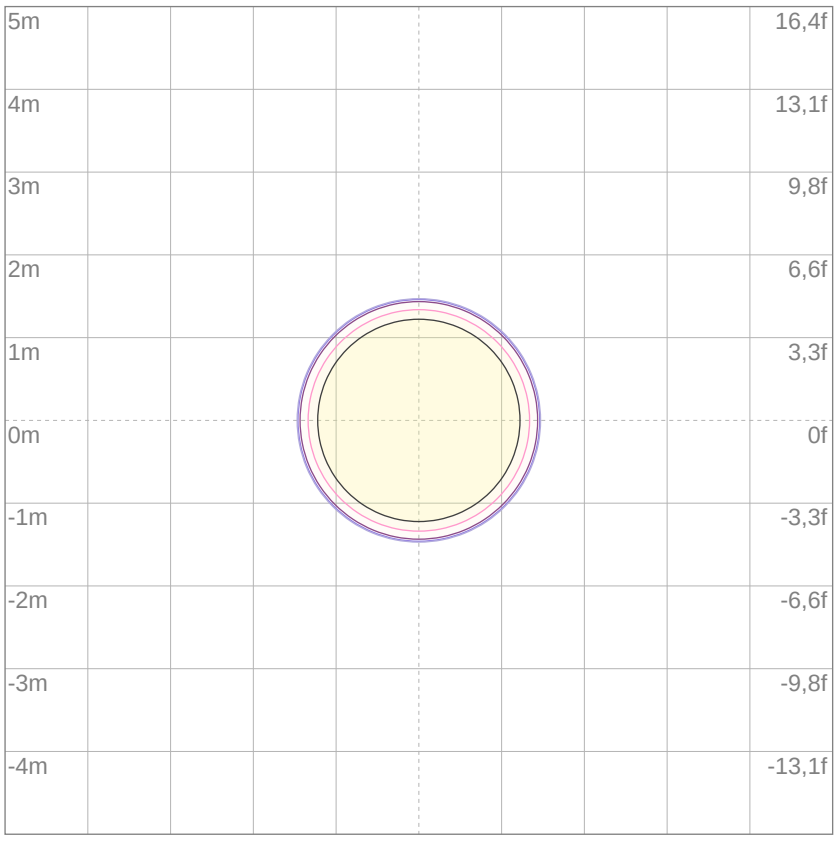
10%	1761 cd
20%	3521 cd
30%	5282 cd
40%	7043 cd
50%	8803 cd
60%	10564 cd
70%	12324 cd
80%	14085 cd

Conditions:

Number of c-planes: 2

Candela at center: 17606 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	5,28 lx
5%	8,80 lx
10%	17,6 lx
30%	52,8 lx
50%	88,0 lx

Conditions:

Number of c-planes: 2

Lux at center: 176 lx

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

Total lumen output:

1101 lm

Peak candela output:

27932 cd

PRODUCT NAME:

ECLFS

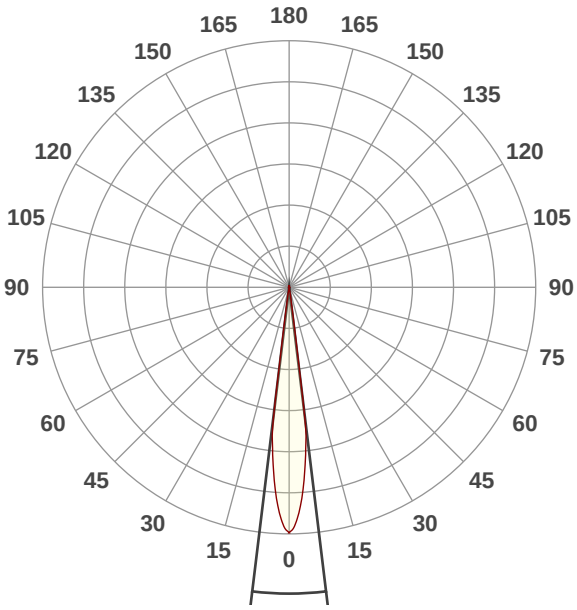
MEASURAMENT CONDITIONS:

Beam angle:
PRL14

Target:
Green

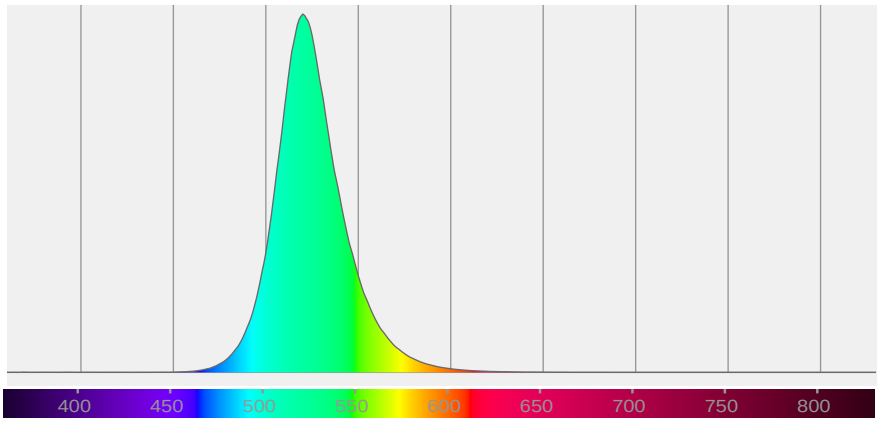
Operator:
Paolo Carvone

Date and time:
30/04/2020 10:00:58



Beam angle 50%: 13,8°
Field angle 10%: 15,9°
Cut off angle 2.5%: 17,1°

Spectra



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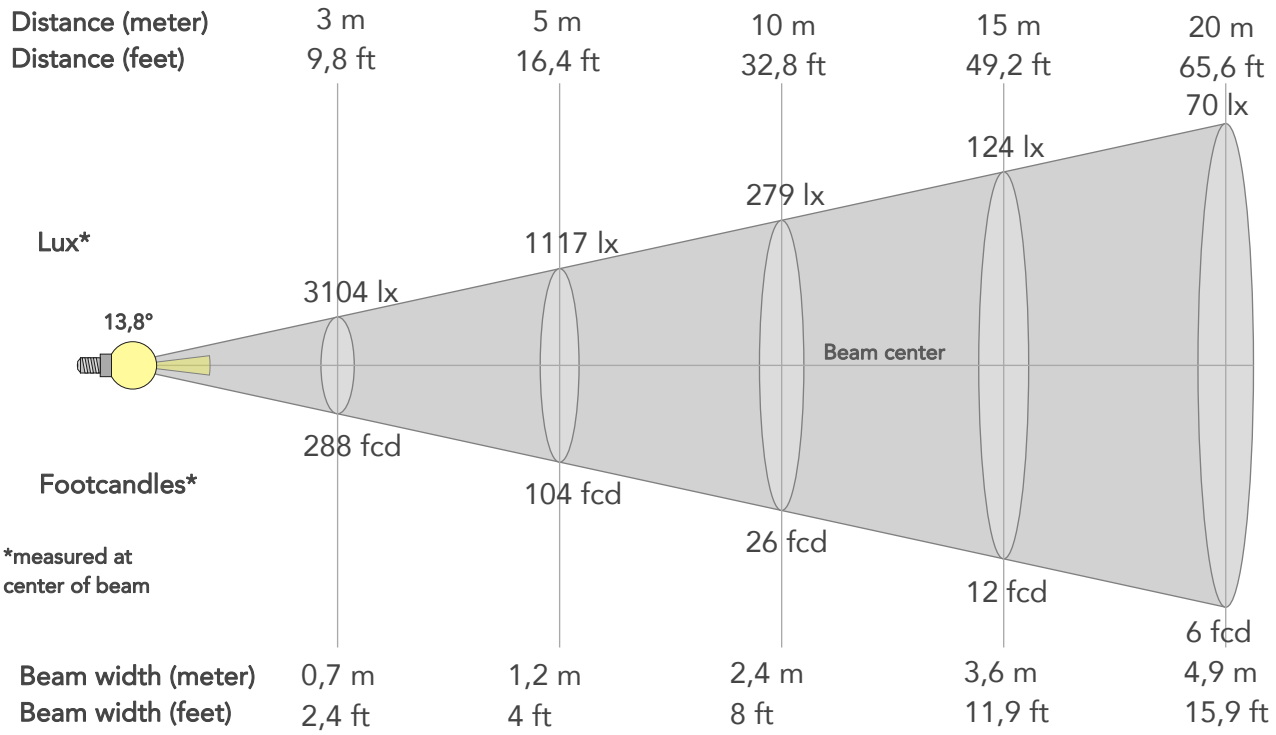
BEAM DETAILS

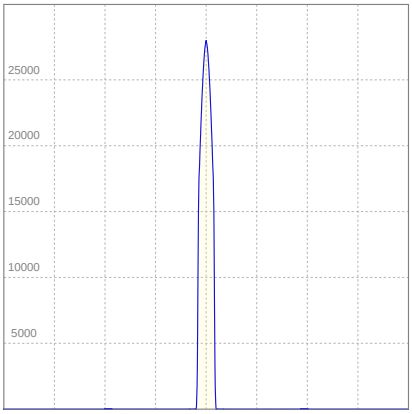
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
13,8°	15,9°	17,1°	99,3%	99,2%



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	27932lx	6983lx	3104lx	1746lx	1117lx	497lx	279lx	124lx	70lx	45lx	31lx	17lx	11lx
Footcand.	2595fcd	649fcd	288fcd	162fcd	104fcd	46fcd	26fcd	12fcd	6fcd	4fcd	3fcd	2fcd	1fcd
Beam wid.	0,2m	0,5m	0,7m	1m	1,2m	1,8m	2,4m	3,6m	4,9m	6,1m	7,3m	9,7m	12,1m
Beam wid.	0,8ft	1,6ft	2,4ft	3,2ft	4ft	6ft	8ft	11,9ft	15,9ft	19,9ft	23,9ft	31,8ft	39,8ft

LINEAR DISTRIBUTION DIAGRAM



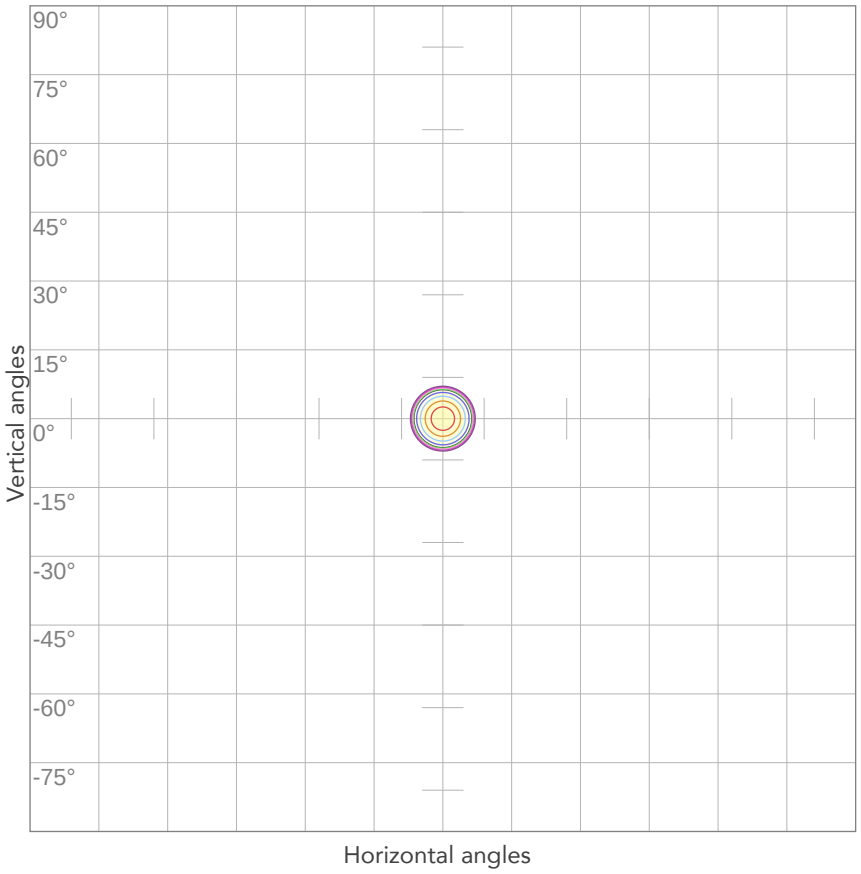
ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
228V	0,281A	48,1W	23lm/W

Power FC
0,95

ISO DIAGRAMS

ISO CANDELA DIAGRAM



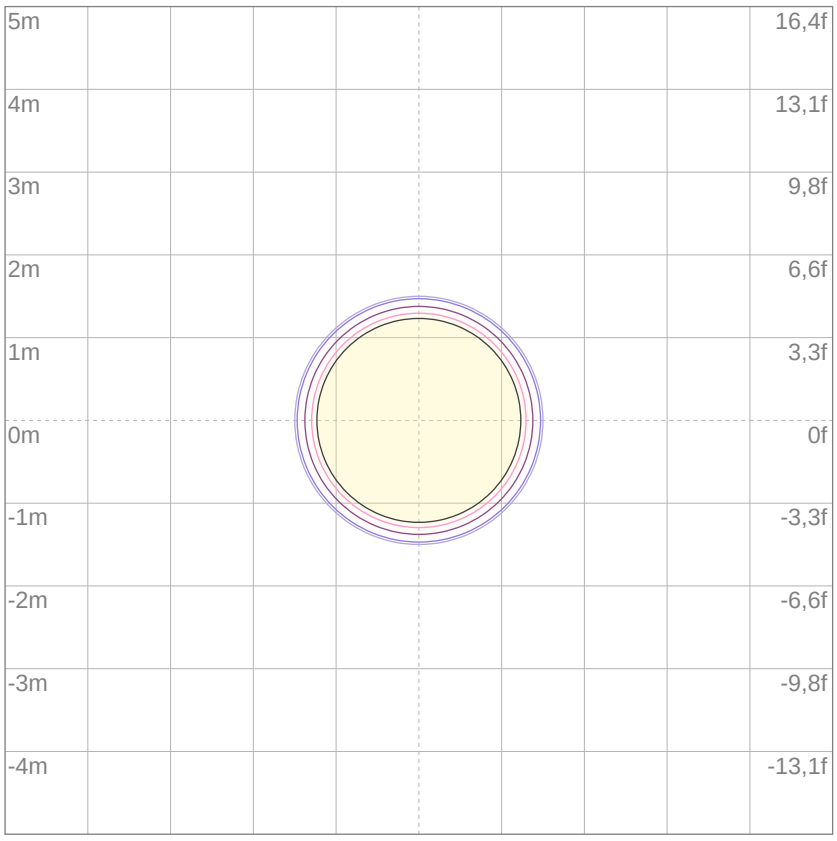
10%	2793 cd
20%	5586 cd
30%	8379 cd
40%	11173 cd
50%	13966 cd
60%	16759 cd
70%	19552 cd
80%	22345 cd

Conditions:

Number of c-planes: 2

Candela at center: 27932 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	8,38 lx
5%	14,0 lx
10%	27,9 lx
30%	83,8 lx
50%	140 lx

Conditions:

Number of c-planes: 2

Lux at center: 279 lx

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

Total lumen output:

161 lm

Peak candela output:

4221 cd

PRODUCT NAME:

ECLFS

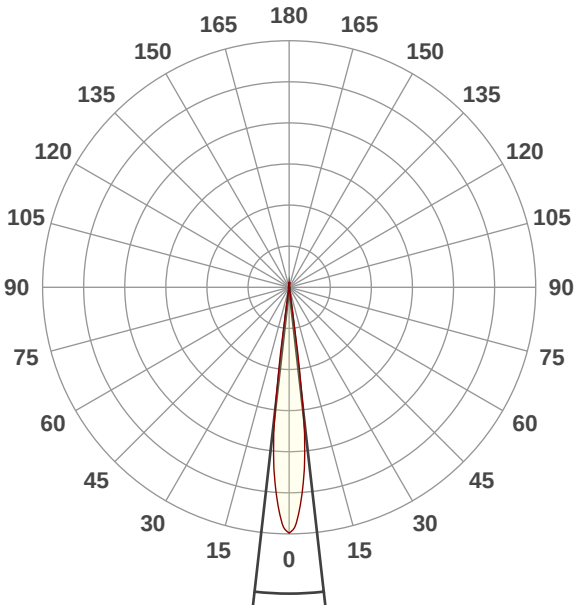
MEASURAMENT CONDITIONS:

Beam angle:
PRL14

Target:
Blue

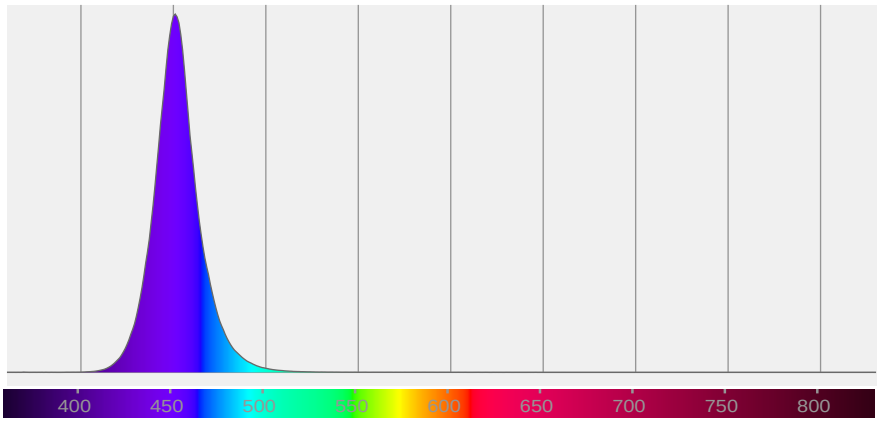
Operator:
Paolo Carvone

Date and time:
30/04/2020 10:05:02



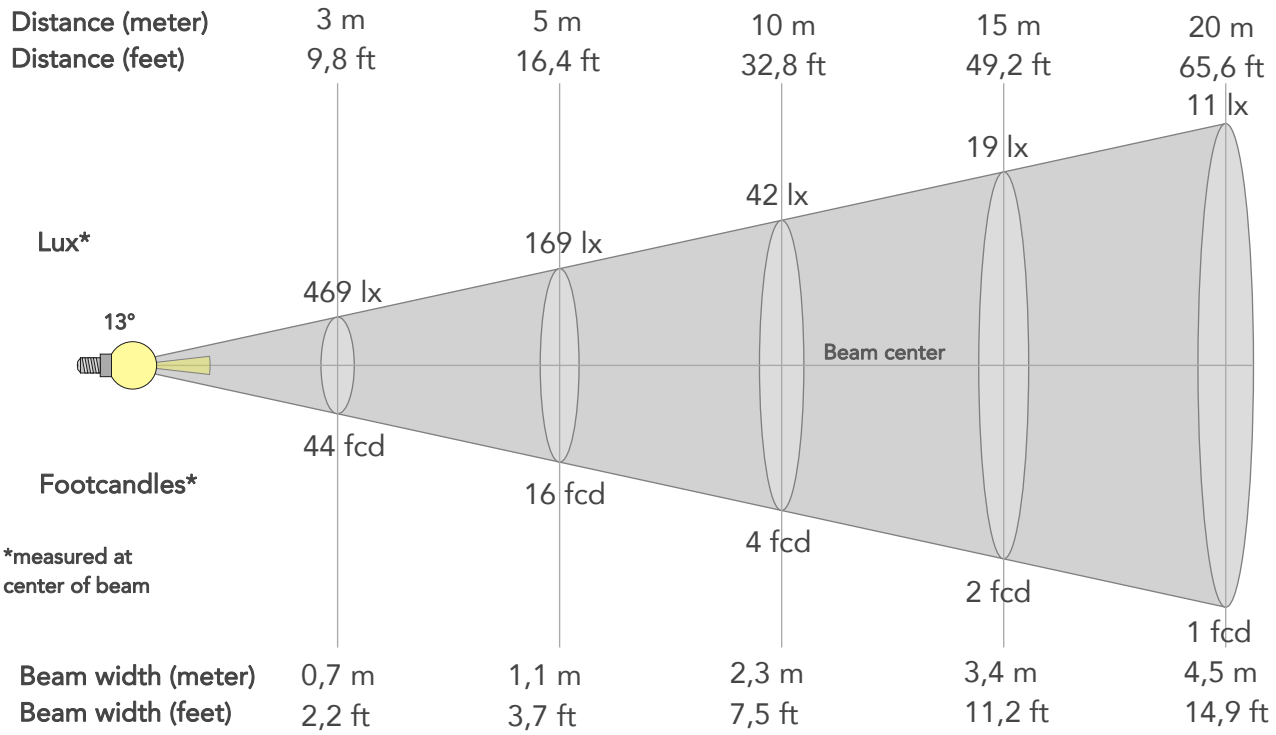
Beam angle 50%: 13°
Field angle 10%: 16,5°
Cut off angle 2.5%: 17,2°

Spectra



BEAM DETAILS

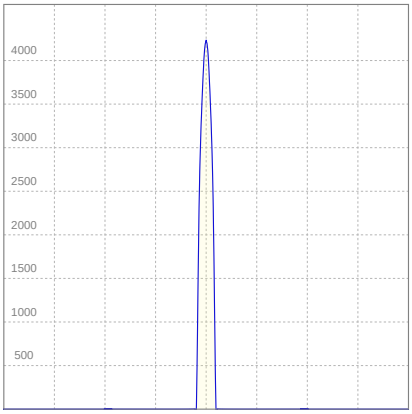
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
13°	16,5°	17,2°	99,4%	99,3%



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	4221lx	1055lx	469lx	264lx	169lx	75lx	42lx	19lx	11lx	7lx	5lx	3lx	2lx
Footcand.	392fcd	98fcd	44fcd	25fcd	16fcd	7fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd
Beam wid.	0,2m	0,5m	0,7m	0,9m	1,1m	1,7m	2,3m	3,4m	4,5m	5,7m	6,8m	9,1m	11,4m
Beam wid.	0,8ft	1,5ft	2,2ft	3ft	3,7ft	5,6ft	7,5ft	11,2ft	14,9ft	18,7ft	22,4ft	29,8ft	37,3ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
227V	0,244A	38,0W	4lm/W

Power FC
0,95

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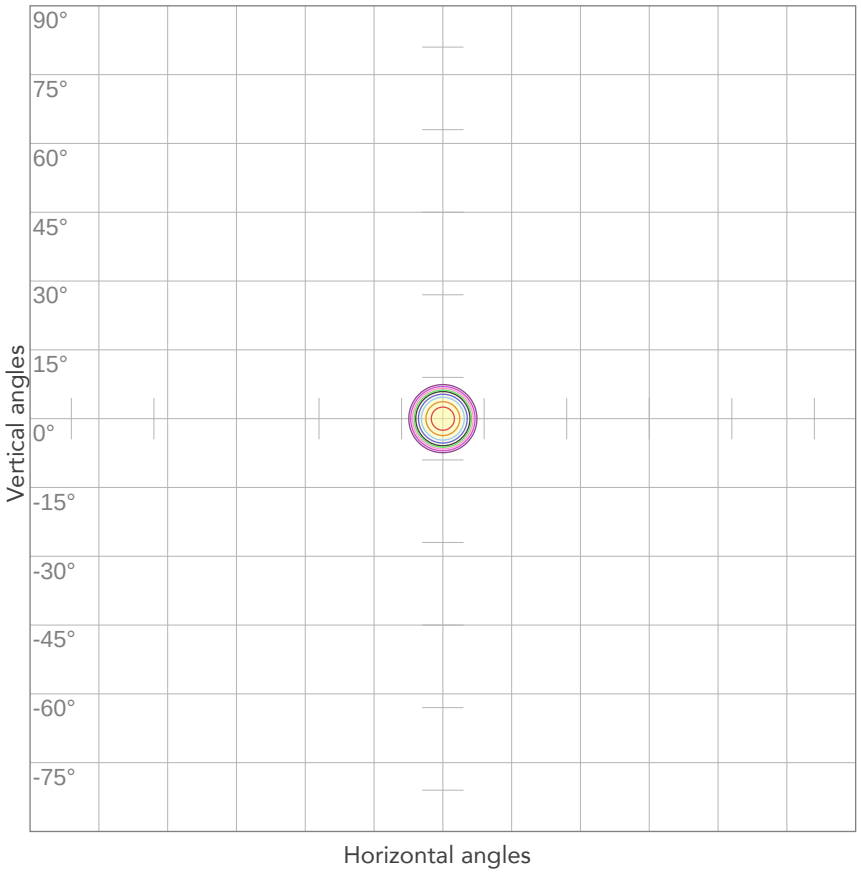
ISO DIAGRAMS

ISO CANDELA DIAGRAM



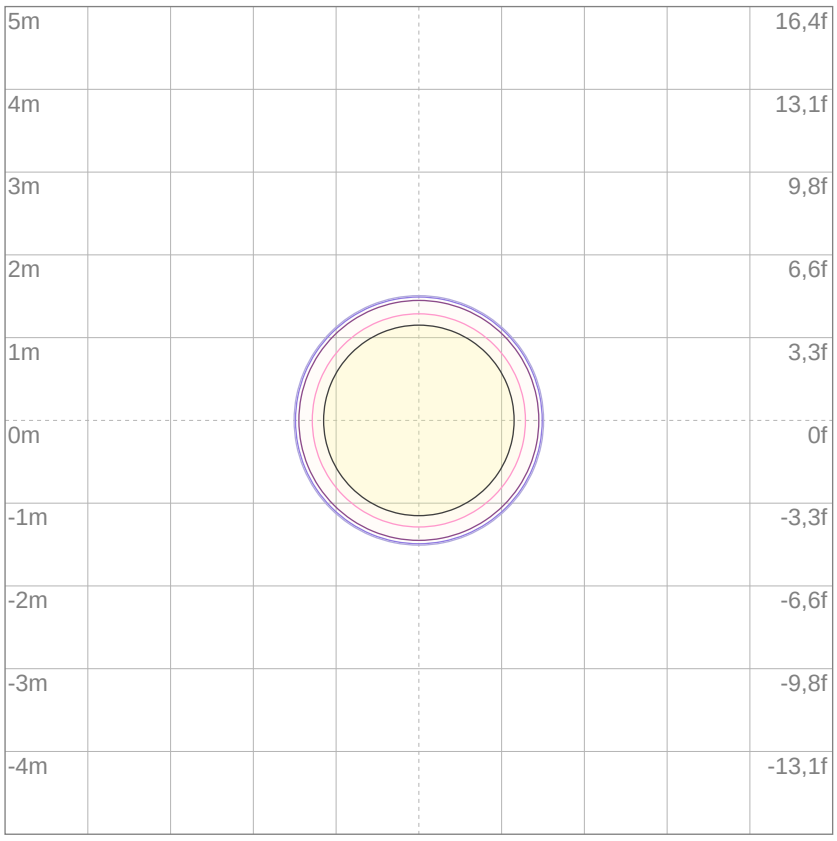
10%	422 cd
20%	844 cd
30%	1266 cd
40%	1688 cd
50%	2111 cd
60%	2533 cd
70%	2955 cd
80%	3377 cd

Conditions:

Number of c-planes: 2

Candela at center: 4221 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	1,27 lx
5%	2,11 lx
10%	4,22 lx
30%	12,7 lx
50%	21,1 lx

Conditions:

Number of c-planes: 2

Lux at center: 42,2 lx

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

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Total lumen output:

2840 lm

Peak candela output:

63071 cd

PRODUCT NAME:

ECLFS

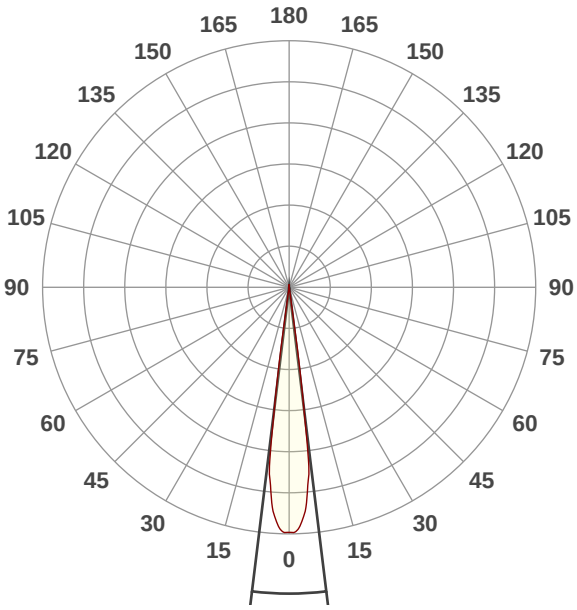
MEASURAMENT CONDITIONS:

Beam angle:
PRL14

Target:
Lime

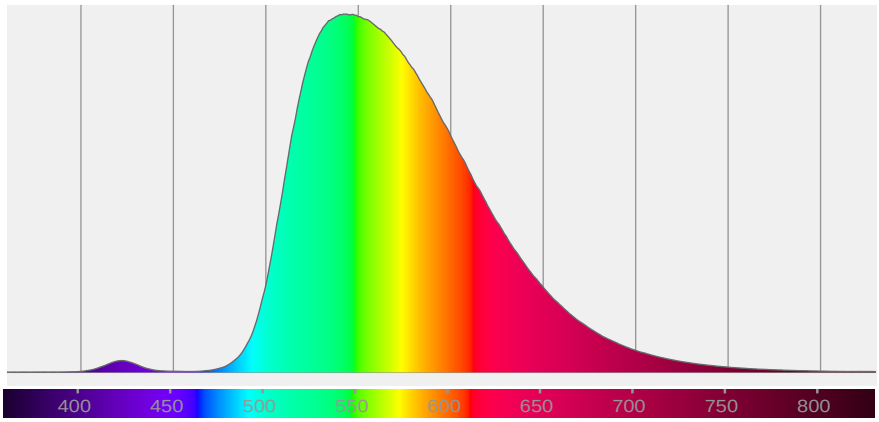
Operator:
Paolo Carvone

Date and time:
30/04/2020 10:06:50



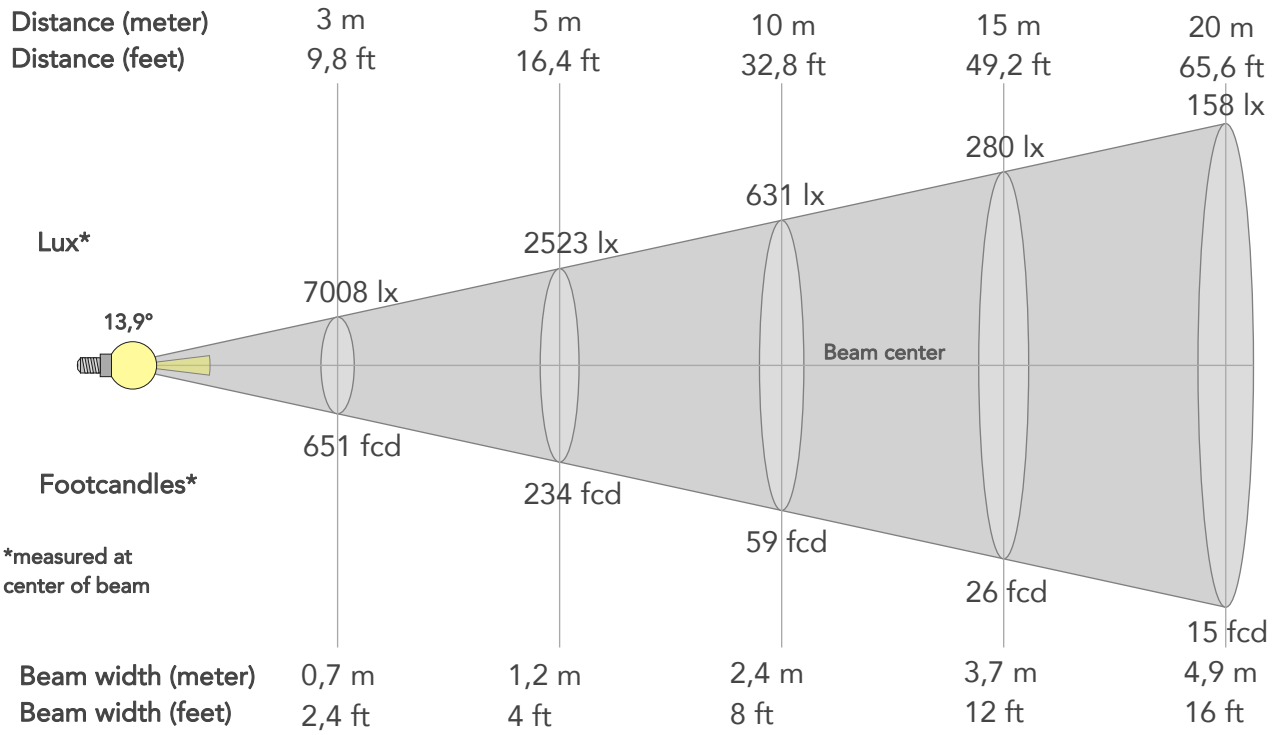
Beam angle 50%: 13,9°
Field angle 10%: 16,4°
Cut off angle 2.5%: 17,1°

Spectra



BEAM DETAILS

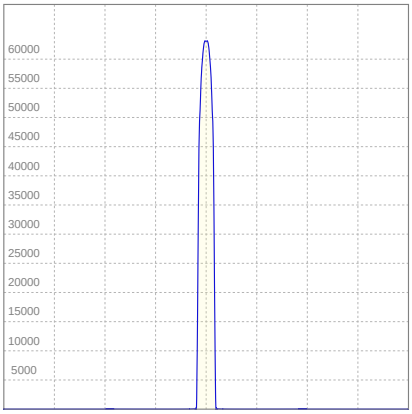
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
13,9°	16,4°	17,1°	98,4%	98,1%



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	63071lx	15768lx	7008lx	3942lx	2523lx	1121lx	631lx	280lx	158lx	101lx	70lx	39lx	25lx
Footcand.	5859fcd	1465fcd	651fcd	366fcd	234fcd	104fcd	59fcd	26fcd	15fcd	9fcd	7fcd	4fcd	2fcd
Beam wid.	0,2m	0,5m	0,7m	1m	1,2m	1,8m	2,4m	3,7m	4,9m	6,1m	7,3m	9,8m	12,2m
Beam wid.	0,8ft	1,6ft	2,4ft	3,2ft	4ft	6ft	8ft	12ft	16ft	20ft	24ft	32,1ft	40,1ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
227V	0,428A	85,1W	33lm/W

Power FC
0,95

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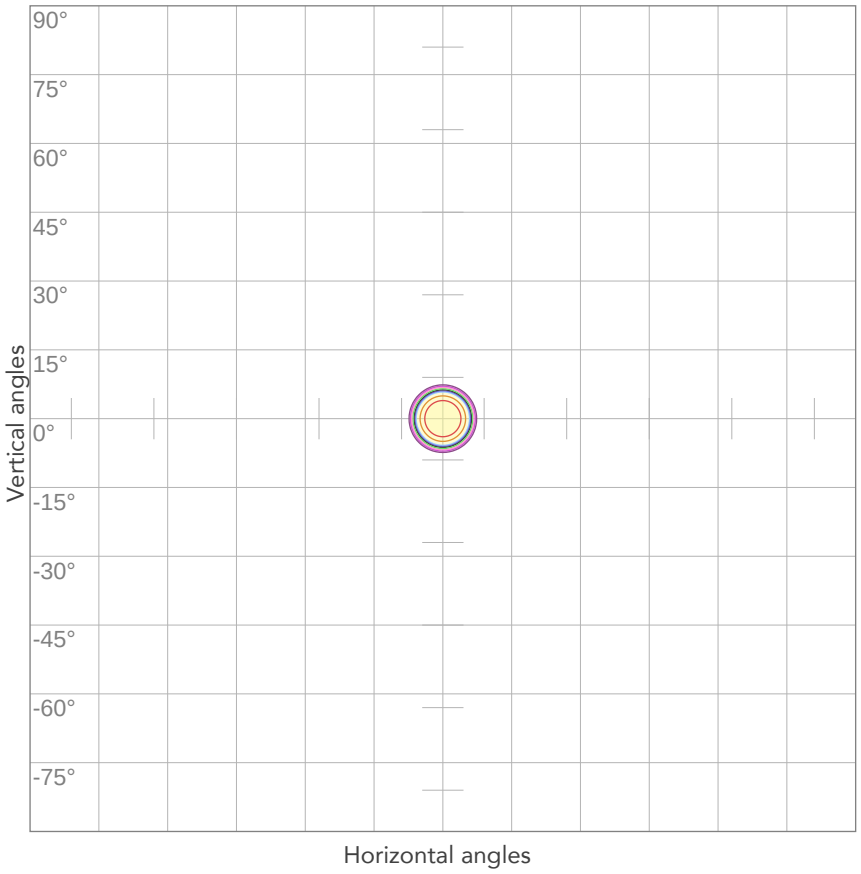
ISO DIAGRAMS

ISO CANDELA DIAGRAM



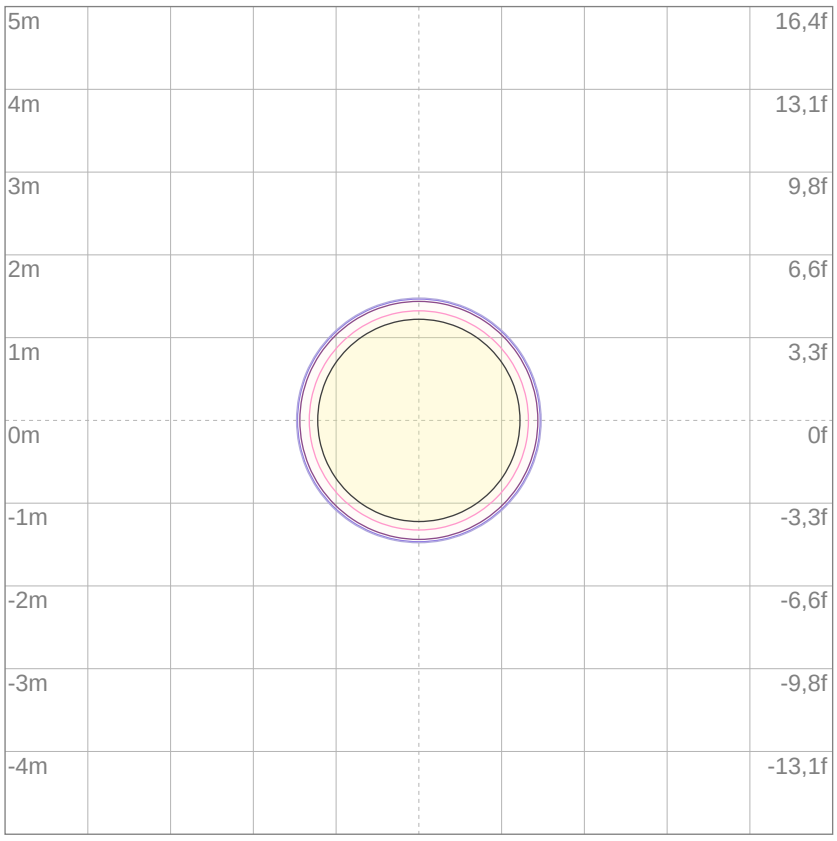
10%	6307 cd
20%	12614 cd
30%	18921 cd
40%	25228 cd
50%	31535 cd
60%	37843 cd
70%	44150 cd
80%	50457 cd

Conditions:

Number of c-planes: 2

Candela at center: 63071 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	18,9 lx
5%	31,5 lx
10%	63,1 lx
30%	189 lx
50%	315 lx

Conditions:

Number of c-planes: 2

Lux at center: 631 lx

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

Total lumen output:

3009 lm

Peak candela output:

69713 cd

Light quality:

CRI: 84,6

Color temperature:

2850 K

PRODUCT NAME:

ECLFS

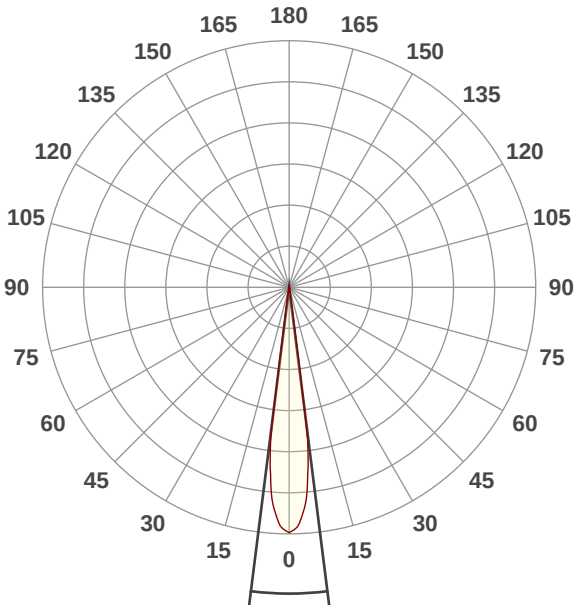
MEASURAMENT CONDITIONS:

Beam angle:
PRL14

Target:
2800K

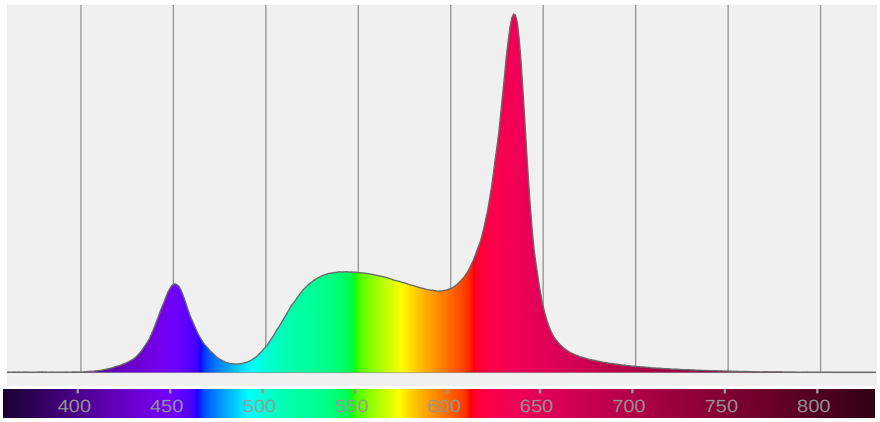
Operator:
Paolo Carvone

Date and time:
30/04/2020 10:46:13



Beam angle 50%: 14,3°
Field angle 10%: 15,8°
Cut off angle 2.5%: 16,6°

Spectra



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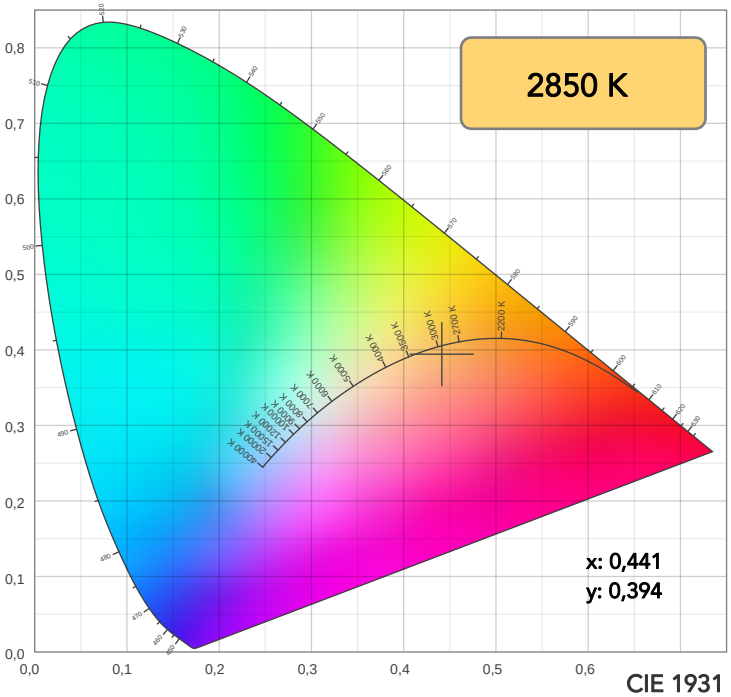
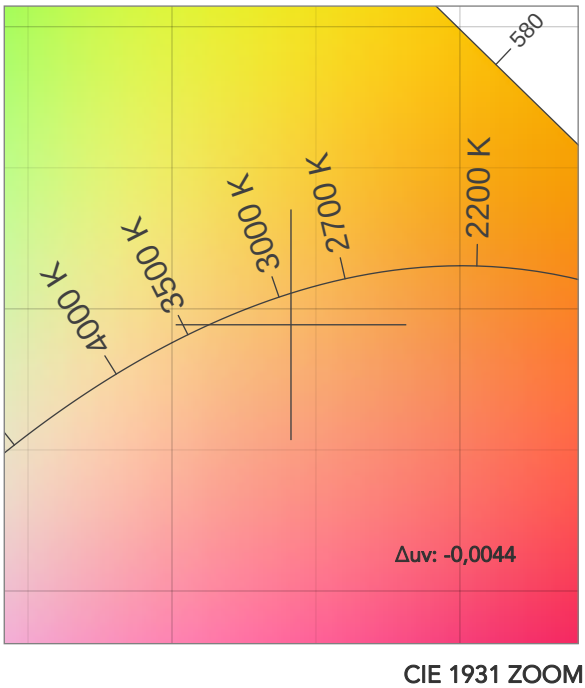
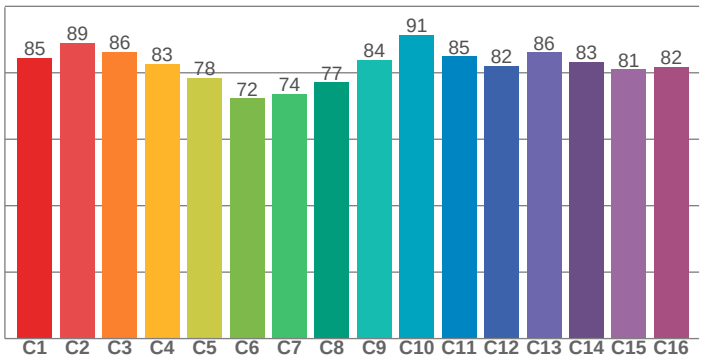
COLOR DETAILS

PROLiGHTS

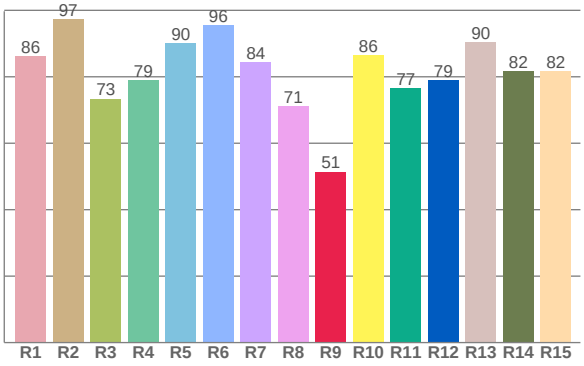




TM30: 83,1



CRI: 84,6 (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
86,2	97,4	73,4	79,0	90,1	95,5	84,3	71,2	51,4	86,5	76,6	78,9	90,4	81,7	81,6

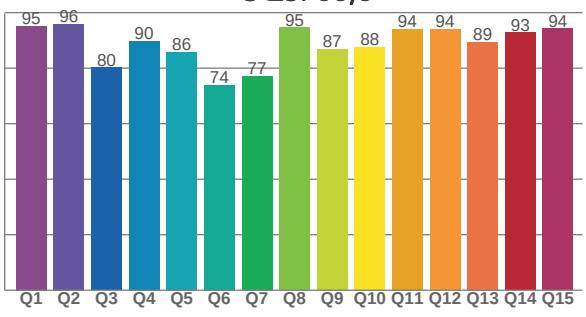
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
84,5	88,9	86,3	82,7	78,5	72,4	73,7	77,1	83,9	91,4	85,0	82,0	86,2	83,3	81,0	81,8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
95,3	95,9	80,3	89,9	85,9	73,9	77,2	94,6	86,9	87,6	94,1	94,0	89,4	92,8	94,2

CQS: 86,6



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
2850 K	84,6	51,4	83,1	113,6	86,6	68	0,441	0,394	-0,0044

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TM30 DETAILS

PROLiGHTS

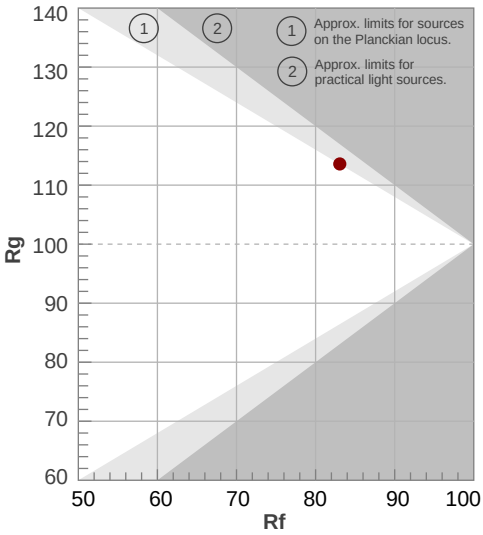
Rf 83,1

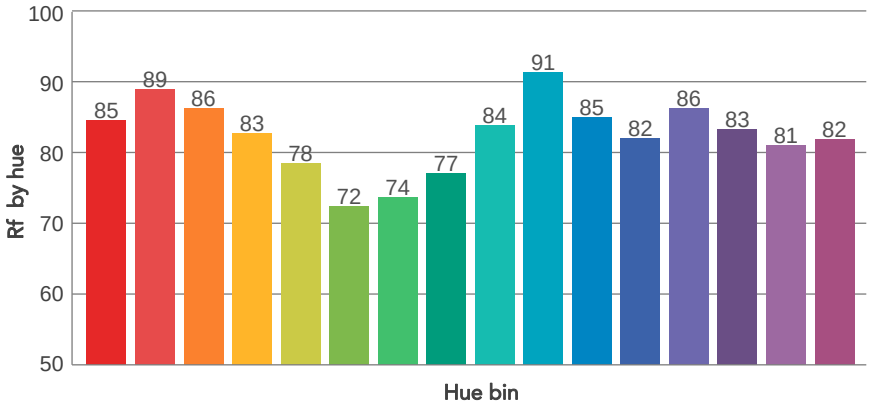
Fidelity index Rf

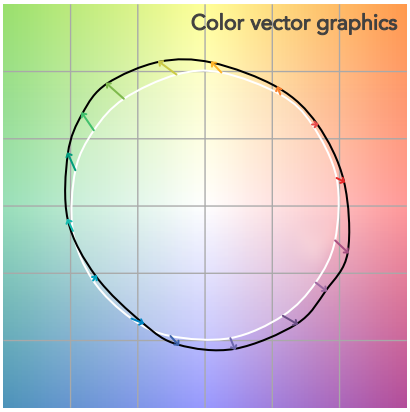
Rg 113,6

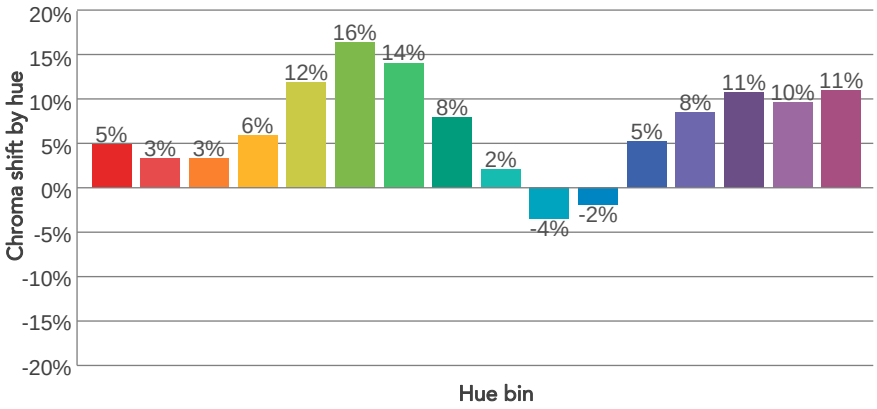
Gammut index

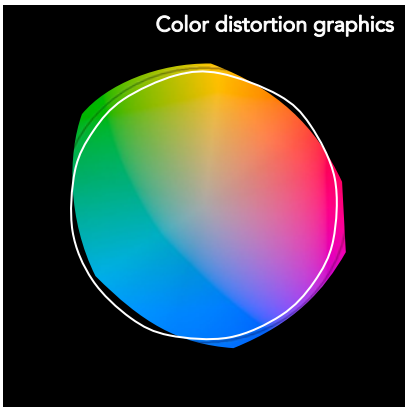
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	85	5%	-4%
2	89	3%	-2%
3	86	3%	5%
4	83	6%	8%
5	78	12%	11%
6	72	16%	4%
7	74	14%	-6%
8	77	8%	-11%
9	84	2%	-9%
10	91	-4%	-1%
11	85	-2%	9%
12	82	5%	7%
13	86	8%	2%
14	83	11%	5%
15	81	10%	-1%
16	82	11%	-7%

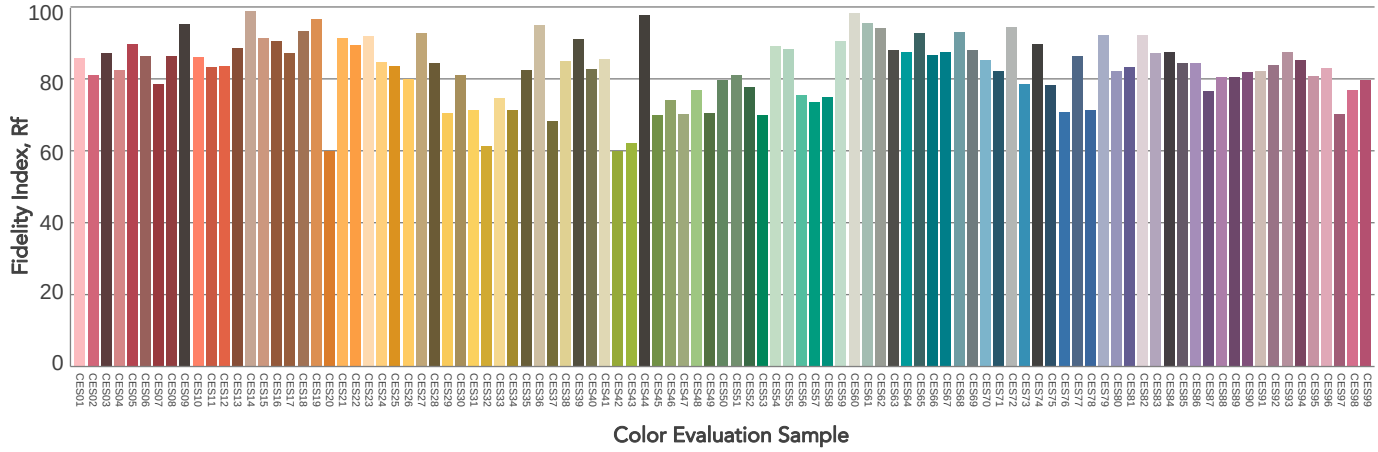












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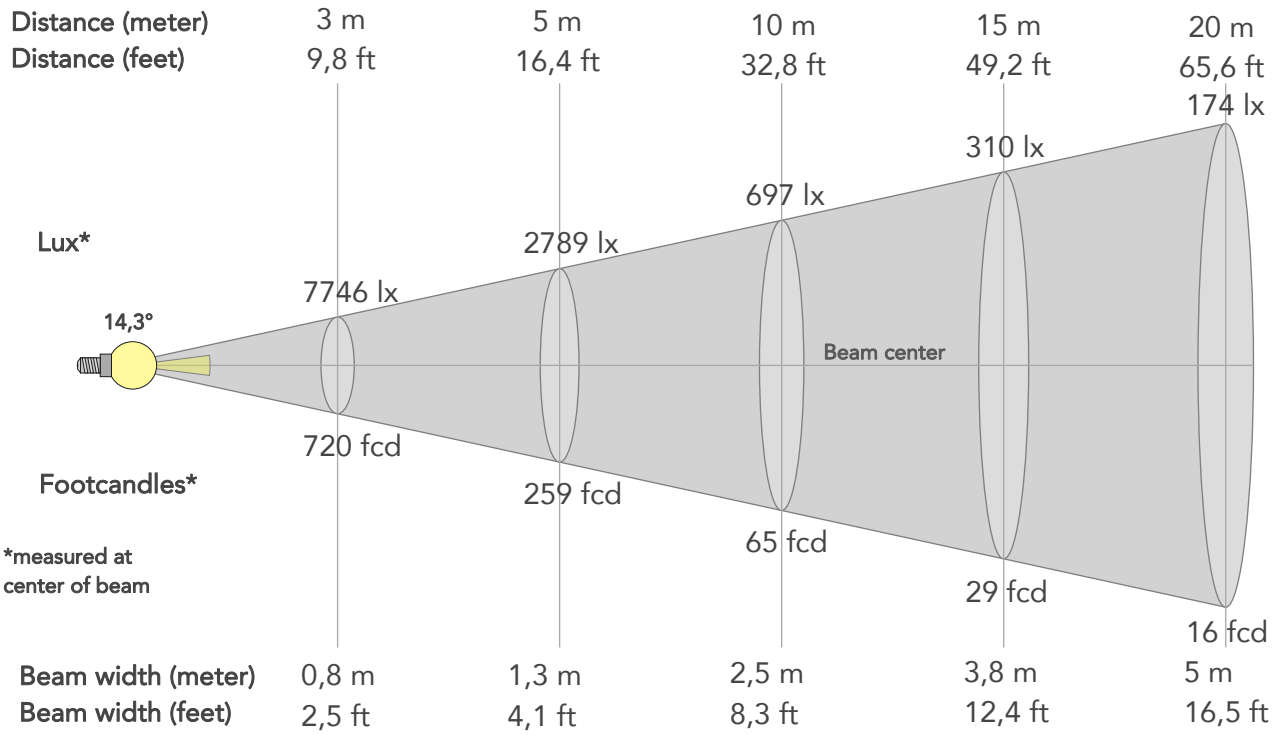
BEAM DETAILS

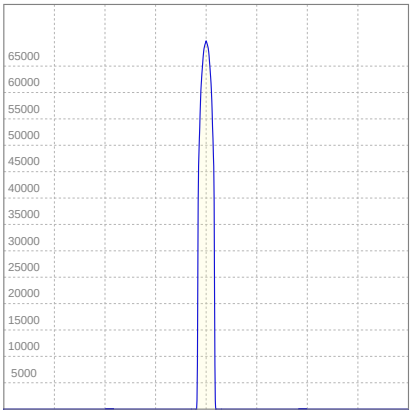
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
14,3°	15,8°	16,6°	99,7%	99,7%



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	69713lx	17428lx	7746lx	4357lx	2789lx	1239lx	697lx	310lx	174lx	112lx	77lx	44lx	28lx
Footcand.	6477fcd	1619fcd	720fcd	405fcd	259fcd	115fcd	65fcd	29fcd	16fcd	10fcd	7fcd	4fcd	3fcd
Beam wid.	0,3m	0,5m	0,8m	1m	1,3m	1,9m	2,5m	3,8m	5m	6,3m	7,6m	10,1m	12,6m
Beam wid.	0,8ft	1,7ft	2,5ft	3,3ft	4,1ft	6,2ft	8,3ft	12,4ft	16,5ft	20,6ft	24,8ft	33ft	41,3ft

LINEAR DISTRIBUTION DIAGRAM



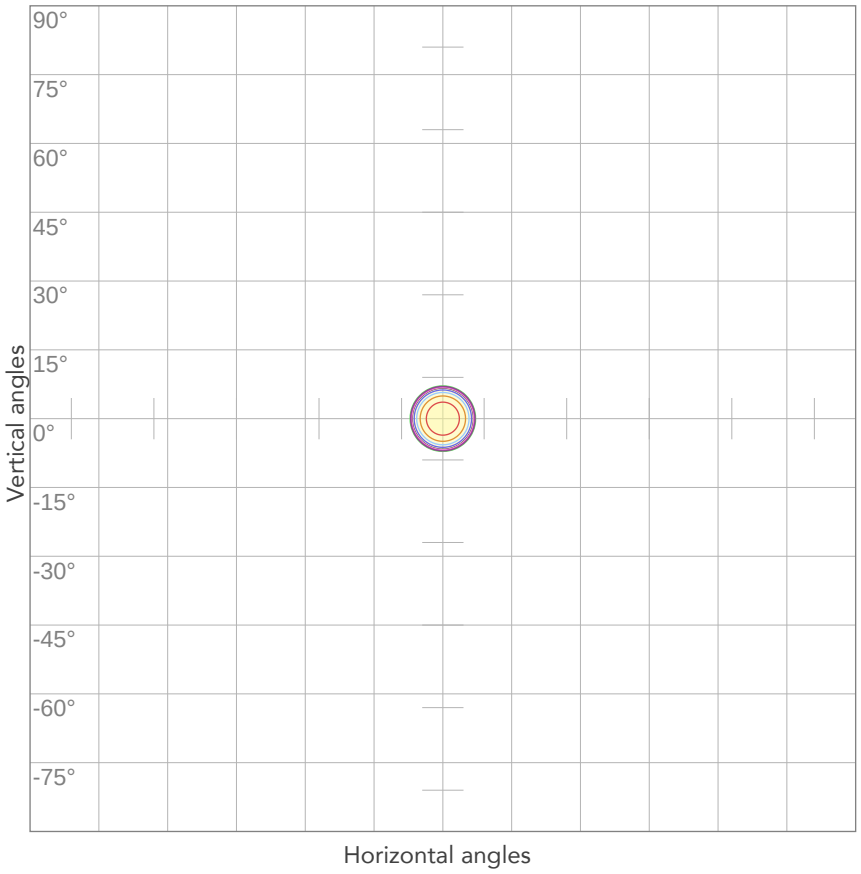
ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,553A	115,1W	26lm/W

Power FC
0,95

ISO DIAGRAMS

ISO CANDELA DIAGRAM



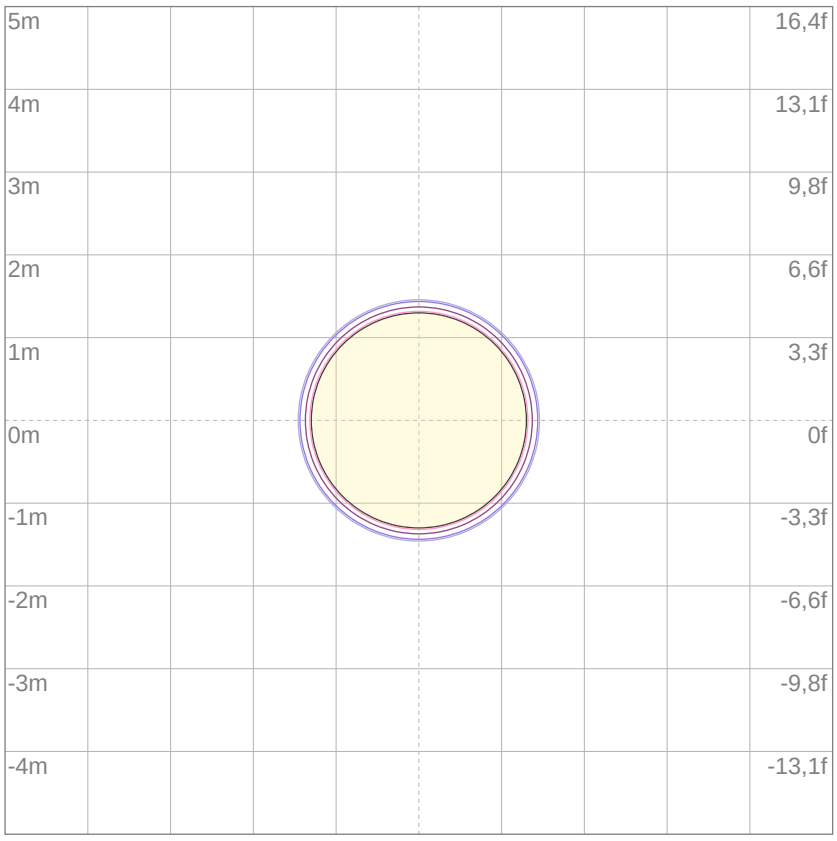
10%	6971 cd
20%	13943 cd
30%	20914 cd
40%	27885 cd
50%	34856 cd
60%	41828 cd
70%	48799 cd
80%	55770 cd

Conditions:

Number of c-planes: 2

Candela at center: 69713 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	20,9 lx
5%	34,9 lx
10%	69,7 lx
30%	209 lx
50%	349 lx

Conditions:

Number of c-planes: 2

Lux at center: 697 lx

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

Total lumen output:

3309 lm

Peak candela output:

75886 cd

Light quality:

CRI: 85,8

Color temperature:

3193 K

PRODUCT NAME:

ECLFS

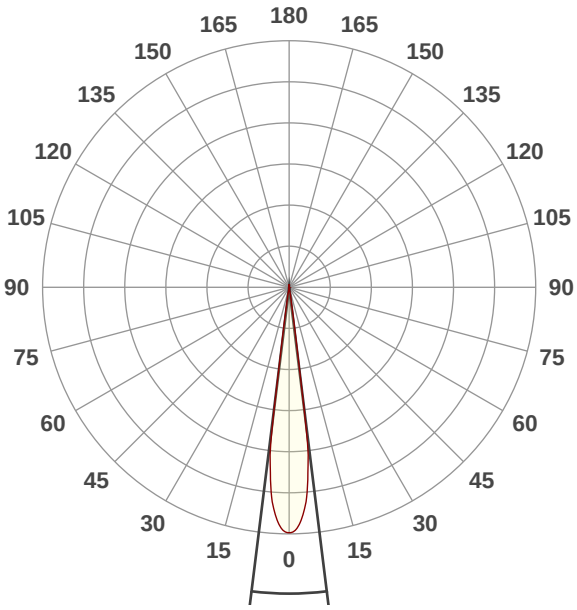
MEASURAMENT CONDITIONS:

Beam angle:
PRL14

Target:
3200K

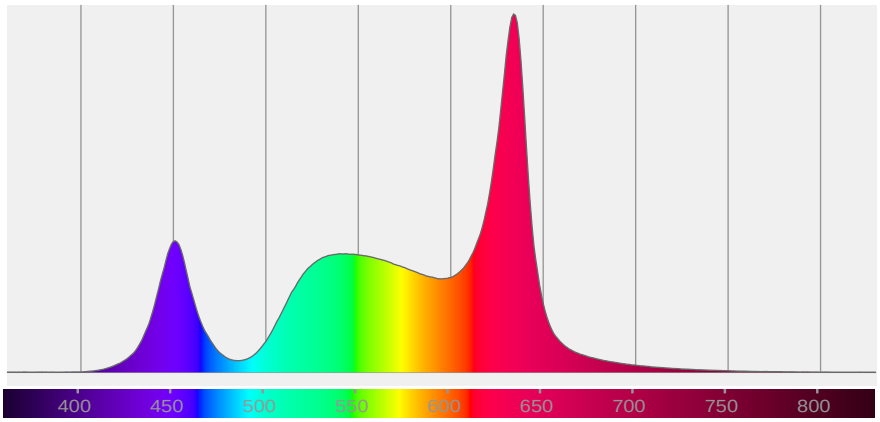
Operator:
Paolo Carvone

Date and time:
30/04/2020 10:44:37



Beam angle 50%: 14,1°
Field angle 10%: 16,3°
Cut off angle 2.5%: 17,4°

Spectra



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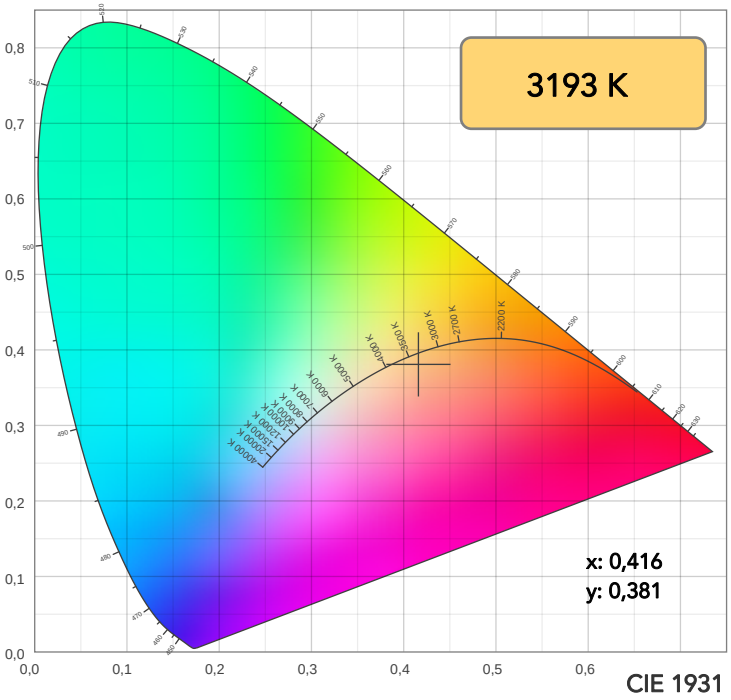
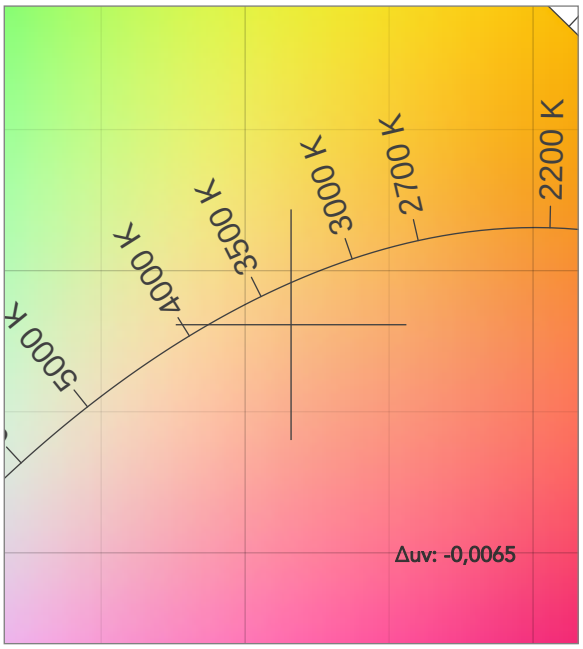
COLOR DETAILS

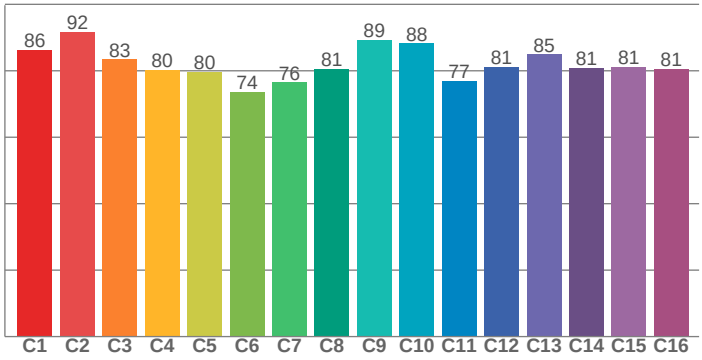


CIE 1931

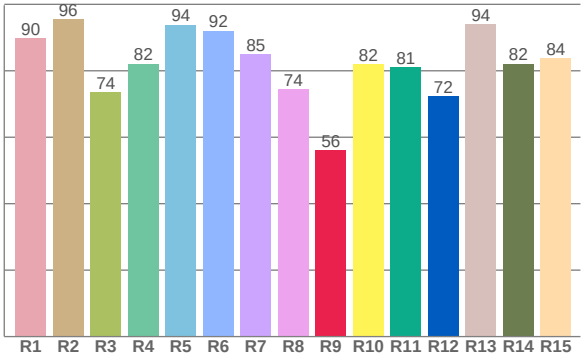


CIE 1931 ZOOM

TM30: 82,7



CRI: 85,8 (R1-R8)



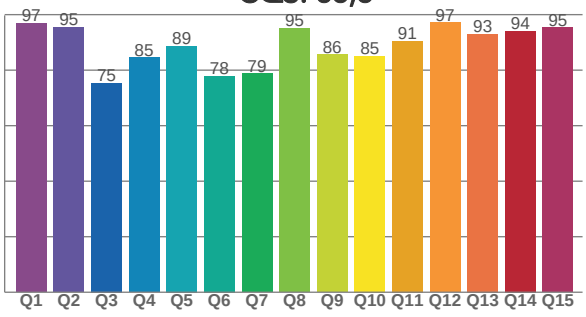
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
89,9	95,6	73,6	82,1	93,8	92,0	84,9	74,4	56,0	82,0	81,0	72,4	93,9	82,1	83,8

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

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
86,3	91,7	83,5	80,2	79,7	73,6	76,5	80,6	89,3	88,2	77,0	81,1	85,0	80,8	81,1	80,6

CQS: 86,6



CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
96,9	95,4	75,3	84,5	88,7	77,9	78,8	95,1	85,7	85,1	90,5	97,1	93,0	94,1	95,4

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
3193 K	85,8	56,0	82,7	112,6	86,6	72	0,416	0,381	-0,0065

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TM30 DETAILS

PROLiGHTS

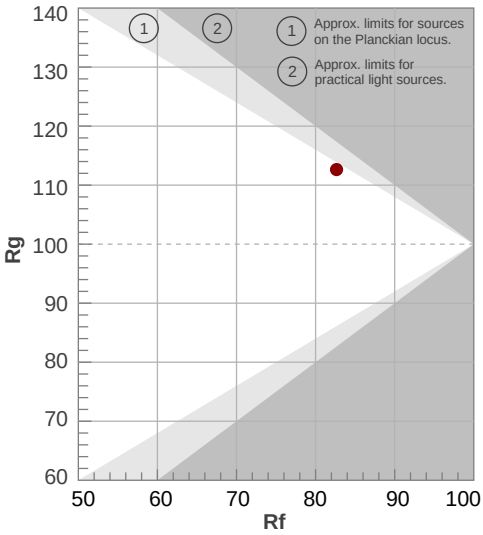
Rf 82,7

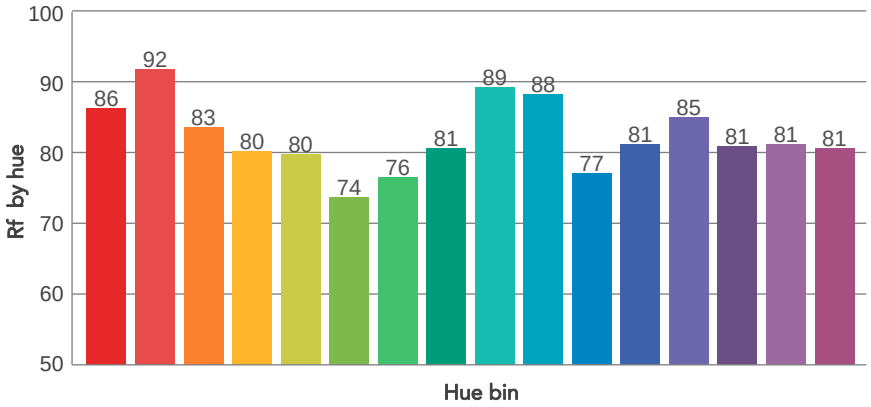
Fidelity index Rf

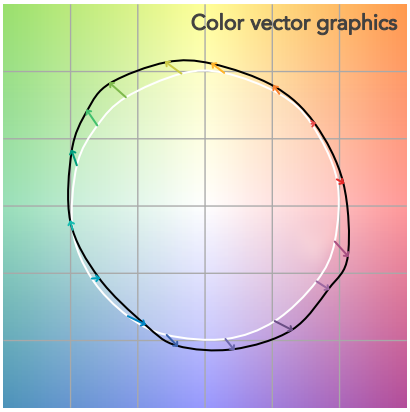
Rg 112,6

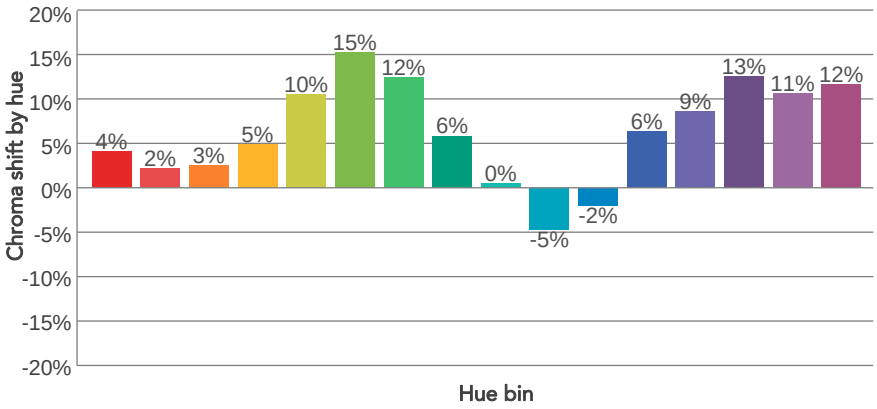
Gammut index

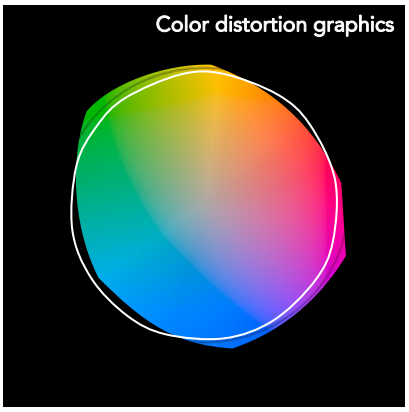
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	86	4%	-3%
2	92	2%	-1%
3	83	3%	6%
4	80	5%	10%
5	80	10%	10%
6	74	15%	4%
7	76	12%	-5%
8	81	6%	-10%
9	89	0%	-6%
10	88	-5%	3%
11	77	-2%	14%
12	81	6%	9%
13	85	9%	4%
14	81	13%	7%
15	81	11%	0%
16	81	12%	-9%

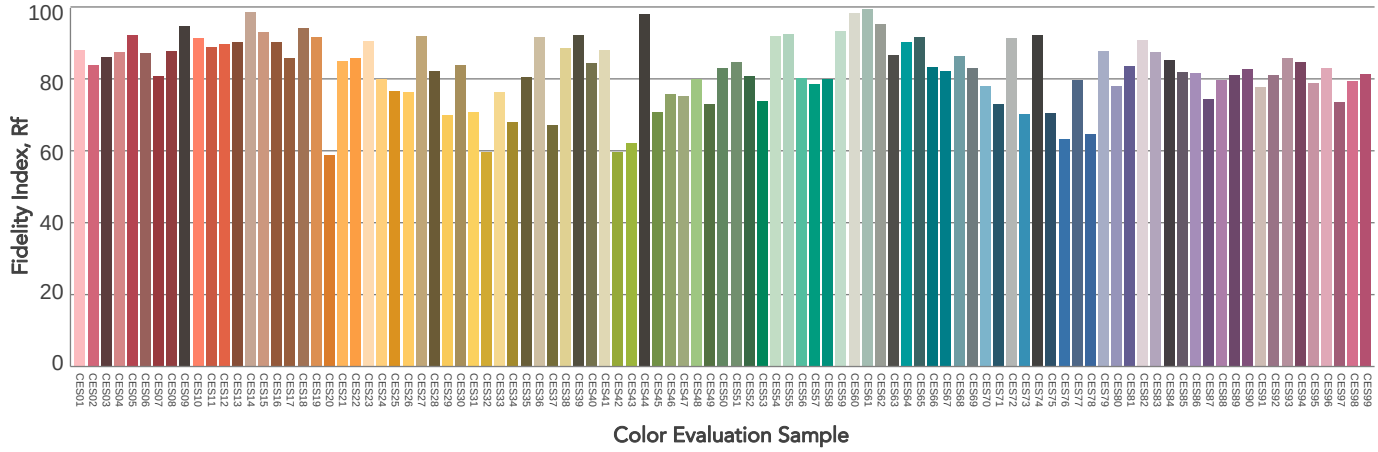












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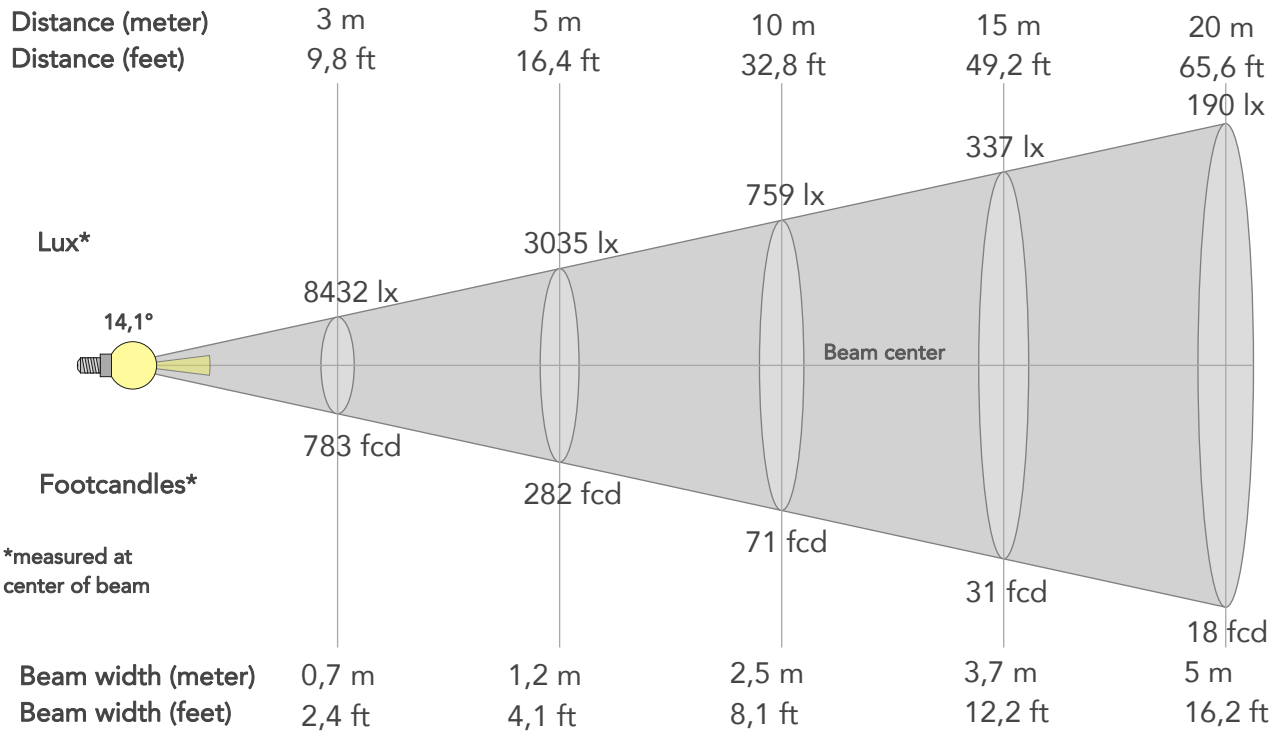
BEAM DETAILS

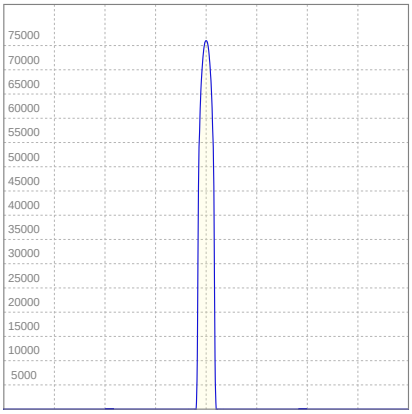
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
14,1°	16,3°	17,4°	99,6%	99,6%



BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	75886lx	18971lx	8432lx	4743lx	3035lx	1349lx	759lx	337lx	190lx	121lx	84lx	47lx	30lx
Footcand.	7050fcd	1763fcd	783fcd	441fcd	282fcd	125fcd	71fcd	31fcd	18fcd	11fcd	8fcd	4fcd	3fcd
Beam wid.	0,2m	0,5m	0,7m	1m	1,2m	1,9m	2,5m	3,7m	5m	6,2m	7,4m	9,9m	12,4m
Beam wid.	0,8ft	1,6ft	2,4ft	3,2ft	4,1ft	6,1ft	8,1ft	12,2ft	16,2ft	20,3ft	24,4ft	32,5ft	40,6ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,598A	125,5W	26lm/W

Power FC
0,95

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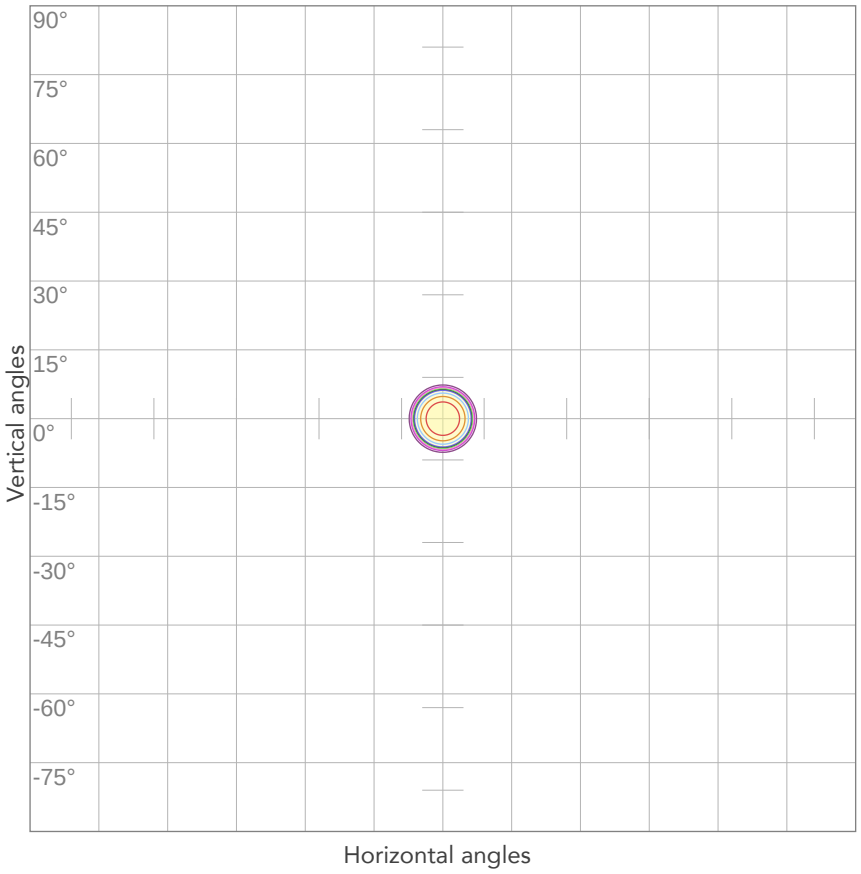
ISO DIAGRAMS

ISO CANDELA DIAGRAM



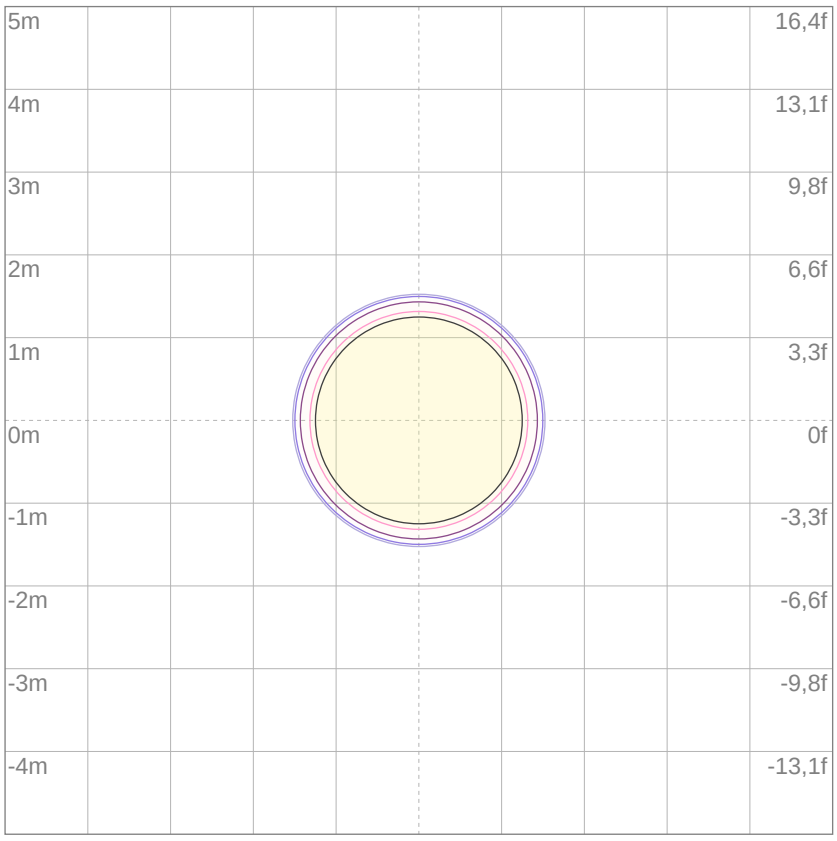
10%	7589 cd
20%	15177 cd
30%	22766 cd
40%	30354 cd
50%	37943 cd
60%	45531 cd
70%	53120 cd
80%	60709 cd

Conditions:

Number of c-planes: 2

Candela at center: 75886 cd

ISO LUX DIAGRAM



3%	22,8 lx
5%	37,9 lx
10%	75,9 lx
30%	228 lx
50%	379 lx

Conditions:

Number of c-planes: 2

Lux at center: 759 lx

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

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Total lumen output:

3617 lm

Peak candela output:

84005 cd

Light quality:

CRI: 84,9

Color temperature:

3899 K

PRODUCT NAME:

ECLFS

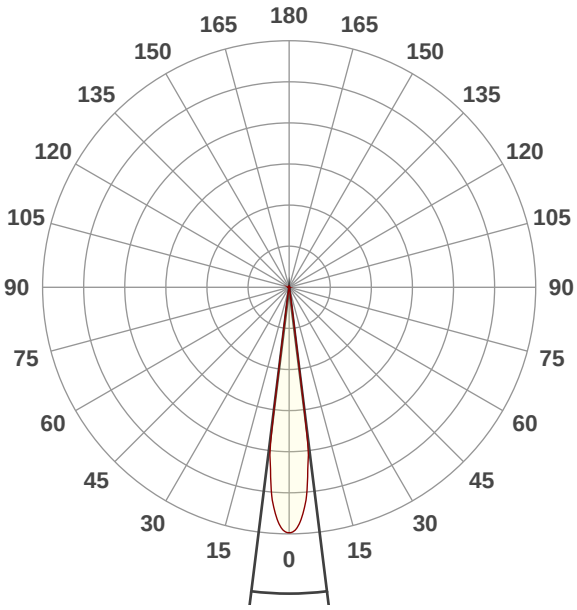
MEASURAMENT CONDITIONS:

Beam angle:
PRL14

Target:
4000K

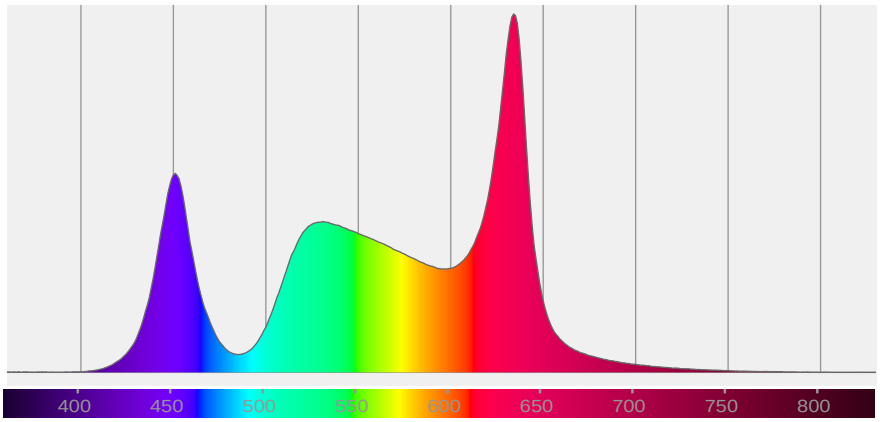
Operator:
Paolo Carvone

Date and time:
30/04/2020 10:42:46



Beam angle 50%: 14,2°
Field angle 10%: 15,8°
Cut off angle 2.5%: 17,3°

Spectra



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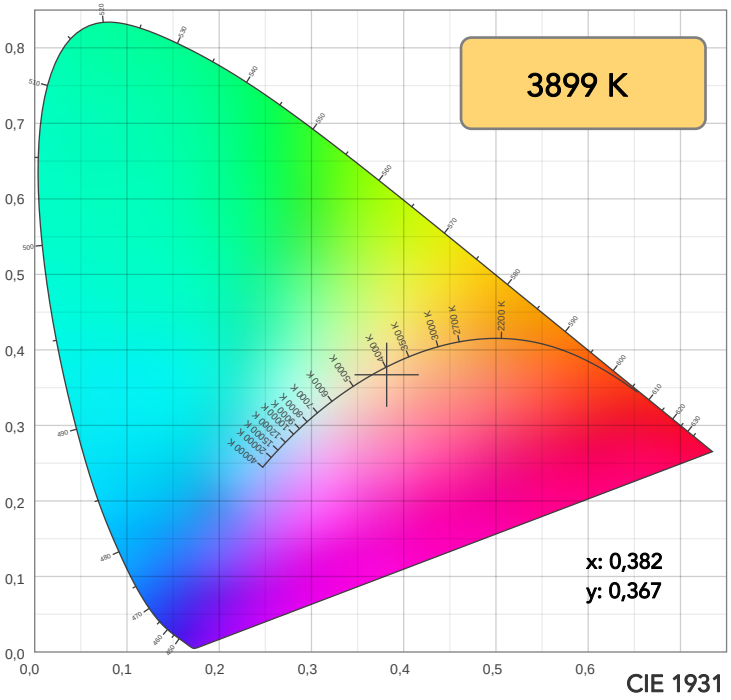
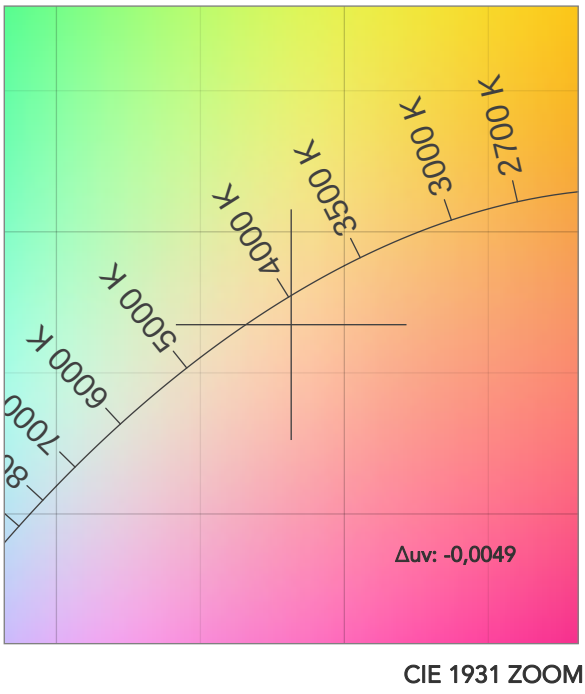
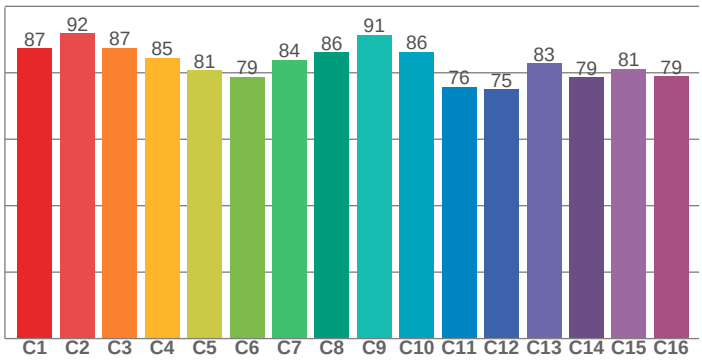
COLOR DETAILS

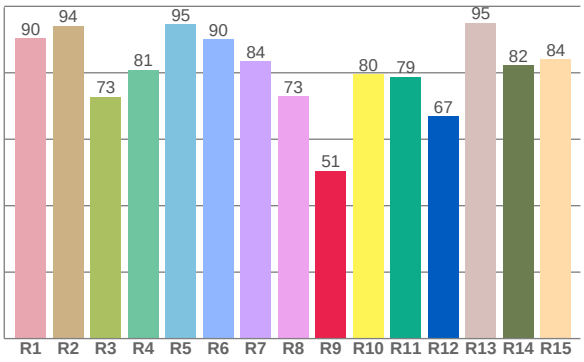




TM30: 83,5



CRI: 84,9 (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
90,4	94,1	72,8	80,9	94,6	90,0	83,6	73,0	50,5	79,6	78,8	66,9	95,1	82,3	84,2

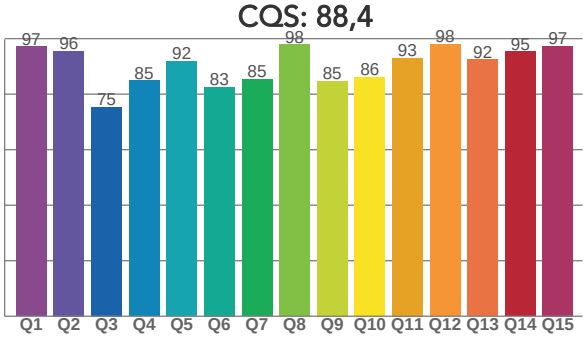
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
87,3	91,8	87,4	84,5	80,8	78,9	83,9	86,2	91,4	86,3	75,8	75,0	82,9	78,6	81,2	79,0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
97,2	95,5	75,3	84,9	91,9	82,7	85,4	97,9	84,8	86,2	93,0	97,9	92,4	95,4	97,4

CQS: 88,4



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
3899 K	84,9	50,5	83,5	111,0	88,4	77	0,382	0,367	-0,0049

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TM30 DETAILS

PROLiGHTS

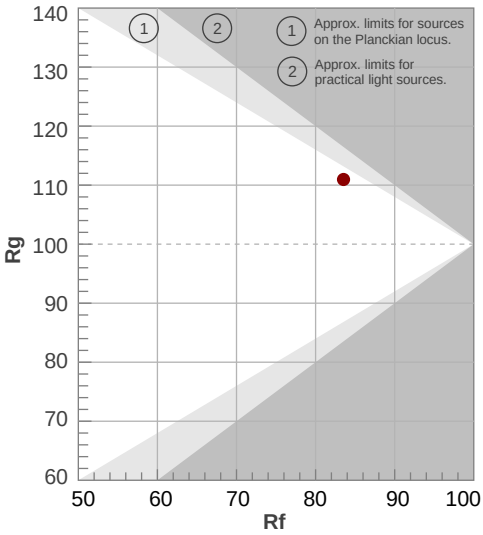
Rf 83,5

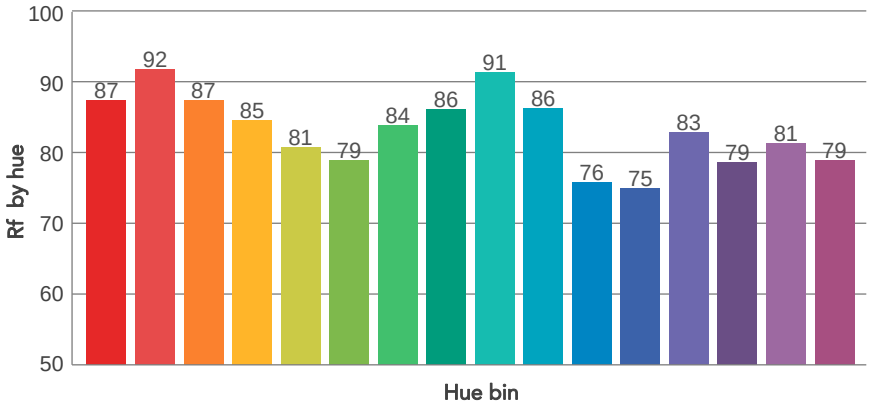
Fidelity index Rf

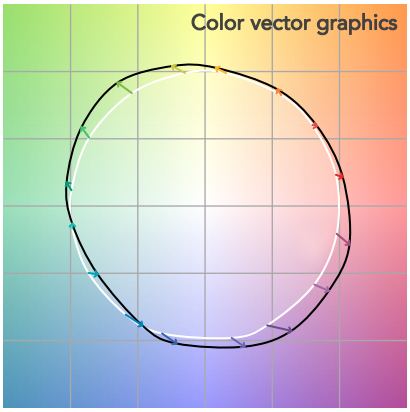
Rg 111,0

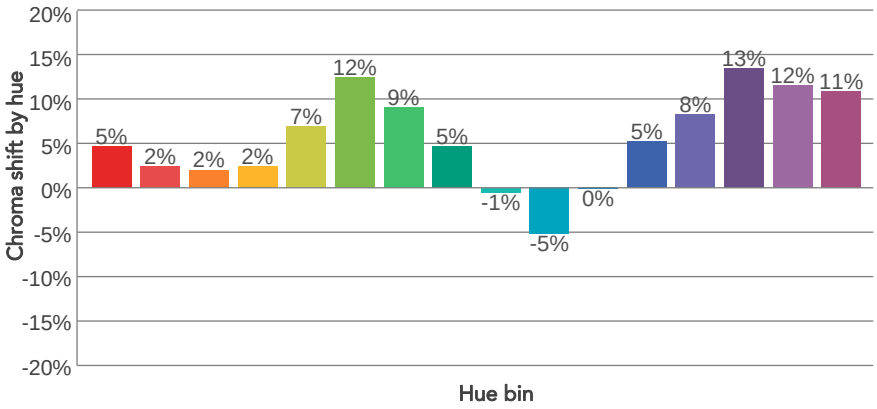
Gammut index

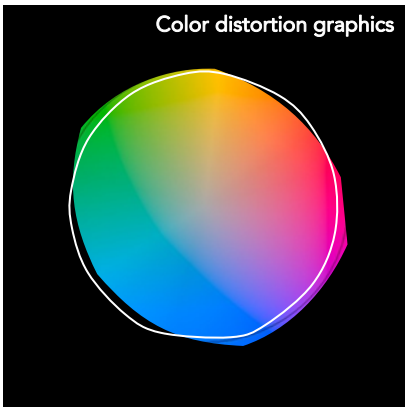
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	87	5%	-3%
2	92	2%	-2%
3	87	2%	5%
4	85	2%	8%
5	81	7%	8%
6	79	12%	5%
7	84	9%	-3%
8	86	5%	-5%
9	91	-1%	-3%
10	86	-5%	5%
11	76	0%	15%
12	75	5%	12%
13	83	8%	8%
14	79	13%	13%
15	81	12%	2%
16	79	11%	-6%

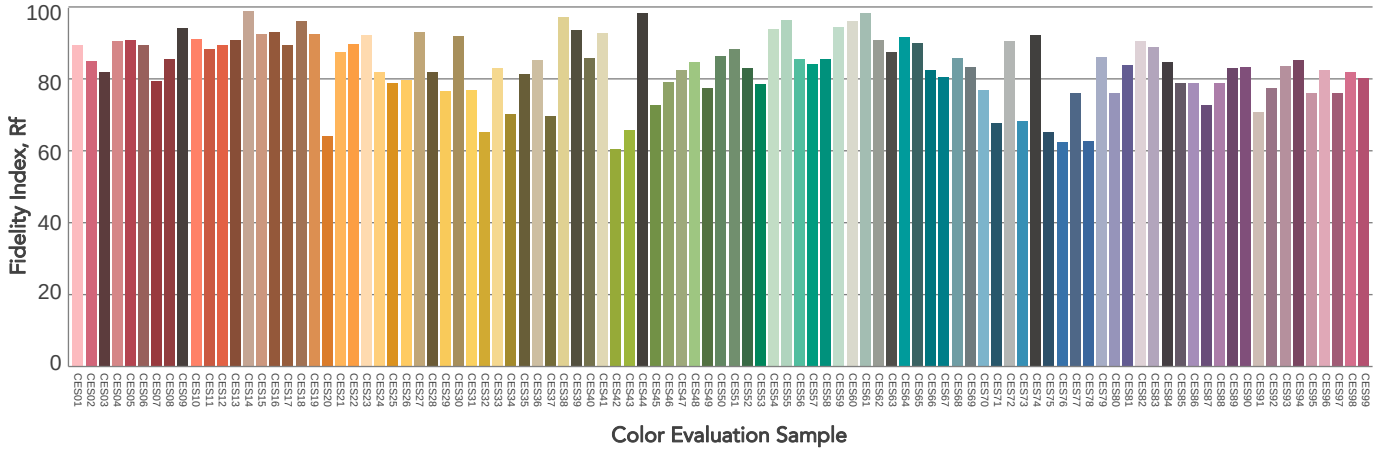












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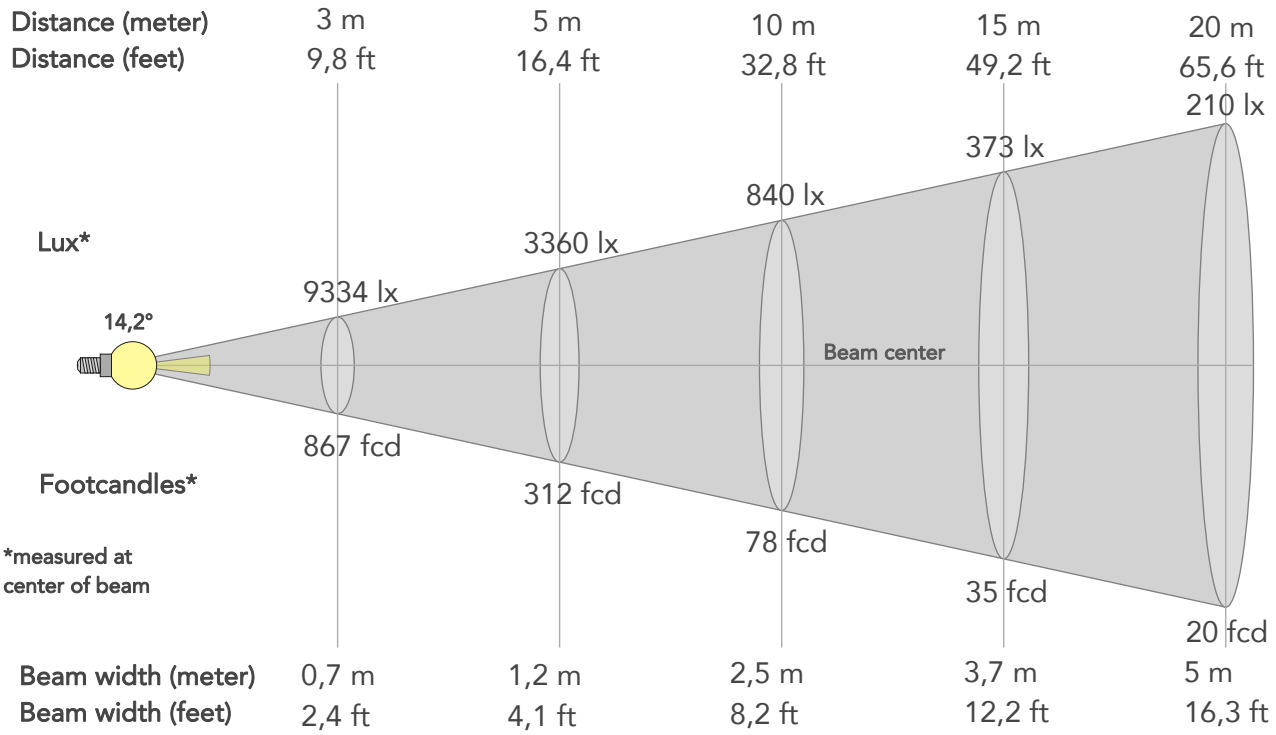
BEAM DETAILS

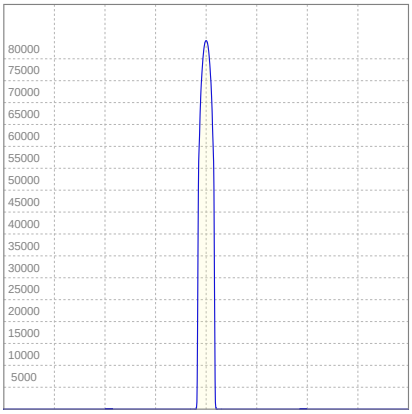
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
14,2°	15,8°	17,3°	99,8%	99,7%



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	84005lx	21001lx	9334lx	5250lx	3360lx	1493lx	840lx	373lx	210lx	134lx	93lx	53lx	34lx
Footcand.	7804fcd	1951fcd	867fcd	488fcd	312fcd	139fcd	78fcd	35fcd	20fcd	12fcd	9fcd	5fcd	3fcd
Beam wid.	0,2m	0,5m	0,7m	1m	1,2m	1,9m	2,5m	3,7m	5m	6,2m	7,5m	10m	12,4m
Beam wid.	0,8ft	1,6ft	2,4ft	3,3ft	4,1ft	6,1ft	8,2ft	12,2ft	16,3ft	20,4ft	24,5ft	32,6ft	40,8ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,665A	140,7W	26lm/W

Power FC
0,95

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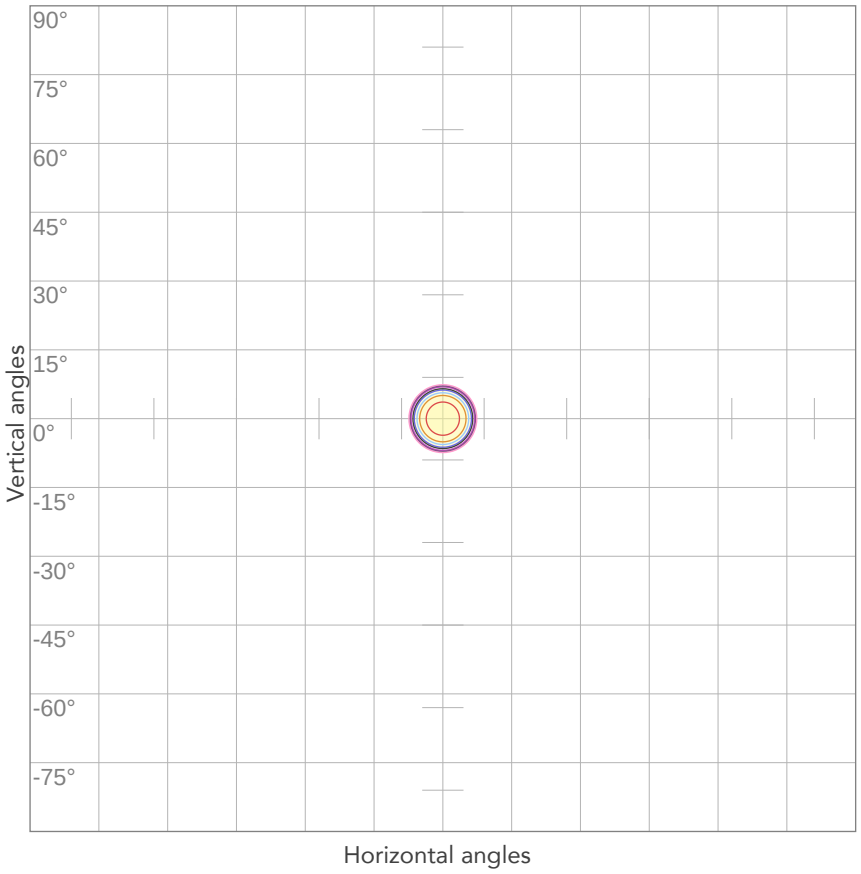
ISO DIAGRAMS

ISO CANDELA DIAGRAM



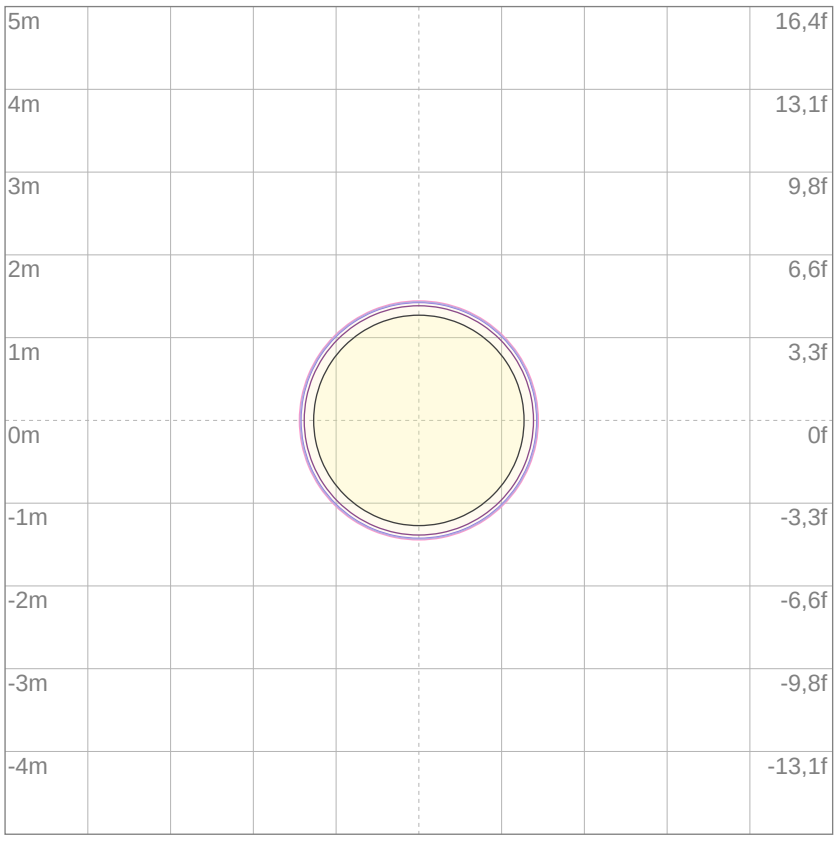
10%	8401 cd
20%	16801 cd
30%	25202 cd
40%	33602 cd
50%	42003 cd
60%	50403 cd
70%	58804 cd
80%	67204 cd

Conditions:

Number of c-planes: 2

Candela at center: 84005 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	25,2 lx
5%	42,0 lx
10%	84,0 lx
30%	252 lx
50%	420 lx

Conditions:

Number of c-planes: 2

Lux at center: 840 lx

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

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Total lumen output:

3849 lm

Peak candela output:

90479 cd

Light quality:

CRI: 84,2

Color temperature:

5242 K

PRODUCT NAME:

ECLFS

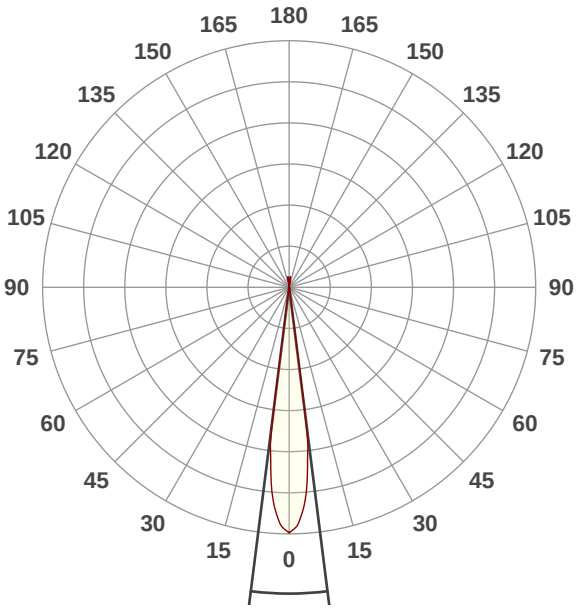
MEASURAMENT CONDITIONS:

Beam angle:
PRL14

Target:
5600K

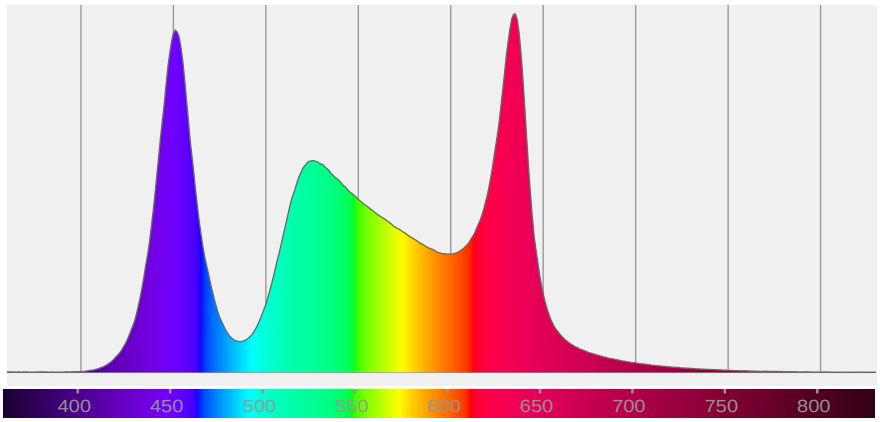
Operator:
Paolo Carvone

Date and time:
30/04/2020 10:41:01



Beam angle 50%: 14,4°
Field angle 10%: 15,8°
Cut off angle 2.5%: 16,1°

Spectra



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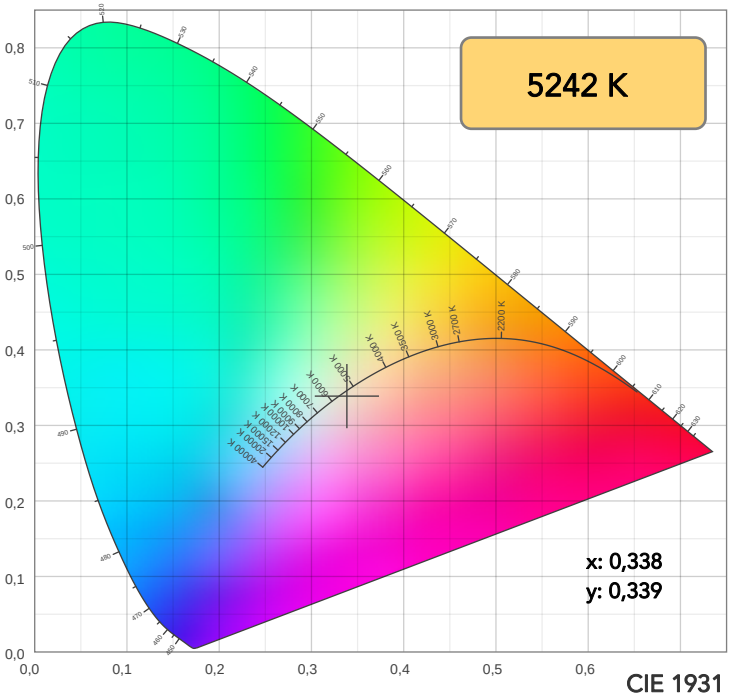
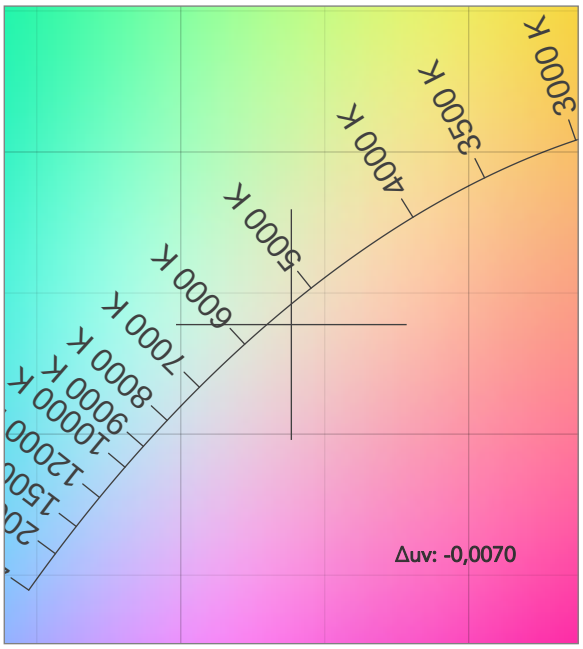
COLOR DETAILS

PROLiGHTS

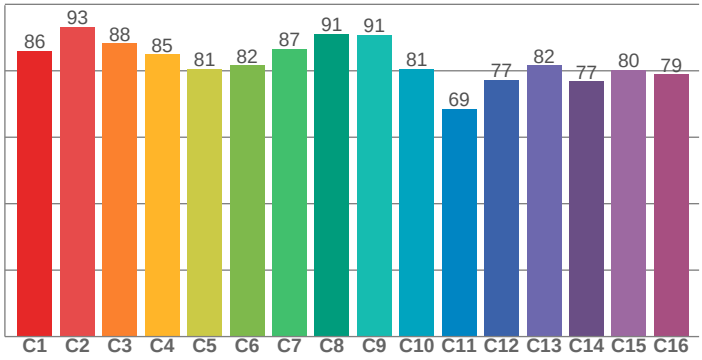


CIE 1931

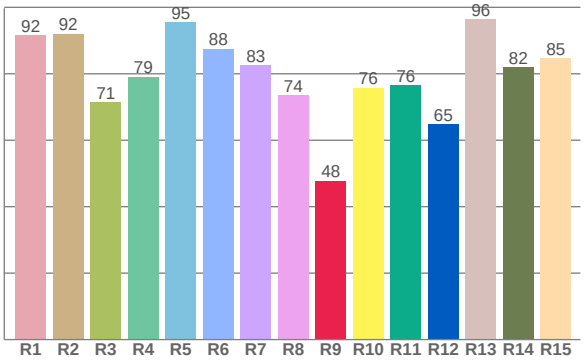


CIE 1931 ZOOM

TM30: 83,0



CRI: 84,2 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
91,6	92,0	71,4	79,2	95,4	87,6	82,6	73,5	47,8	75,8	76,5	64,7	96,4	82,0	84,7

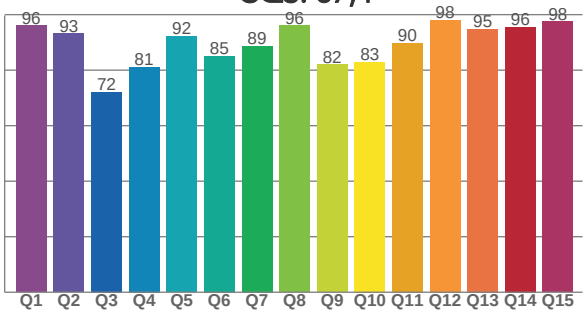
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
86,0	93,1	88,2	85,0	80,6	81,7	86,7	91,1	90,9	80,7	68,5	77,3	81,6	76,8	80,3	78,9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
96,1	93,2	72,1	81,2	92,2	85,1	88,7	96,0	82,0	82,9	89,8	98,0	94,8	95,6	97,5

CQS: 87,4



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
5242 K	84,2	47,8	83,0	109,3	87,4	81	0,338	0,339	-0,0070

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TM30 DETAILS

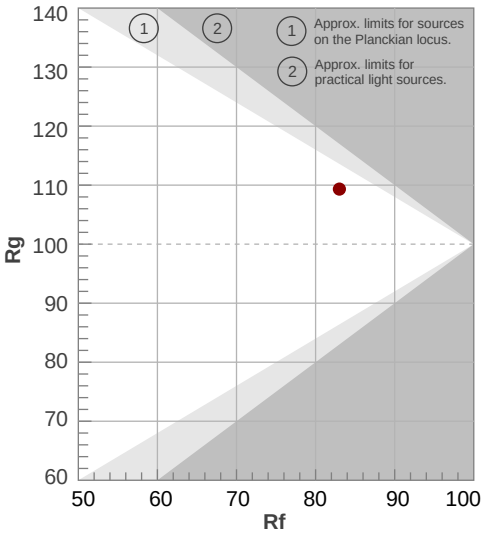
Rf 83,0

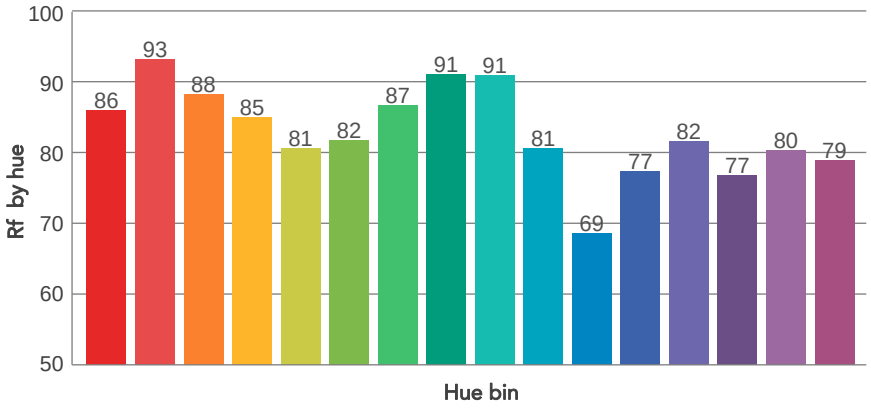
Fidelity index Rf

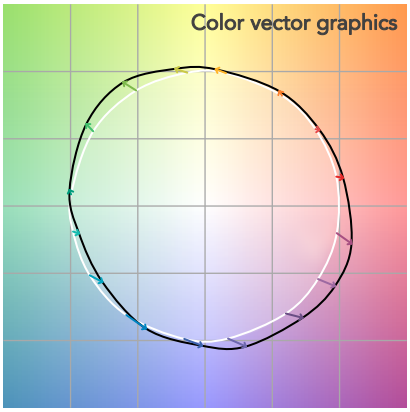
Rg 109,3

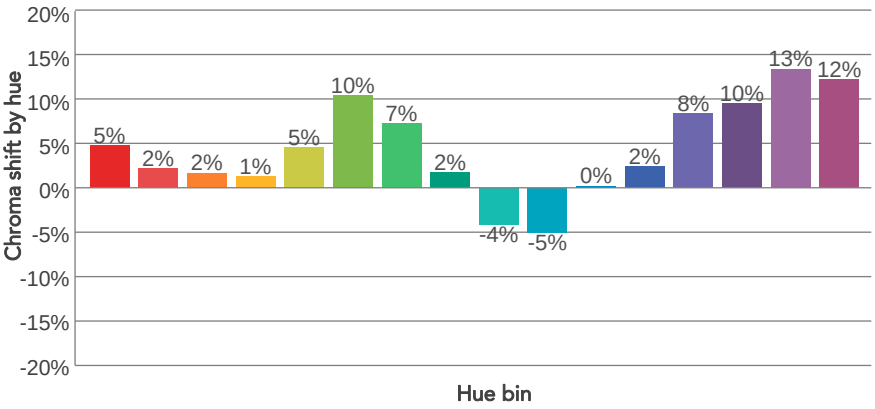
Gammut index

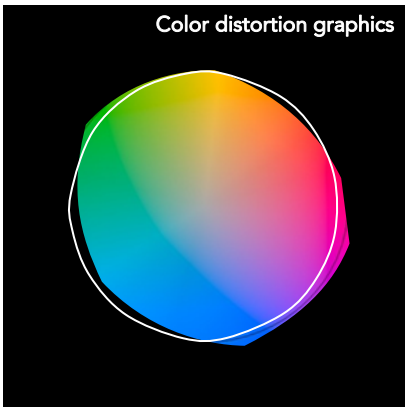
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	86	5%	-2%
2	93	2%	-2%
3	88	2%	4%
4	85	1%	8%
5	81	5%	8%
6	82	10%	5%
7	87	7%	-2%
8	91	2%	-3%
9	91	-4%	2%
10	81	-5%	9%
11	69	0%	18%
12	77	2%	14%
13	82	8%	12%
14	77	10%	9%
15	80	13%	3%
16	79	12%	-5%

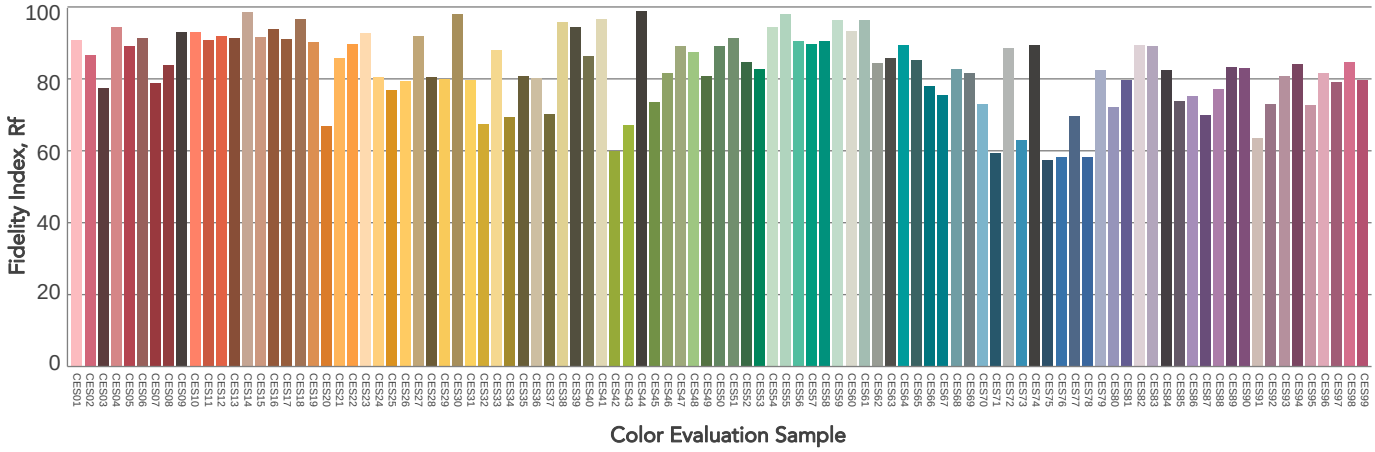












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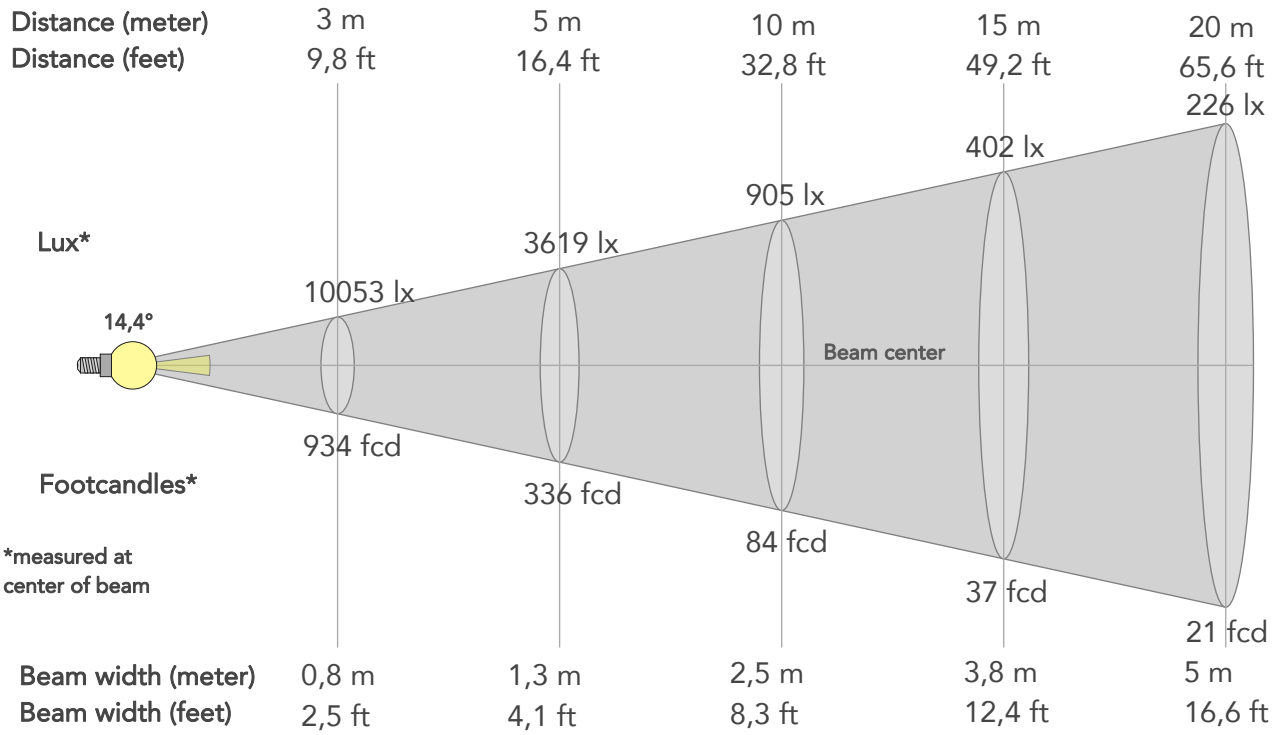
BEAM DETAILS

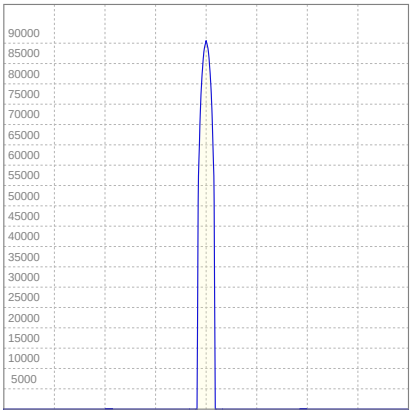
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
14,4°	15,8°	16,1°	99,8%	99,8%



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	90479lx	22620lx	10053lx	5655lx	3619lx	1609lx	905lx	402lx	226lx	145lx	101lx	57lx	36lx
Footcand.	8406fcd	2101fcd	934fcd	525fcd	336fcd	149fcd	84fcd	37fcd	21fcd	13fcd	9fcd	5fcd	3fcd
Beam wid.	0,3m	0,5m	0,8m	1m	1,3m	1,9m	2,5m	3,8m	5m	6,3m	7,6m	10,1m	12,6m
Beam wid.	0,8ft	1,7ft	2,5ft	3,3ft	4,1ft	6,2ft	8,3ft	12,4ft	16,6ft	20,7ft	24,8ft	33,1ft	41,4ft

LINEAR DISTRIBUTION DIAGRAM



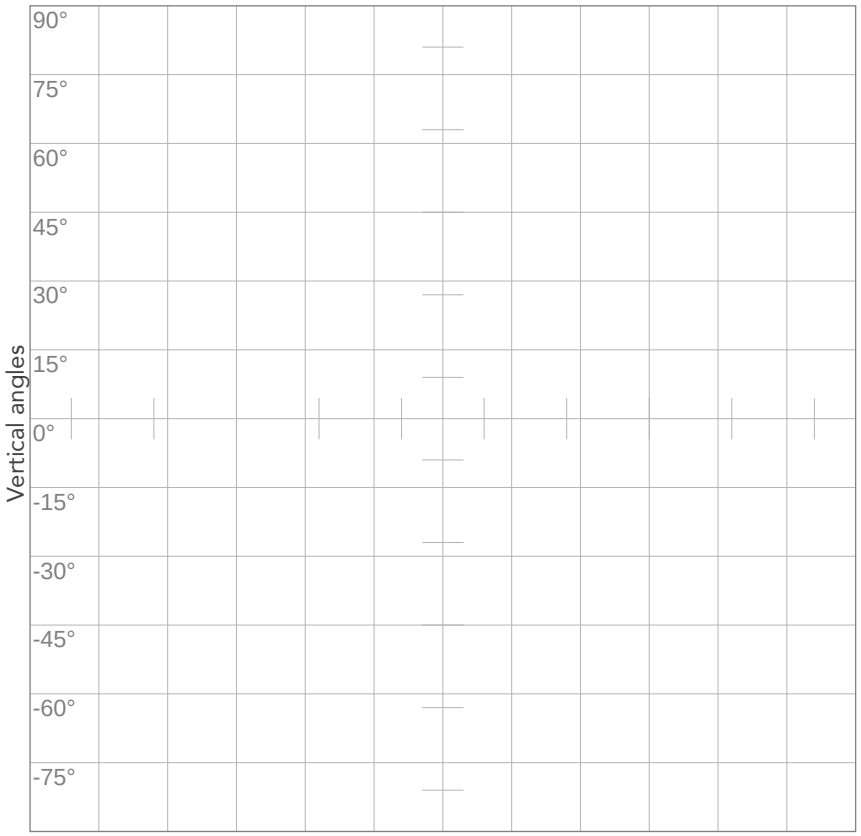
ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,735A	156,5W	25lm/W

Power FC
0,95

ISO DIAGRAMS

ISO CANDELA DIAGRAM



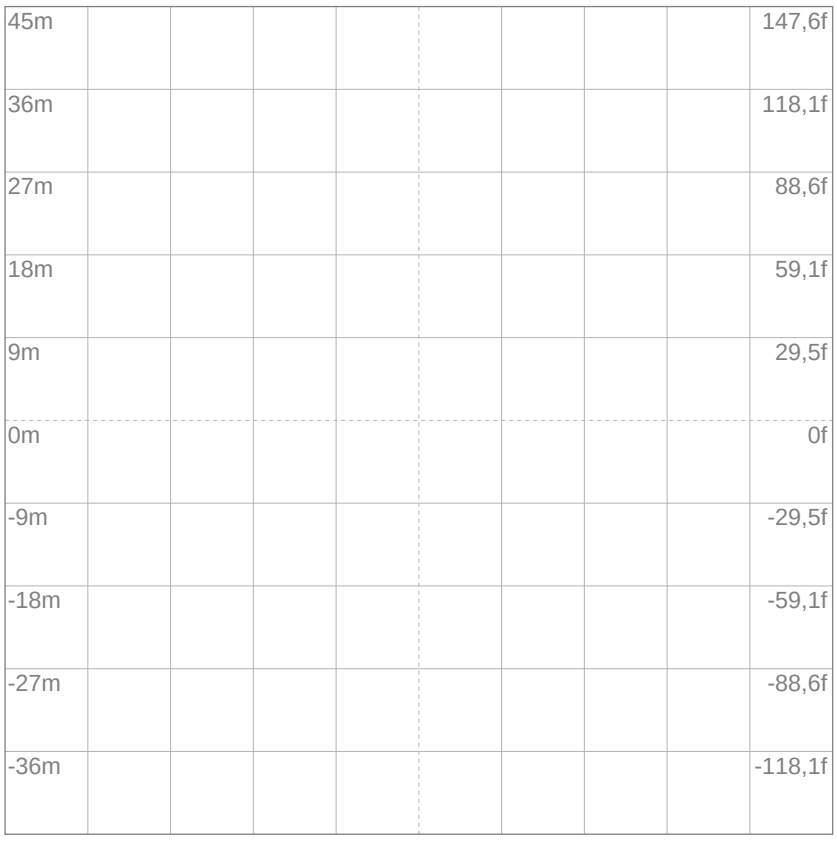
10%	9048 cd
20%	18096 cd
30%	27144 cd
40%	36192 cd
50%	45240 cd
60%	54287 cd
70%	63335 cd
80%	72383 cd

Conditions:

Number of c-planes: 2

Candela at center: 90479 cd

ISO LUX DIAGRAM



3%	27,1 lx
5%	45,2 lx
10%	90,5 lx
30%	271 lx
50%	452 lx

Conditions:

Number of c-planes: 2

Lux at center: 905 lx

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

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Total lumen output:

3809 lm

Peak candela output:

88684 cd

Light quality:

CRI: 84,6

Color temperature:

5575 K

PRODUCT NAME:

ECLFS

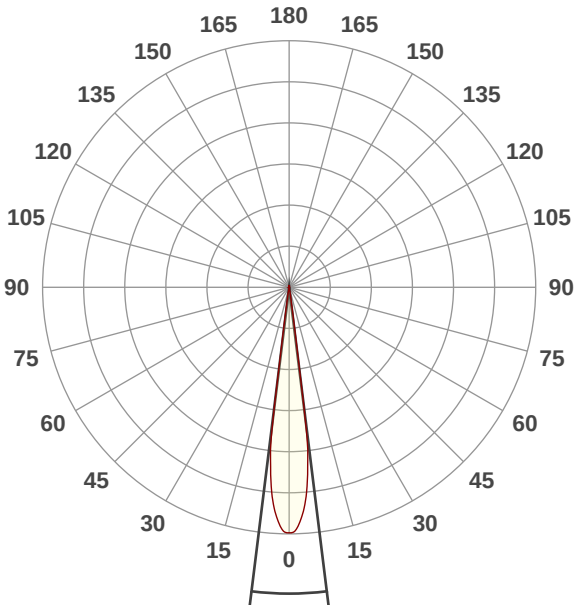
MEASURAMENT CONDITIONS:

Beam angle:
PRL14

Target:
6000K

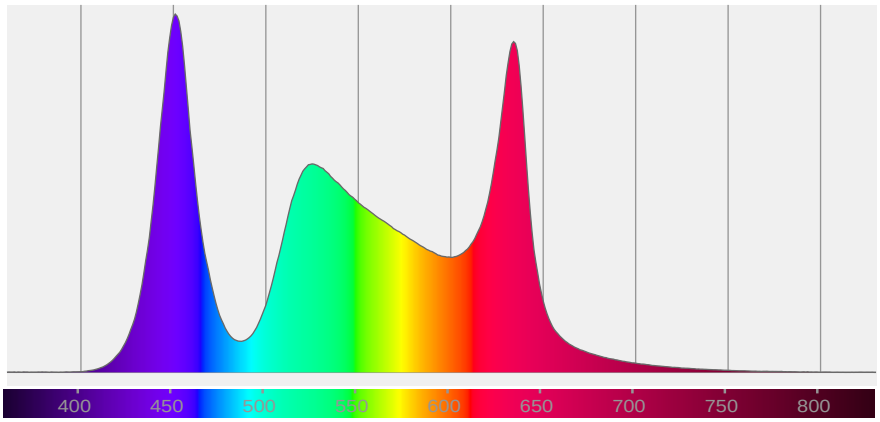
Operator:
Paolo Carvone

Date and time:
30/04/2020 10:39:29



Beam angle 50%: 14,1°
Field angle 10%: 16,1°
Cut off angle 2.5%: 17,3°

Spectra



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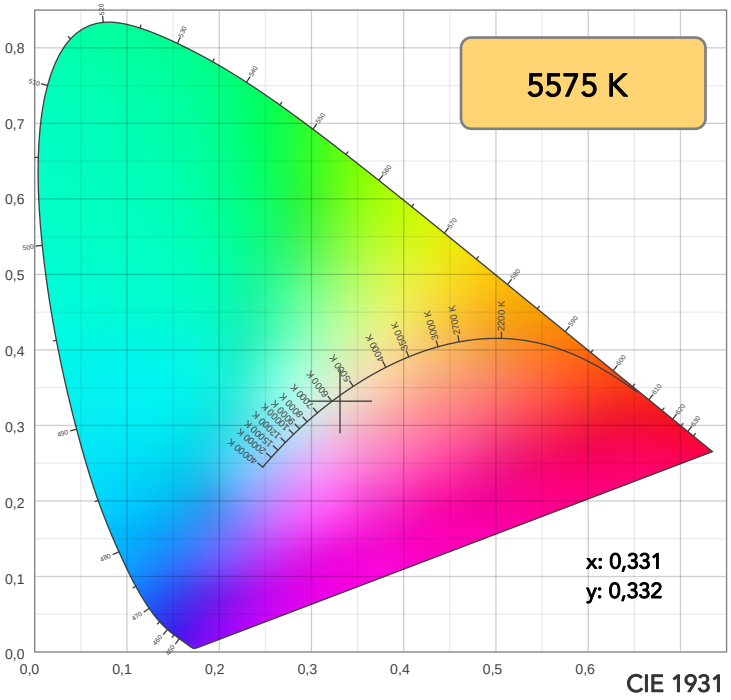
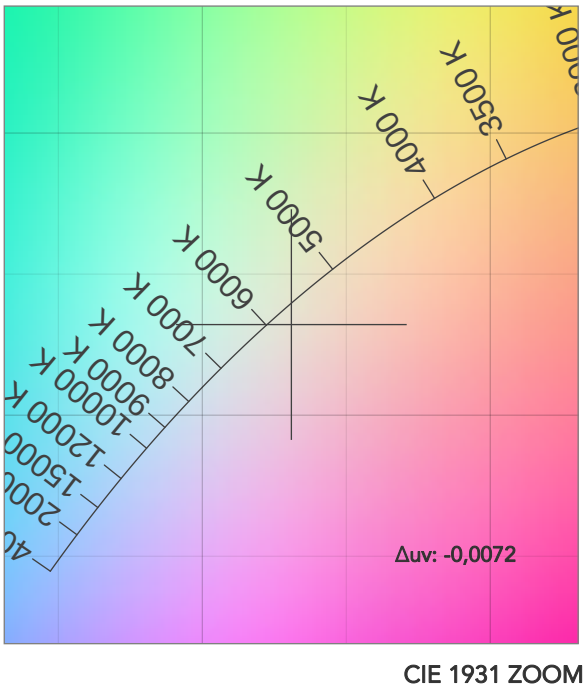
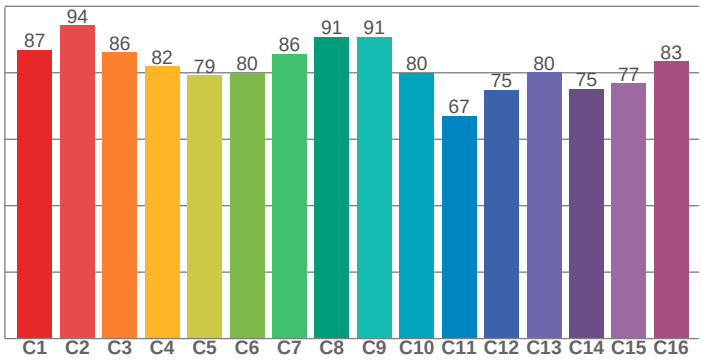
COLOR DETAILS

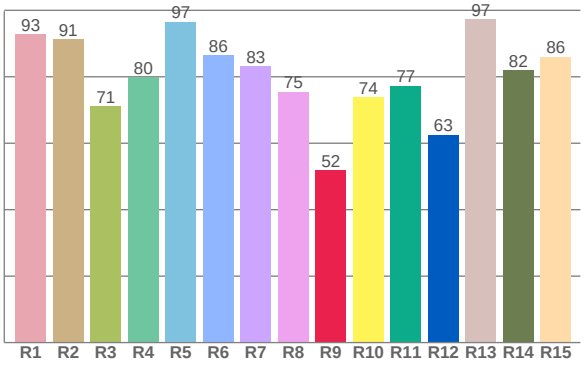




TM30: 82,1



CRI: 84,6 (R1-R8)



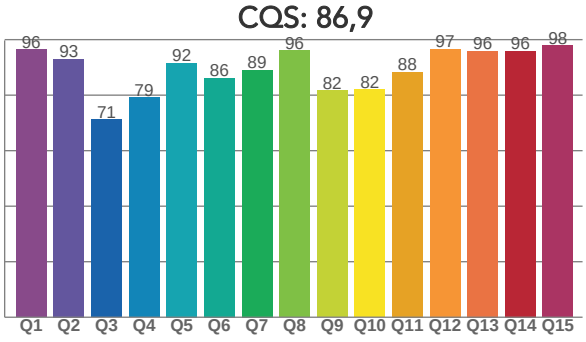
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
92,8	91,3	71,1	79,9	96,6	86,4	83,1	75,5	52,0	73,9	77,3	62,6	97,3	82,0	86,0

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
86,9	94,3	86,2	82,0	79,3	79,9	85,7	90,8	90,9	79,9	67,1	74,9	80,1	75,2	76,9	83,5

CQS: 86,9



CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
96,4	93,0	71,1	79,1	91,6	86,2	89,1	96,1	81,7	81,9	88,3	96,6	95,9	95,9	97,8

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
5575 K	84,6	52,0	82,1	109,9	86,9	82	0,331	0,332	-0,0072

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TM30 DETAILS

PROLiGHTS

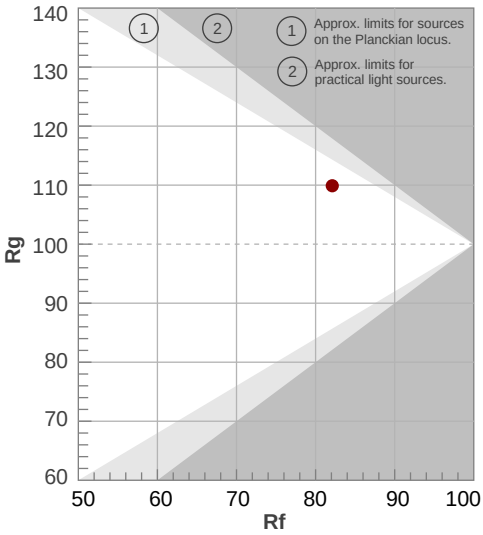
Rf 82,1

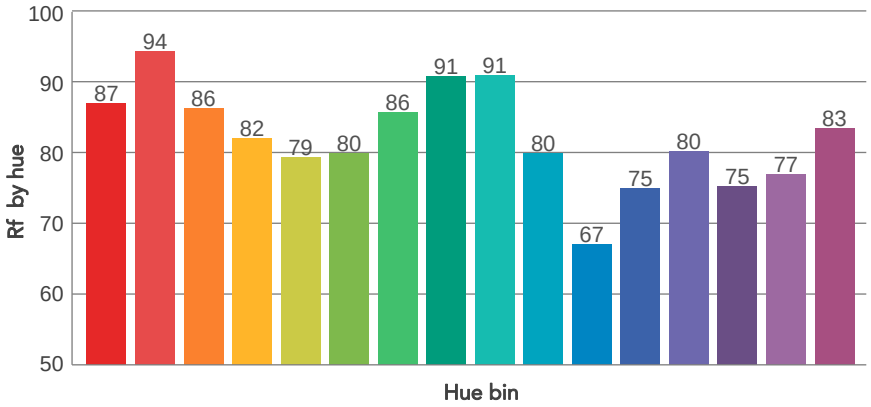
Fidelity index Rf

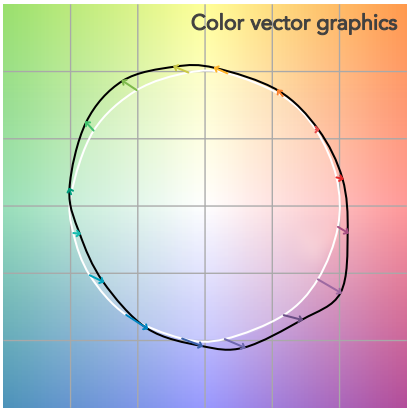
Rg 109,9

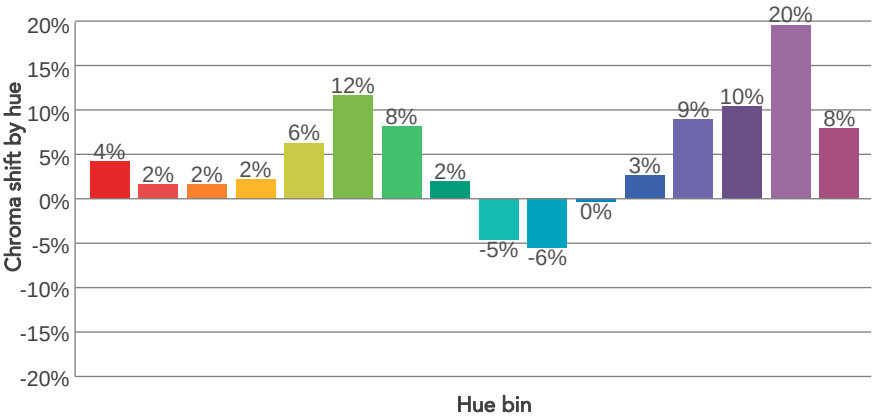
Gammut index

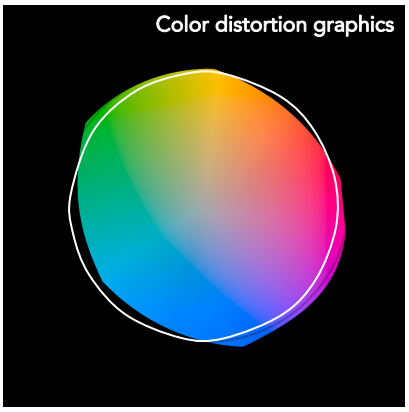
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	87	4%	-2%
2	94	2%	-1%
3	86	2%	5%
4	82	2%	10%
5	79	6%	9%
6	80	12%	5%
7	86	8%	-2%
8	91	2%	-4%
9	91	-5%	1%
10	80	-6%	9%
11	67	0%	18%
12	75	3%	15%
13	80	9%	13%
14	75	10%	9%
15	77	20%	1%
16	83	8%	-3%

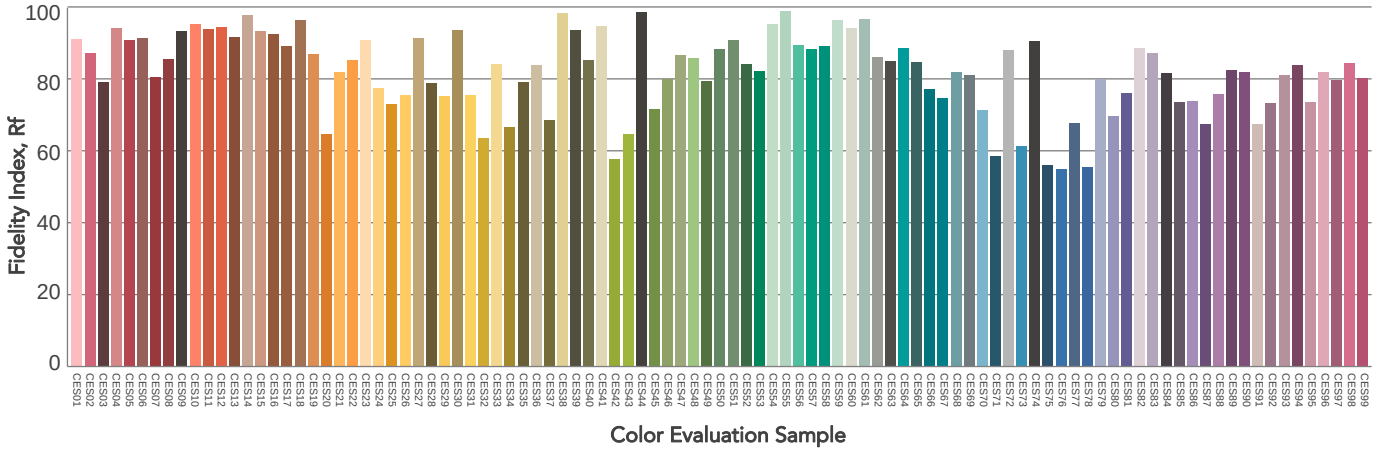












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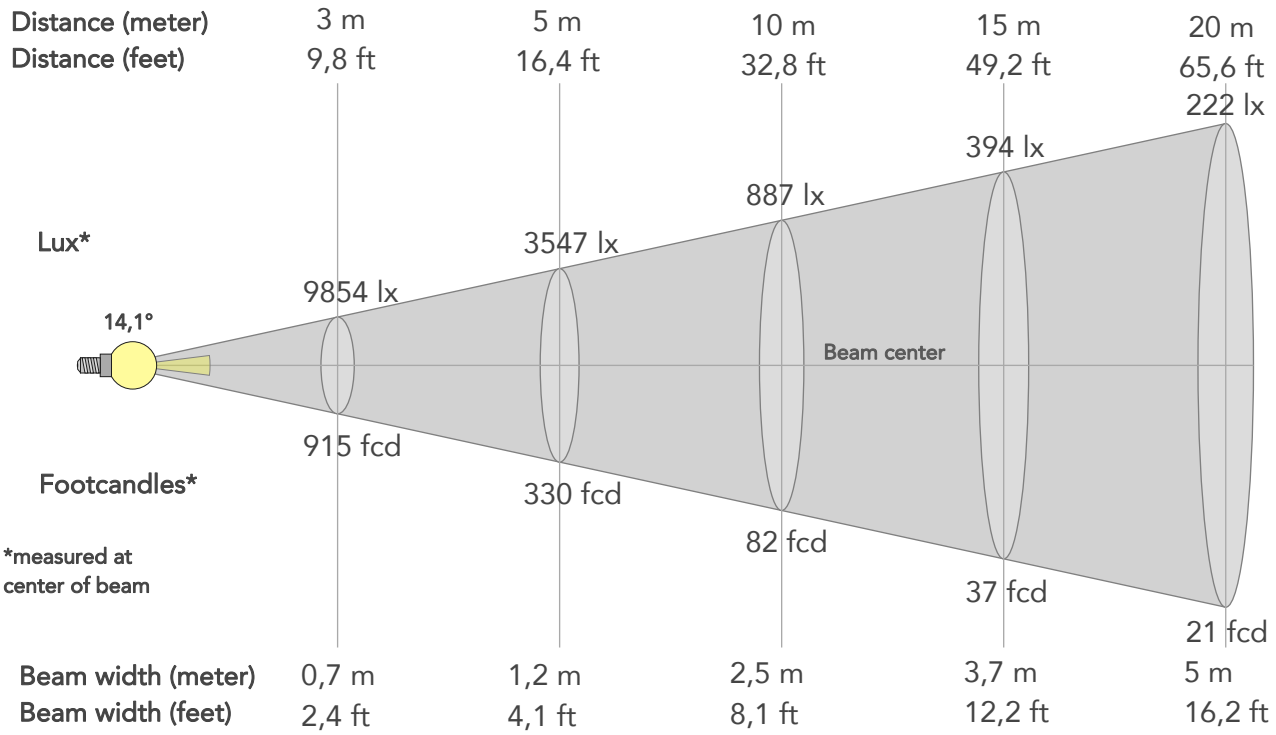
BEAM DETAILS

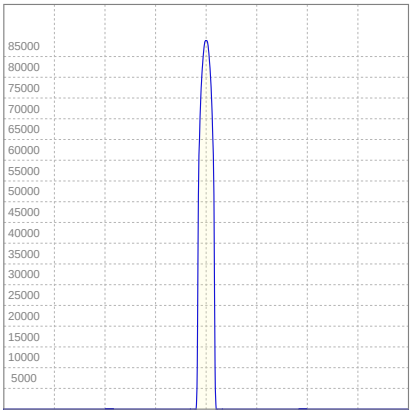
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
14,1°	16,1°	17,3°	99,8%	99,7%



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	88684lx	22171lx	9854lx	5543lx	3547lx	1577lx	887lx	394lx	222lx	142lx	99lx	55lx	35lx
Footcand.	8239fcd	2060fcd	915fcd	515fcd	330fcd	146fcd	82fcd	37fcd	21fcd	13fcd	9fcd	5fcd	3fcd
Beam wid.	0,2m	0,5m	0,7m	1m	1,2m	1,9m	2,5m	3,7m	5m	6,2m	7,4m	9,9m	12,4m
Beam wid.	0,8ft	1,6ft	2,4ft	3,2ft	4,1ft	6,1ft	8,1ft	12,2ft	16,2ft	20,3ft	24,4ft	32,5ft	40,6ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,724A	154,2W	25lm/W

Power FC
0,95

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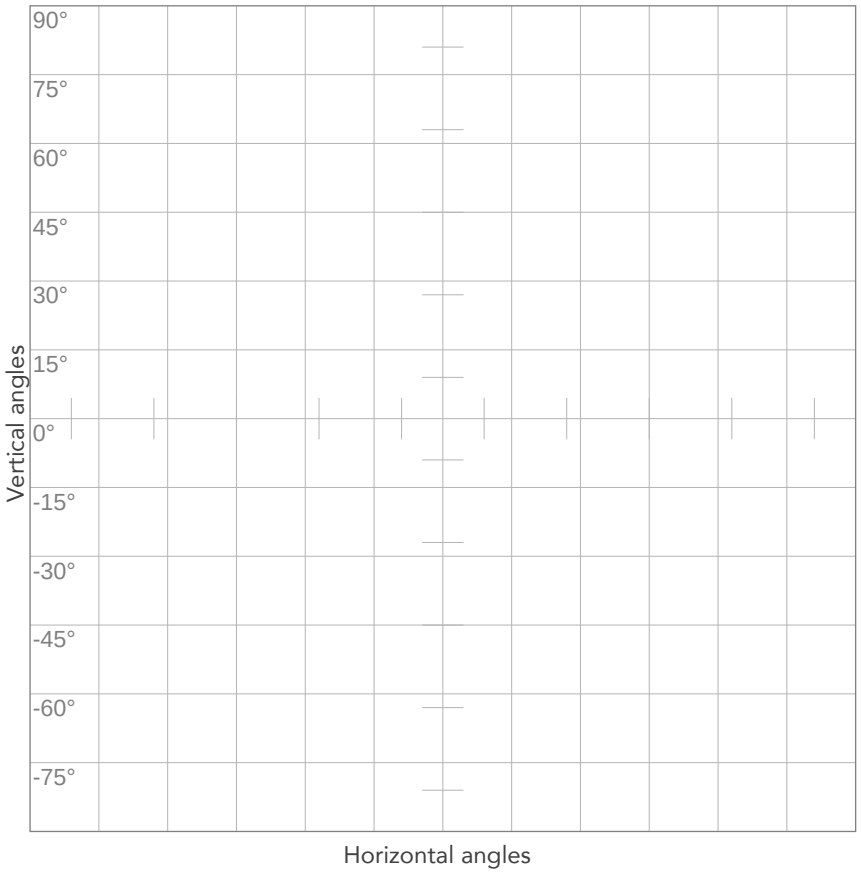
ISO DIAGRAMS

ISO CANDELA DIAGRAM



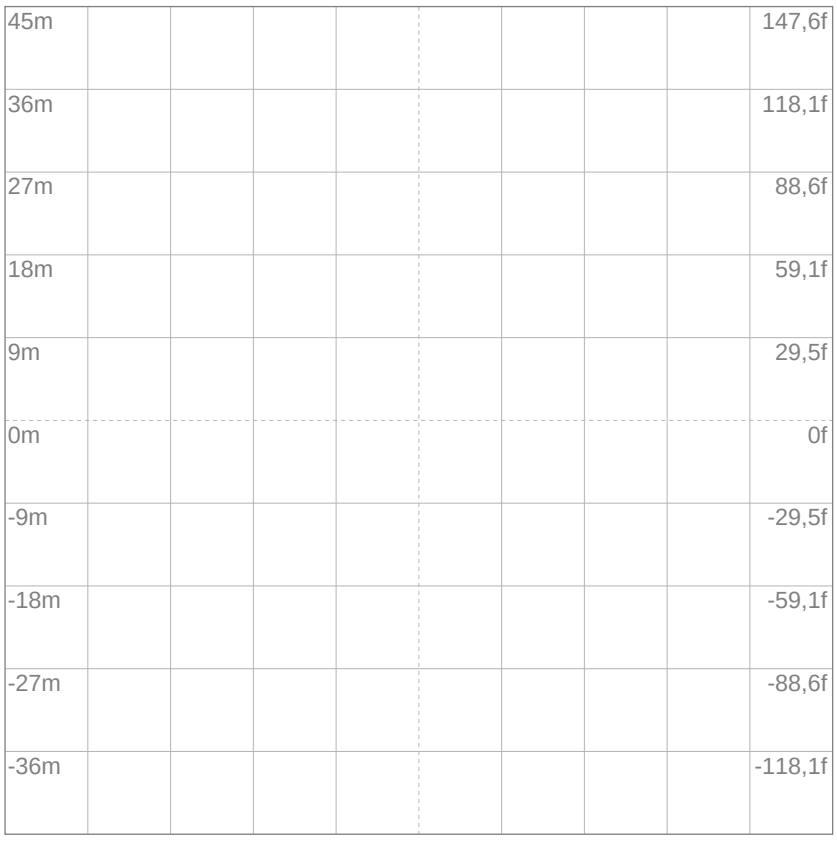
10%	8868 cd
20%	17737 cd
30%	26605 cd
40%	35474 cd
50%	44342 cd
60%	53210 cd
70%	62079 cd
80%	70947 cd

Conditions:

Number of c-planes: 2

Candela at center: 88684 cd

ISO LUX DIAGRAM



3%	26,6 lx
5%	44,3 lx
10%	88,7 lx
30%	266 lx
50%	443 lx

Conditions:

Number of c-planes: 2

Lux at center: 887 lx

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

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