PROLiGHTS

Photometric Test Report

ECLFS PRL36

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:

5970 lm

Peak candela output:

21815 cd

PRODUCT NAME:

ECLFS

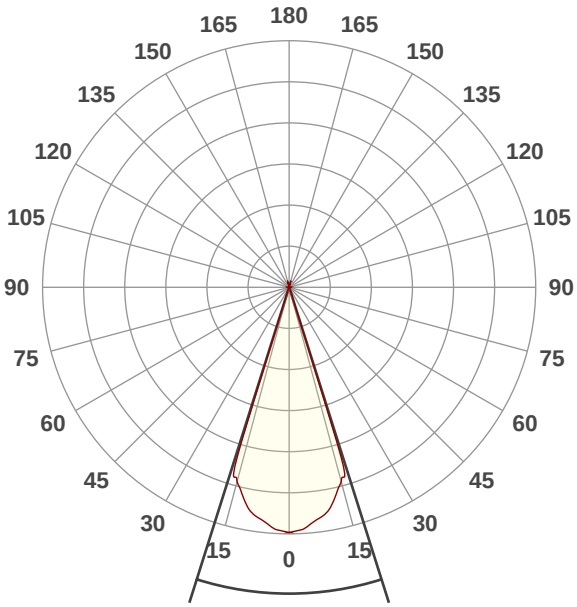
MEASURAMENT CONDITIONS:

Beam angle:
PRL36

Target:
Full on

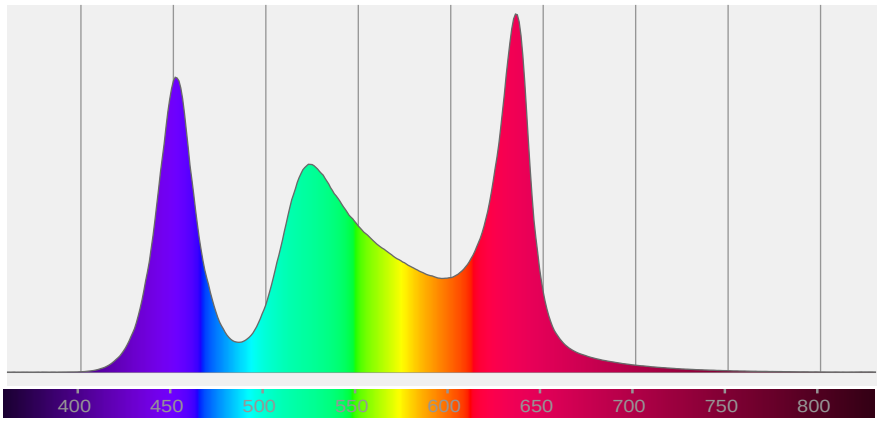
Operator:
Paolo Carvone

Date and time:
30/04/2020 11:25:34



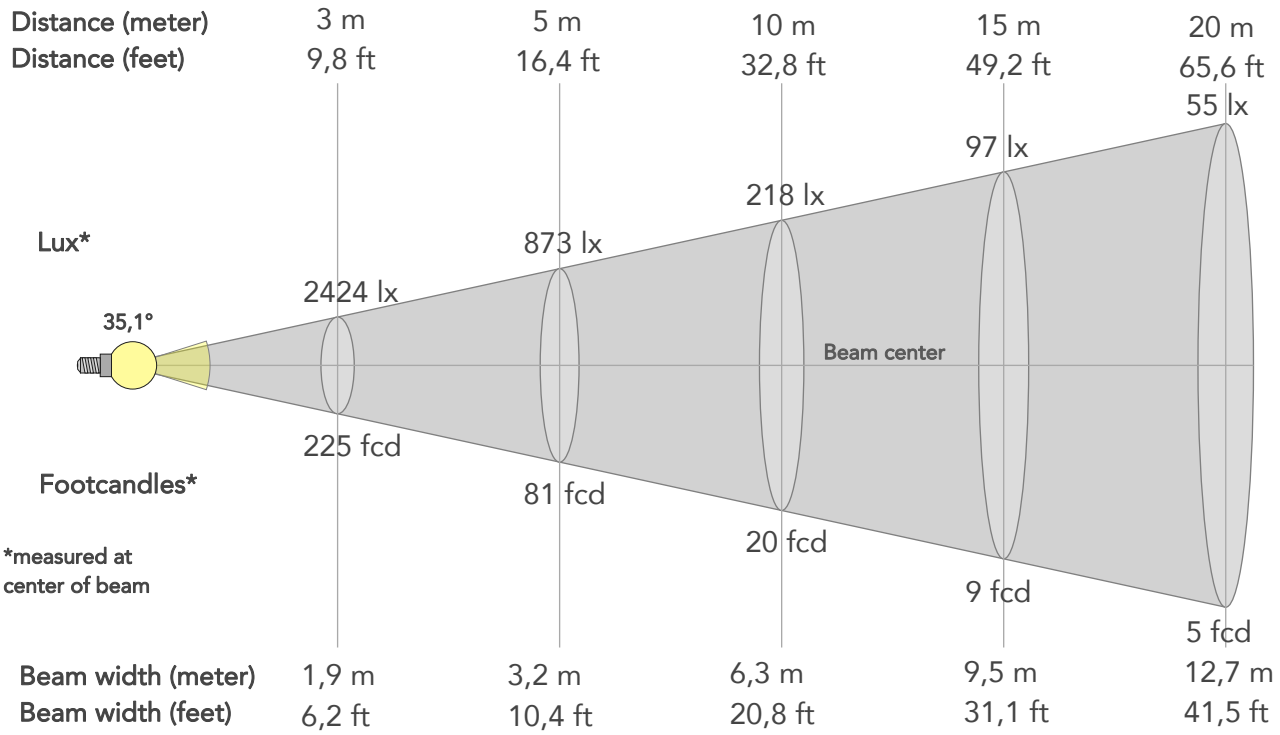
Beam angle 50%: 35,1°
Field angle 10%: 37,1°
Cut off angle 2.5%: 38,5°

Spectra



BEAM DETAILS

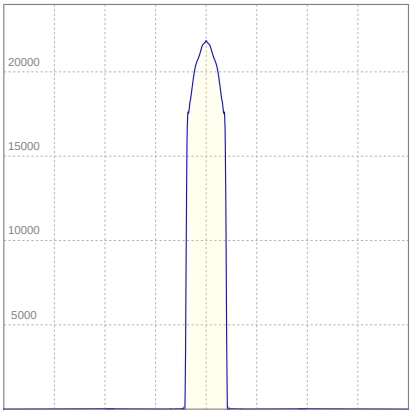
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
35,1°	37,1°	38,5°	96,8%	96,6%



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	21815lx	5454lx	2424lx	1363lx	873lx	388lx	218lx	97lx	55lx	35lx	24lx	14lx	9lx
Footcand.	2027fcd	507fcd	225fcd	127fcd	81fcd	36fcd	20fcd	9fcd	5fcd	3fcd	2fcd	1fcd	1fcd
Beam wid.	0,6m	1,3m	1,9m	2,5m	3,2m	4,7m	6,3m	9,5m	12,7m	15,8m	19m	25,3m	31,6m
Beam wid.	2,1ft	4,2ft	6,2ft	8,3ft	10,4ft	15,6ft	20,8ft	31,1ft	41,5ft	51,9ft	62,3ft	83ft	103,8ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
228V	0,923A	200,7W	30lm/W

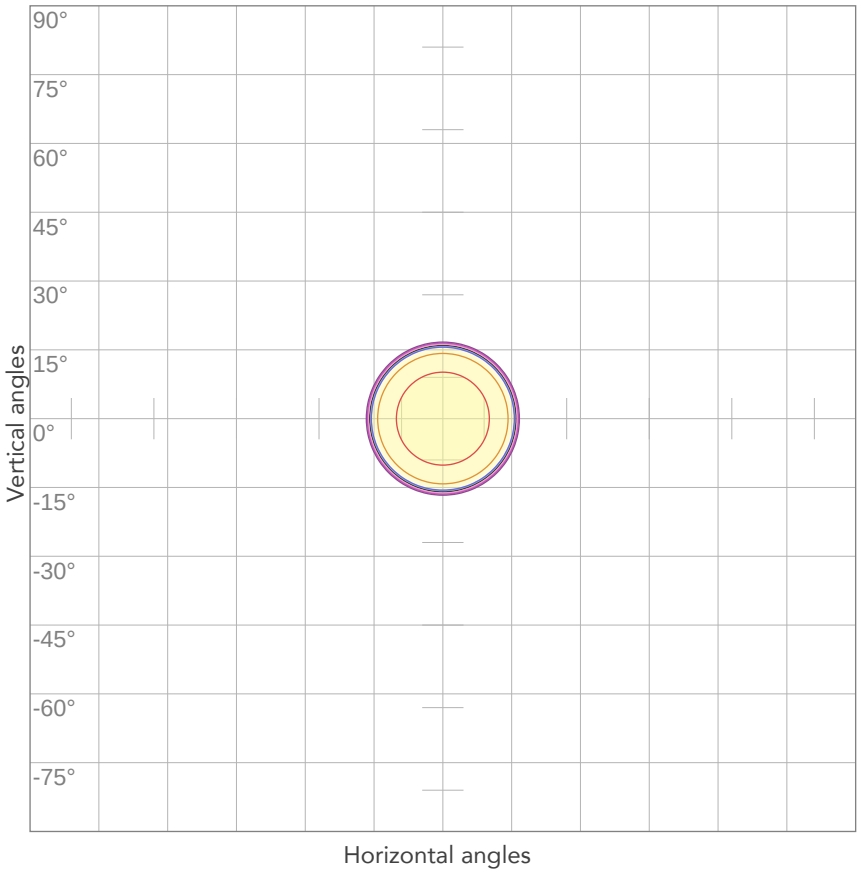
Power FC
0,95

Via A. Olivetti snc
04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

prolights.it
info@prolights.it

ISO DIAGRAMS

ISO CANDELA DIAGRAM



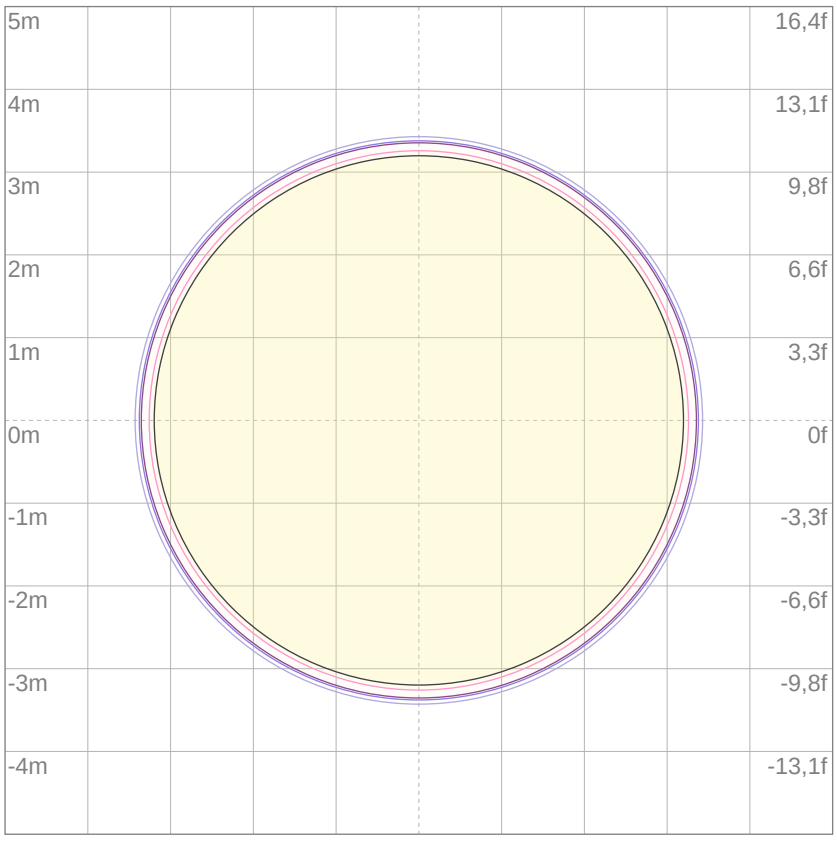
10%	2181 cd
20%	4363 cd
30%	6544 cd
40%	8726 cd
50%	10907 cd
60%	13089 cd
70%	15270 cd
80%	17452 cd

Conditions:

Number of c-planes: 2

Candela at center: 21815 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	6,54 lx
5%	10,9 lx
10%	21,8 lx
30%	65,4 lx
50%	109 lx

Conditions:

Number of c-planes: 2

Lux at center: 218 lx

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

Via A. Olivetti snc
04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

prolights.it
info@prolights.it

Total lumen output:

896 lm

Peak candela output:

3268 cd

PRODUCT NAME:

ECLFS

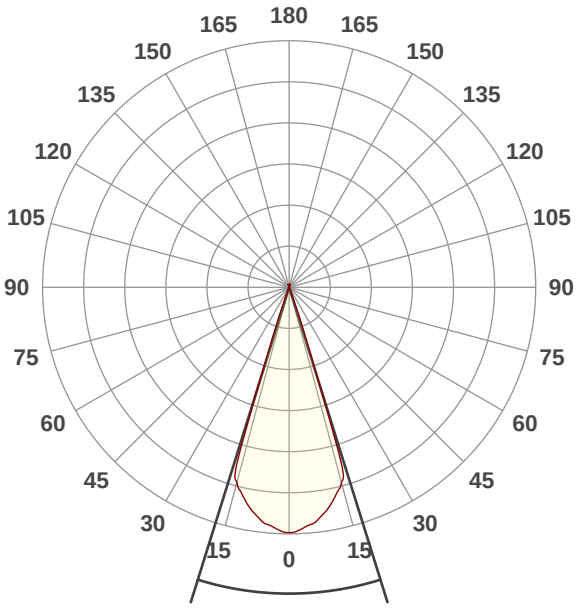
MEASURAMENT CONDITIONS:

Beam angle:
PRL36

Target:
Red

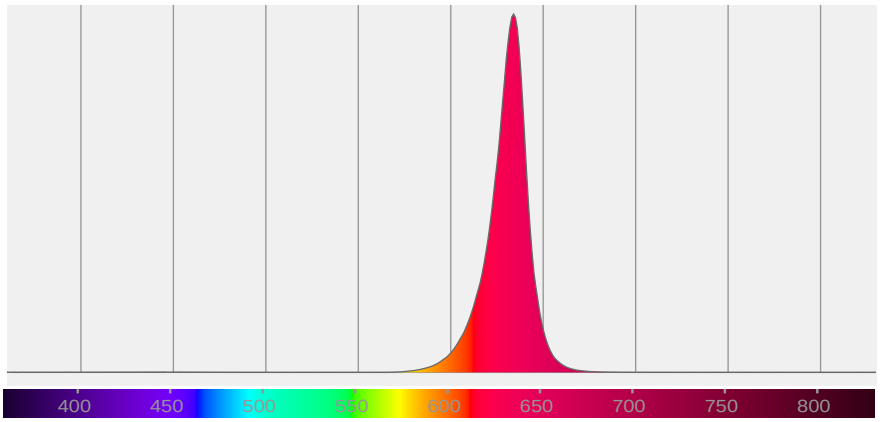
Operator:
Paolo Carvone

Date and time:
30/04/2020 11:27:13



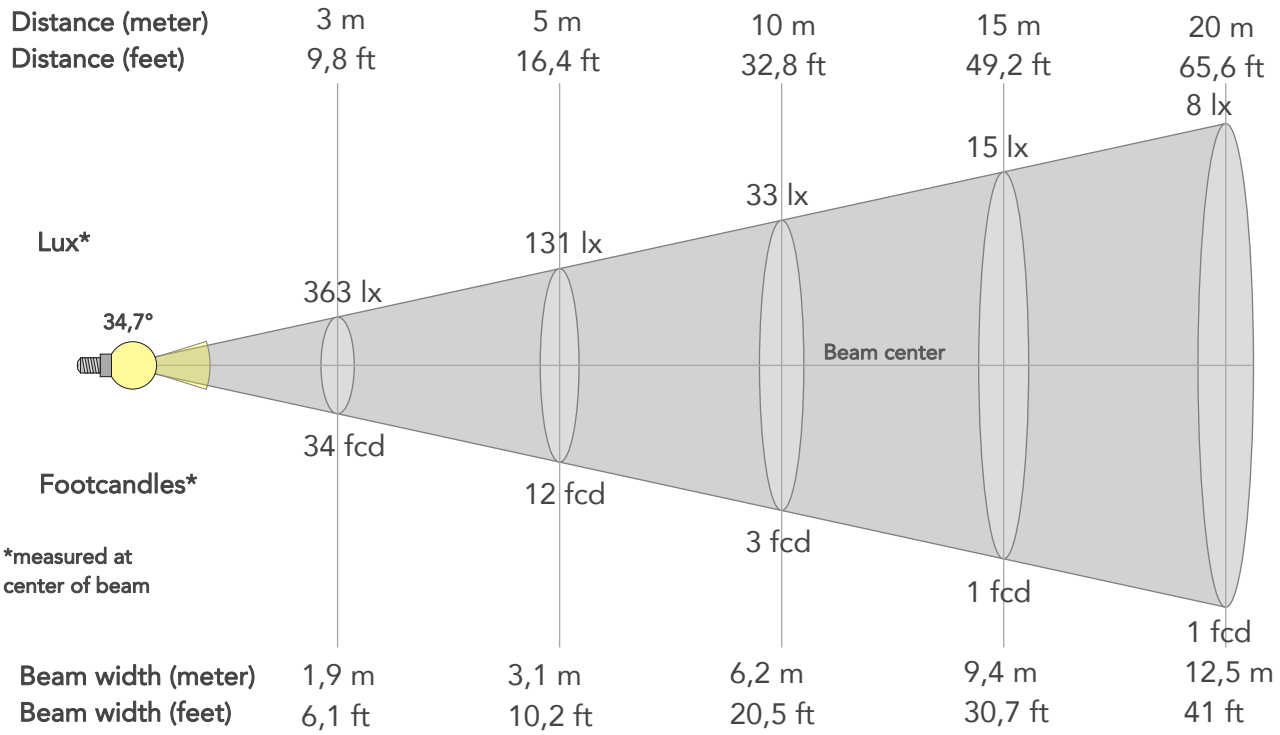
Beam angle 50%: 34,7°
Field angle 10%: 38,4°
Cut off angle 2.5%: 39,7°

Spectra



BEAM DETAILS

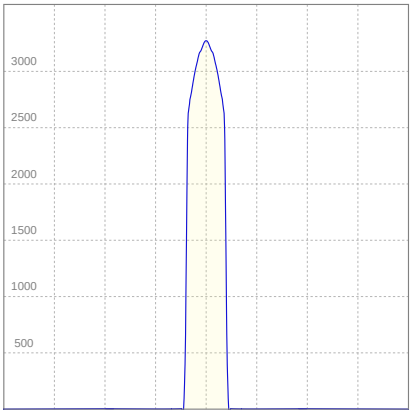
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
34,7°	38,4°	39,7°	96,7%	96,4%



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	3268lx	817lx	363lx	204lx	131lx	58lx	33lx	15lx	8lx	5lx	4lx	2lx	1lx
Footcand.	304fcd	76fcd	34fcd	19fcd	12fcd	5fcd	3fcd	1fcd	1fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	0,6m	1,2m	1,9m	2,5m	3,1m	4,7m	6,2m	9,4m	12,5m	15,6m	18,7m	25m	31,2m
Beam wid.	2,1ft	4,1ft	6,1ft	8,2ft	10,2ft	15,4ft	20,5ft	30,7ft	41ft	51,2ft	61,5ft	81,9ft	102,4ft

LINEAR DISTRIBUTION DIAGRAM



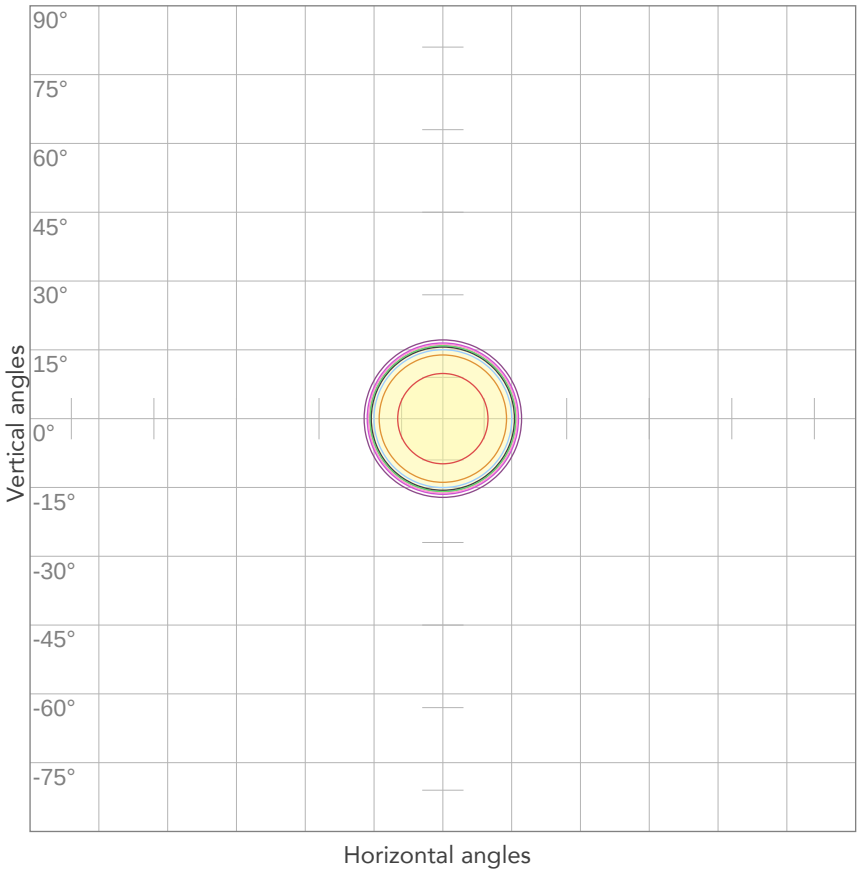
ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
229V	0,278A	47,3W	19lm/W

Power FC
0,95

ISO DIAGRAMS

ISO CANDELA DIAGRAM



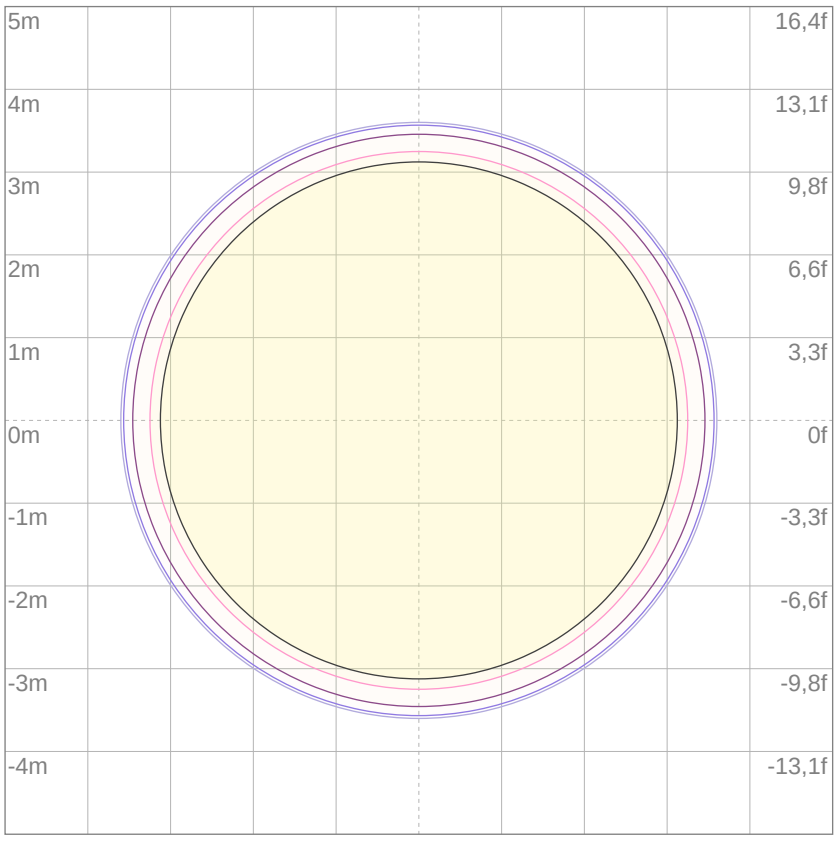
10%	327 cd
20%	654 cd
30%	980 cd
40%	1307 cd
50%	1634 cd
60%	1961 cd
70%	2287 cd
80%	2614 cd

Conditions:

Number of c-planes: 2

Candela at center: 3268 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	0,980 lx
5%	1,63 lx
10%	3,27 lx
30%	9,80 lx
50%	16,3 lx

Conditions:

Number of c-planes: 2

Lux at center: 32,7 lx

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

Via A. Olivetti snc
04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

prolights.it
info@prolights.it

Total lumen output:

1316 lm

Peak candela output:

4925 cd

PRODUCT NAME:

ECLFS

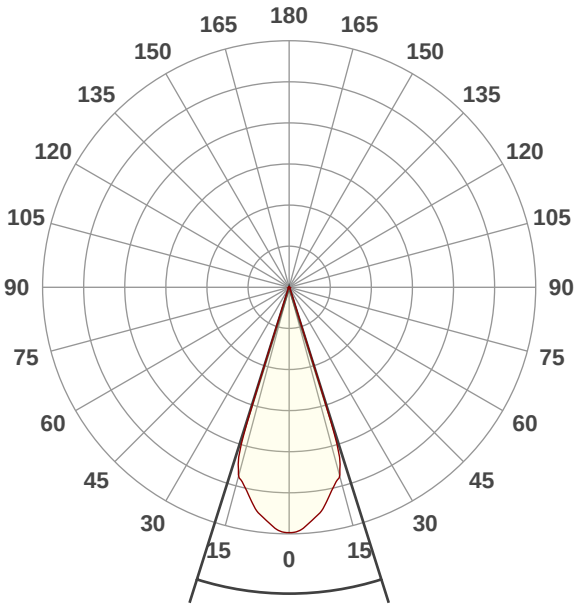
MEASURAMENT CONDITIONS:

Beam angle:
PRL36

Target:
Green

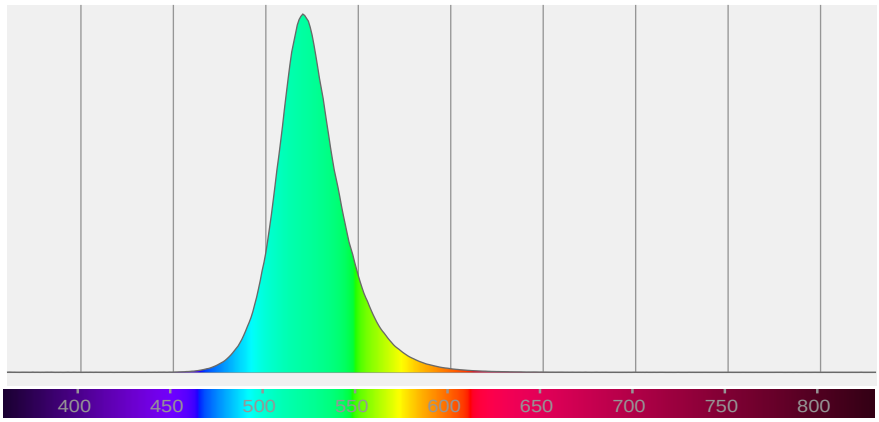
Operator:
Paolo Carvone

Date and time:
30/04/2020 11:28:43



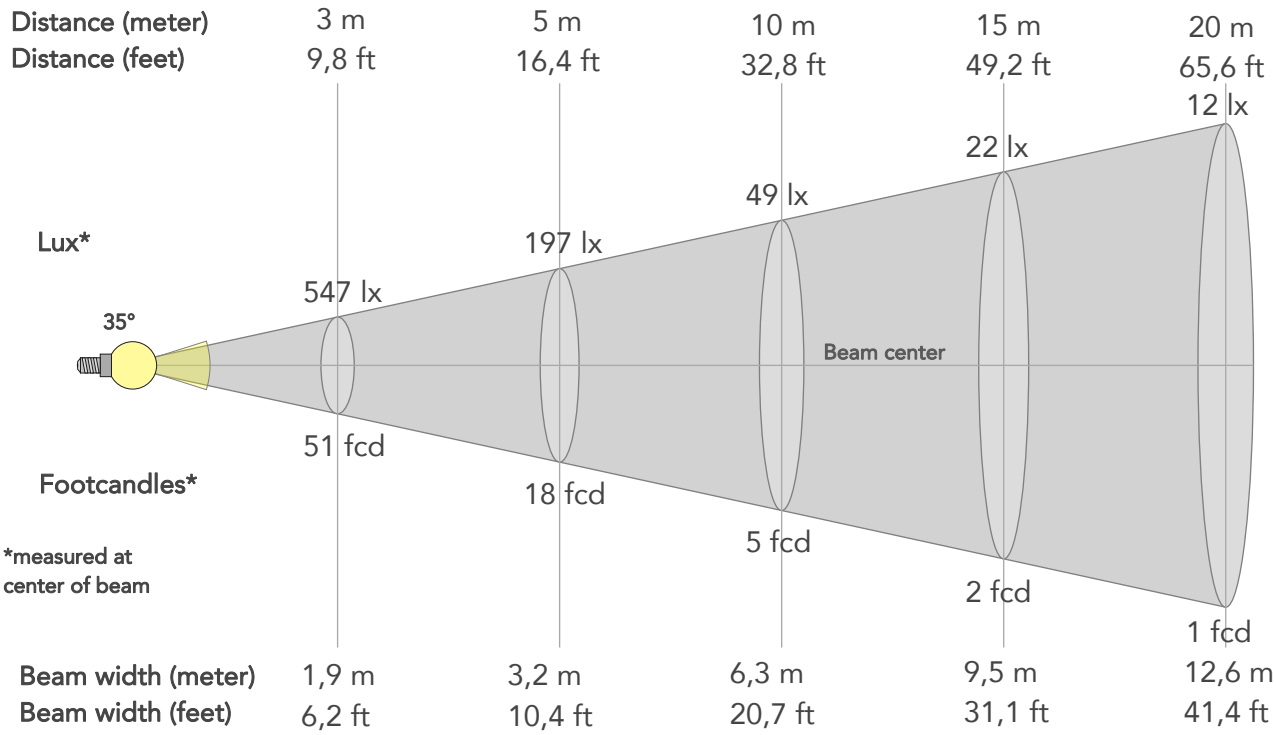
Beam angle 50%: 35°
Field angle 10%: 37,5°
Cut off angle 2.5%: 40°

Spectra



BEAM DETAILS

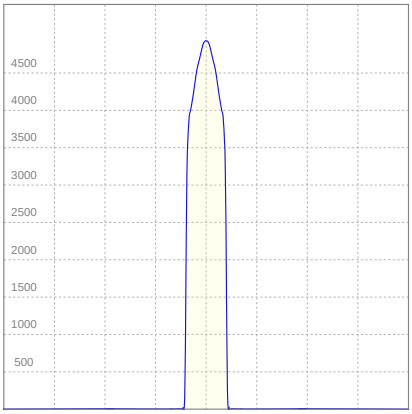
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
35°	37,5°	40°	96,7%	96,4%



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	4925lx	1231lx	547lx	308lx	197lx	88lx	49lx	22lx	12lx	8lx	5lx	3lx	2lx
Footcand.	458fcd	114fcd	51fcd	29fcd	18fcd	8fcd	5fcd	2fcd	1fcd	1fcd	1fcd	0fcd	0fcd
Beam wid.	0,6m	1,3m	1,9m	2,5m	3,2m	4,7m	6,3m	9,5m	12,6m	15,8m	18,9m	25,3m	31,6m
Beam wid.	2,1ft	4,2ft	6,2ft	8,3ft	10,4ft	15,5ft	20,7ft	31,1ft	41,4ft	51,8ft	62,1ft	82,8ft	103,6ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
229V	0,281A	48,0W	27lm/W

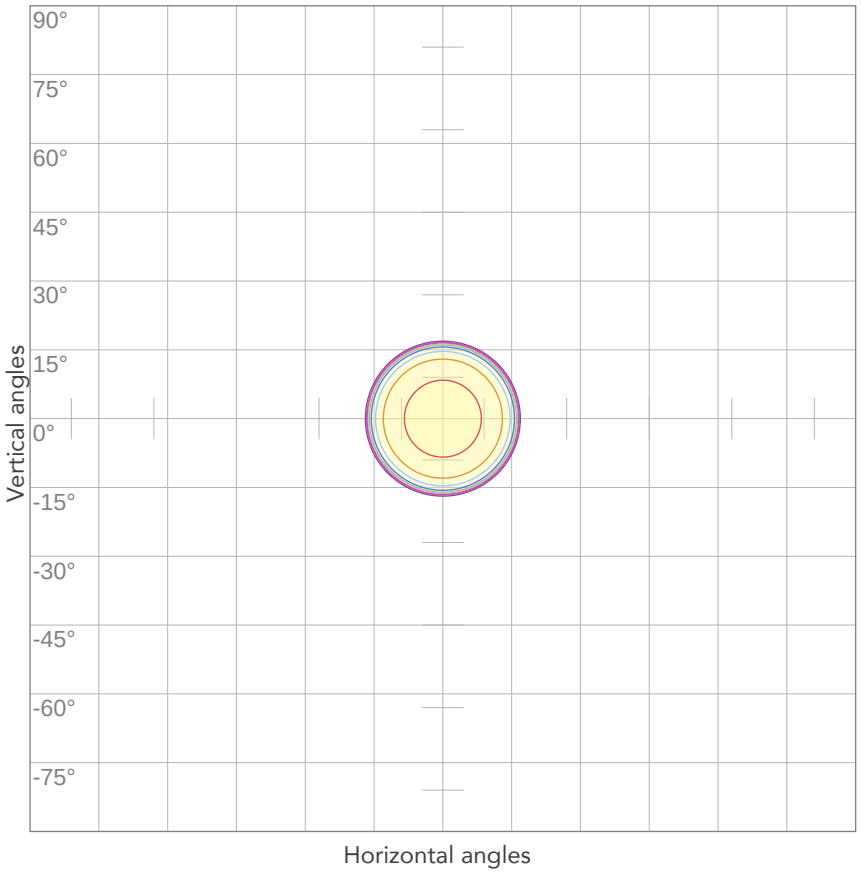
Power FC
0,95

Via A. Olivetti snc
04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

prolights.it
info@prolights.it

ISO DIAGRAMS

ISO CANDELA DIAGRAM



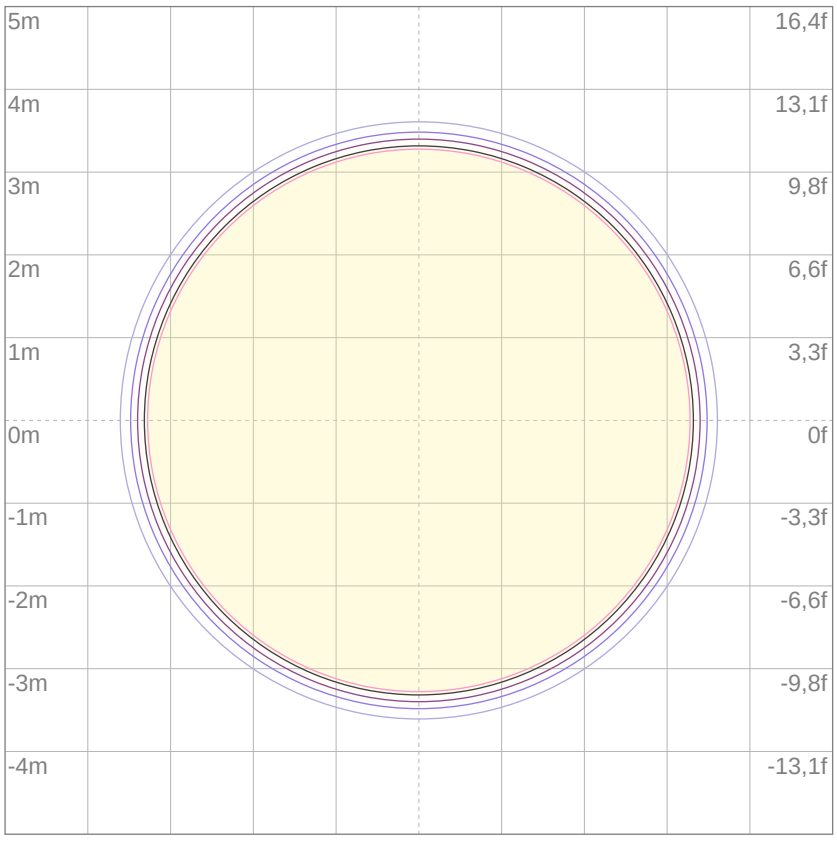
10%	493 cd
20%	985 cd
30%	1478 cd
40%	1970 cd
50%	2463 cd
60%	2955 cd
70%	3448 cd
80%	3940 cd

Conditions:

Number of c-planes: 2

Candela at center: 4925 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	1,48 lx
5%	2,46 lx
10%	4,93 lx
30%	14,8 lx
50%	24,6 lx

Conditions:

Number of c-planes: 2

Lux at center: 49,3 lx

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

Via A. Olivetti snc
04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

prolights.it
info@prolights.it

Total lumen output:

198 lm

Peak candela output:

752 cd

PRODUCT NAME:

ECLFS

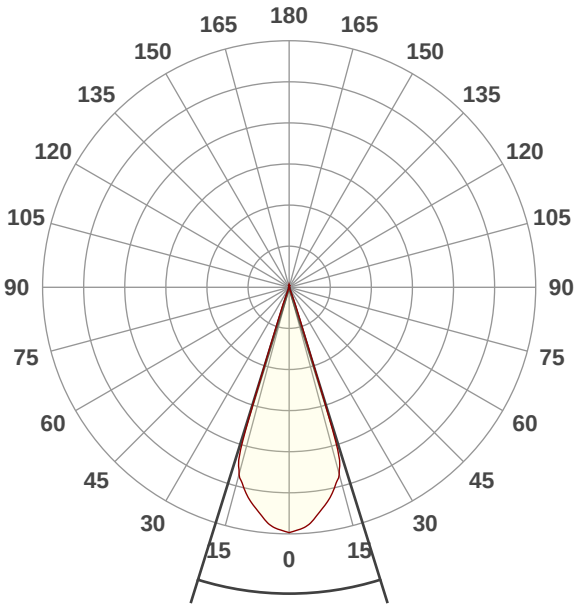
MEASURAMENT CONDITIONS:

Beam angle:
PRL36

Target:
Blue

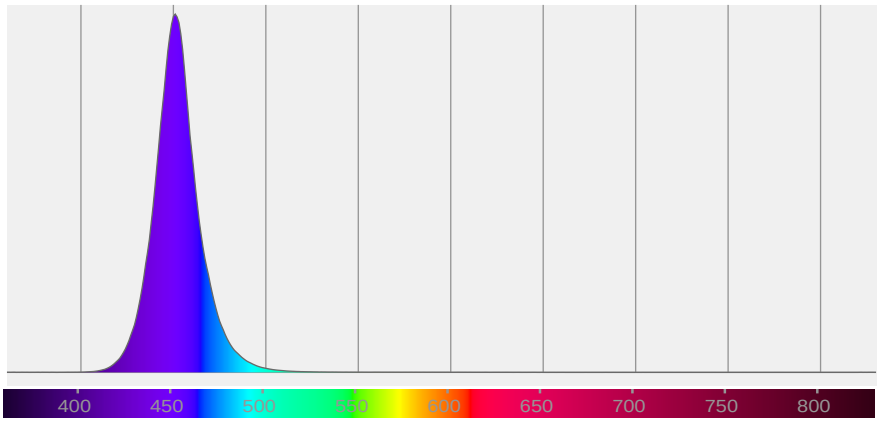
Operator:
Paolo Carvone

Date and time:
30/04/2020 11:32:23



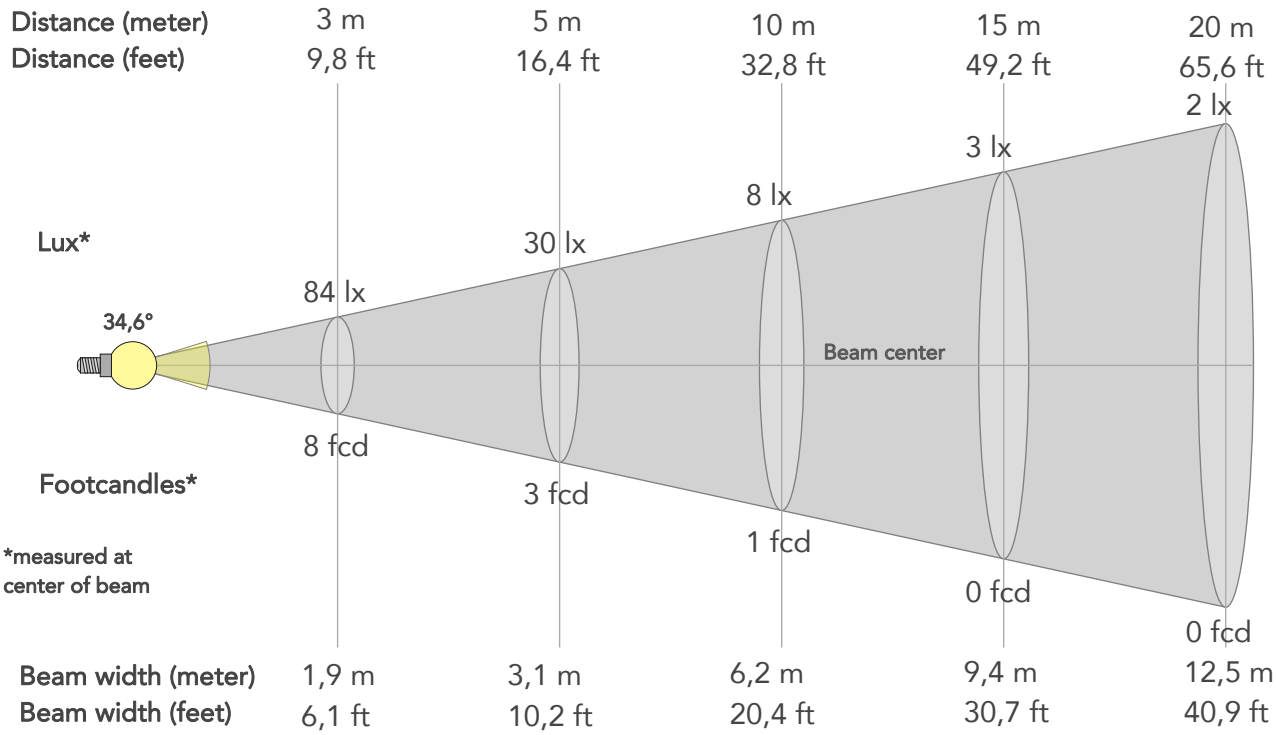
Beam angle 50%: 34,6°
Field angle 10%: 38°
Cut off angle 2.5%: 39,7°

Spectra



BEAM DETAILS

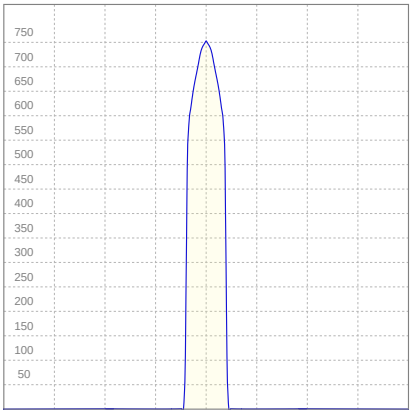
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
34,6°	38°	39,7°	97,2%	96,9%



BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	752lx	188lx	84lx	47lx	30lx	13lx	8lx	3lx	2lx	1lx	1lx	0lx	0lx
Footcand.	70fcd	17fcd	8fcd	4fcd	3fcd	1fcd	1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	0,6m	1,2m	1,9m	2,5m	3,1m	4,7m	6,2m	9,4m	12,5m	15,6m	18,7m	24,9m	31,2m
Beam wid.	2,1ft	4,1ft	6,1ft	8,2ft	10,2ft	15,3ft	20,4ft	30,7ft	40,9ft	51,1ft	61,3ft	81,8ft	102,2ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
229V	0,245A	38,2W	5lm/W

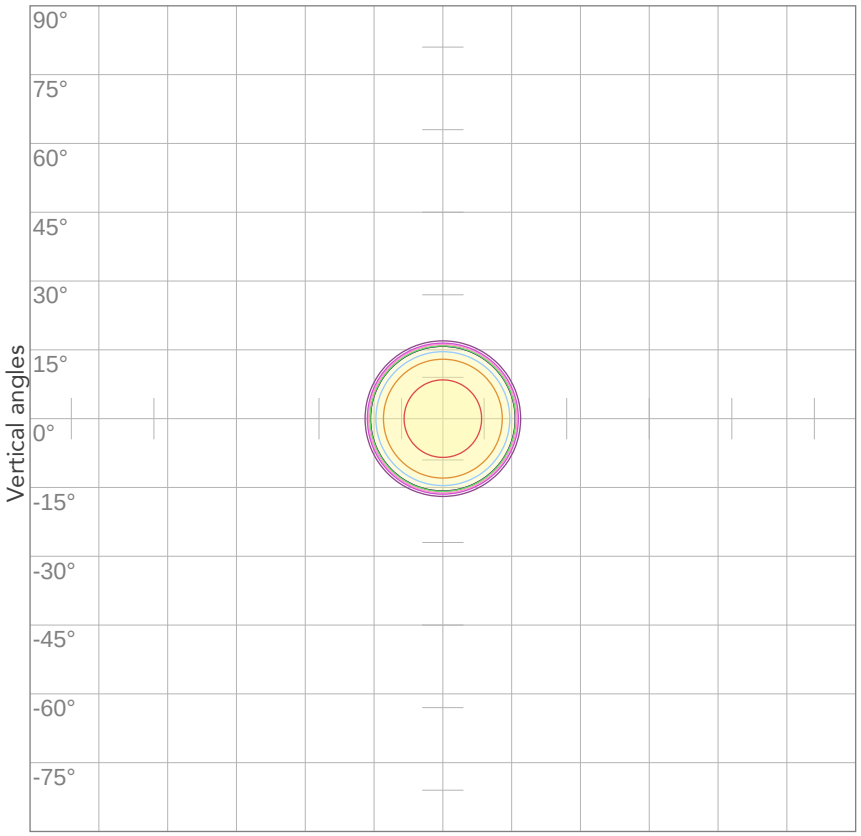
Power FC
0,95

Via A. Olivetti snc
04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

prolights.it
info@prolights.it

ISO DIAGRAMS

ISO CANDELA DIAGRAM



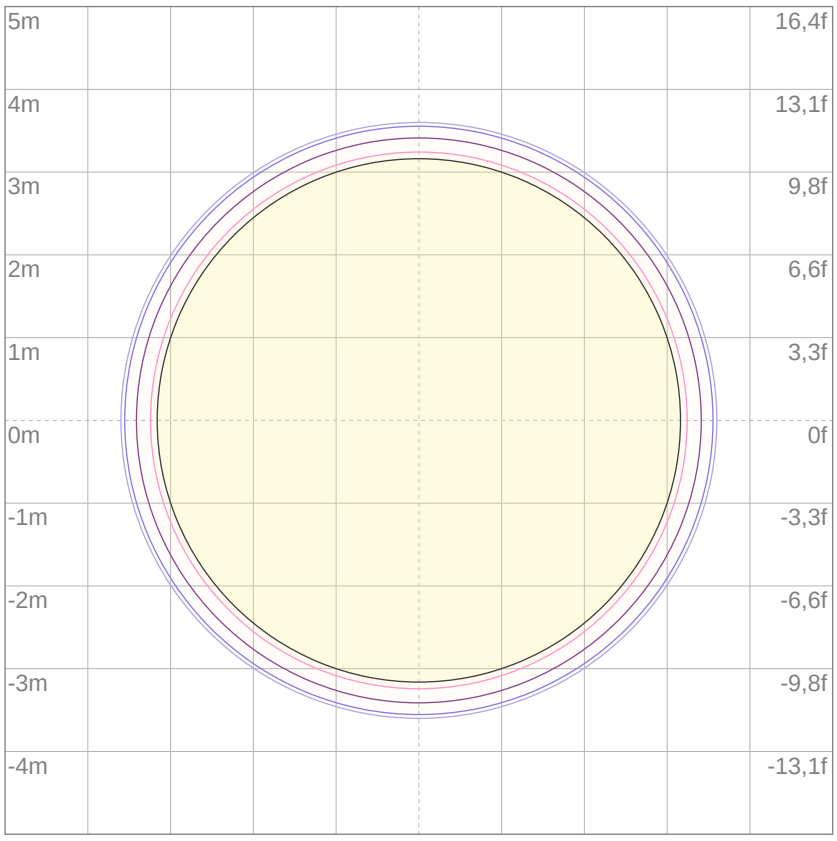
10%	75 cd
20%	150 cd
30%	226 cd
40%	301 cd
50%	376 cd
60%	451 cd
70%	527 cd
80%	602 cd

Conditions:

Number of c-planes: 2

Candela at center: 752 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	0,226 lx
5%	0,376 lx
10%	0,752 lx
30%	2,26 lx
50%	3,76 lx

Conditions:

Number of c-planes: 2

Lux at center: 7,52 lx

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

Total lumen output:

3761 lm

Peak candela output:

13433 cd

PRODUCT NAME:

ECLFS

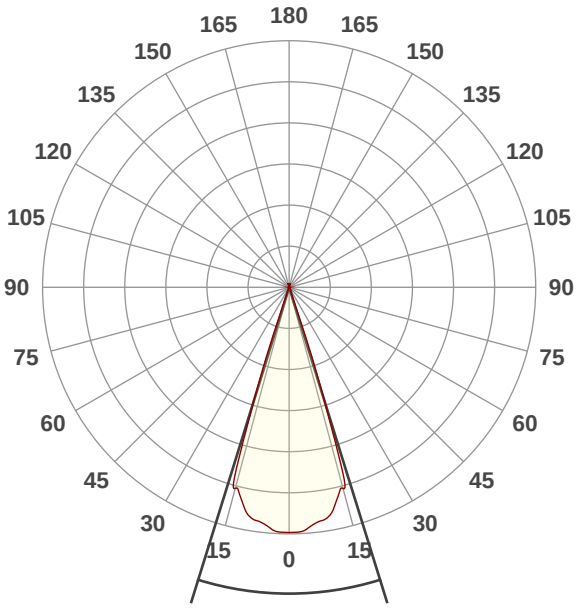
MEASURAMENT CONDITIONS:

Beam angle:
PRL36

Target:
Lime

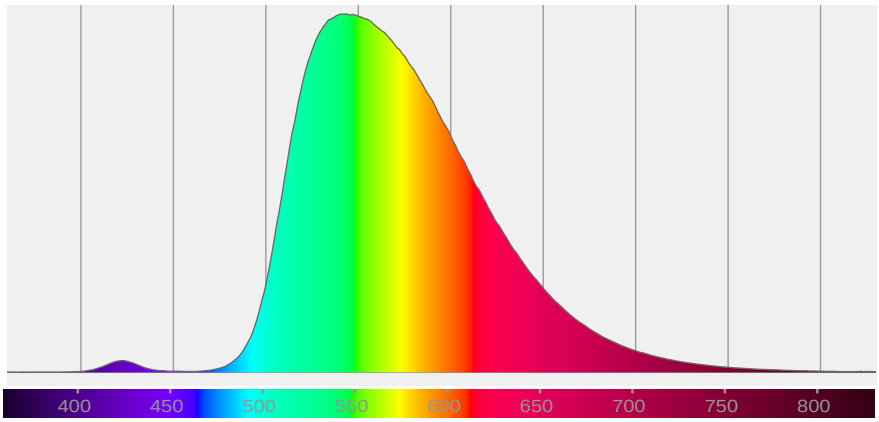
Operator:
Paolo Carvone

Date and time:
30/04/2020 11:35:24



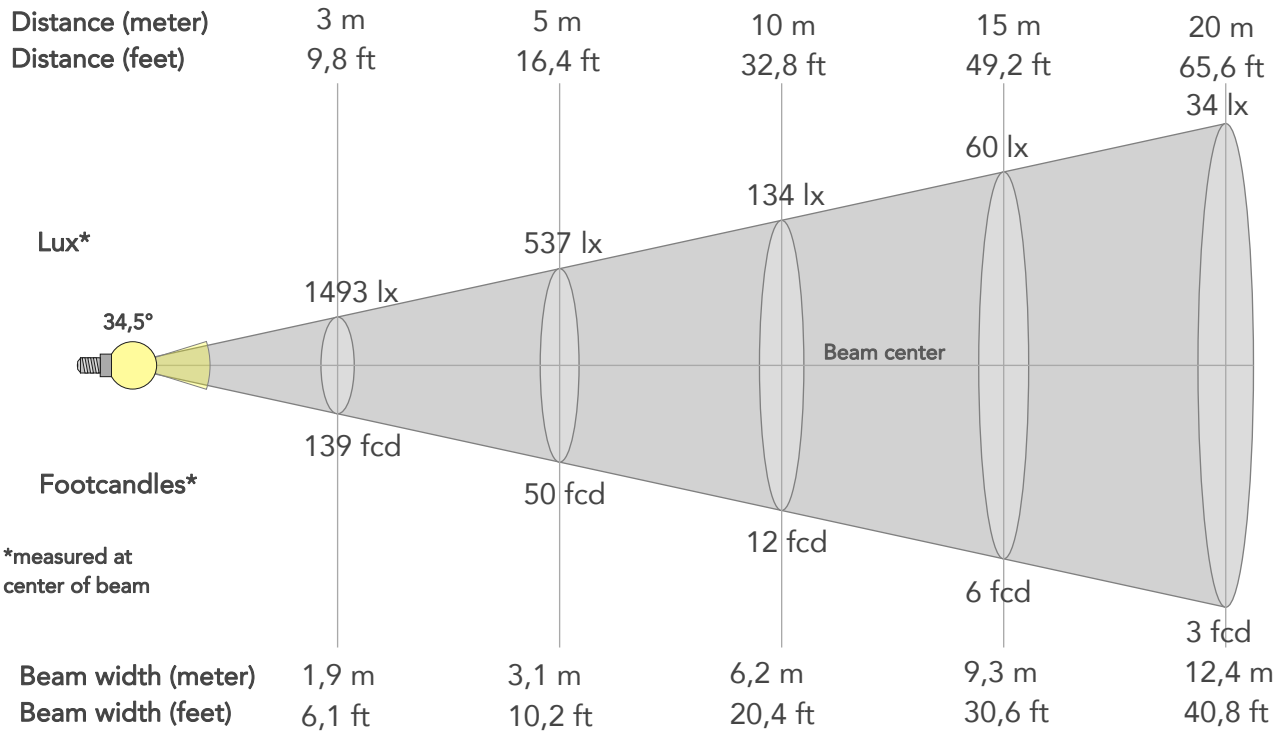
Beam angle 50%: 34,5°
Field angle 10%: 38,5°
Cut off angle 2.5%: 39,3°

Spectra



BEAM DETAILS

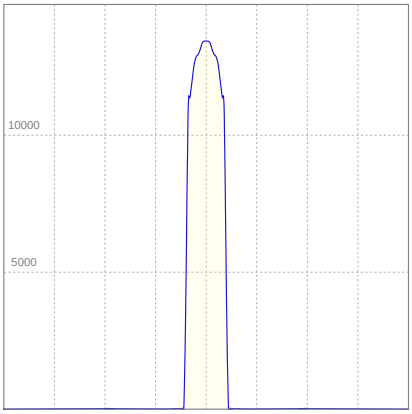
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
34,5°	38,5°	39,3°	96,5%	96,2%



BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	13433lx	3358lx	1493lx	840lx	537lx	239lx	134lx	60lx	34lx	21lx	15lx	8lx	5lx
Footcand.	1248fcd	312fcd	139fcd	78fcd	50fcd	22fcd	12fcd	6fcd	3fcd	2fcd	1fcd	1fcd	0fcd
Beam wid.	0,6m	1,2m	1,9m	2,5m	3,1m	4,7m	6,2m	9,3m	12,4m	15,5m	18,7m	24,9m	31,1m
Beam wid.	2,1ft	4,1ft	6,1ft	8,1ft	10,2ft	15,3ft	20,4ft	30,6ft	40,8ft	51ft	61,2ft	81,6ft	102ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,430A	85,1W	44lm/W

Power FC
0,95

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04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

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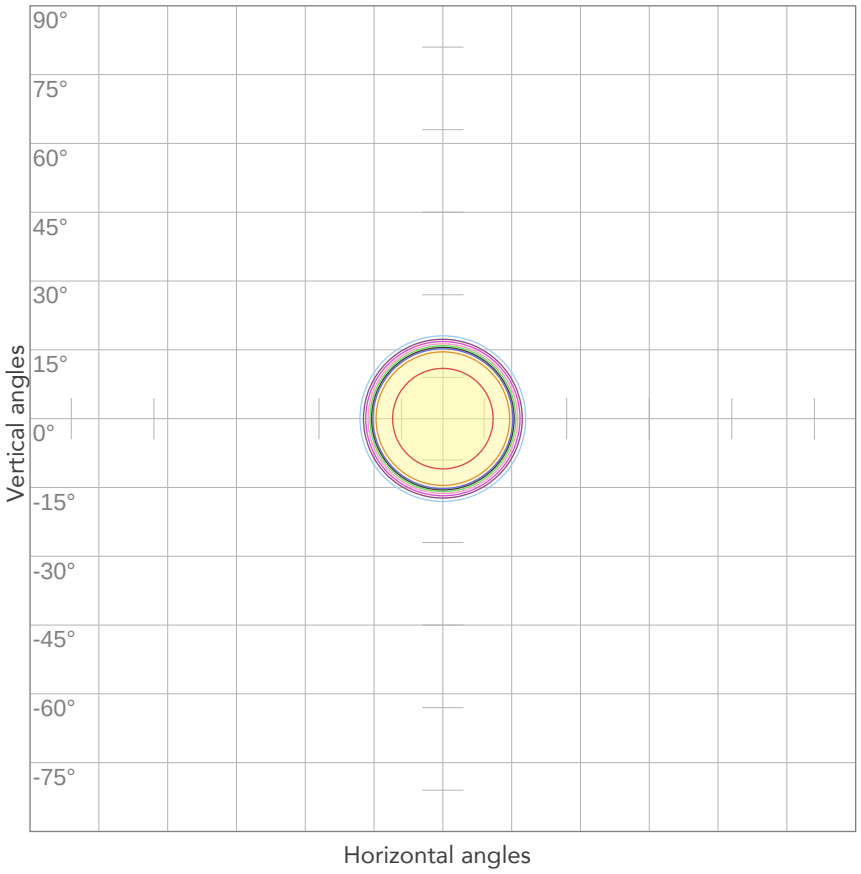
ISO DIAGRAMS

ISO CANDELA DIAGRAM



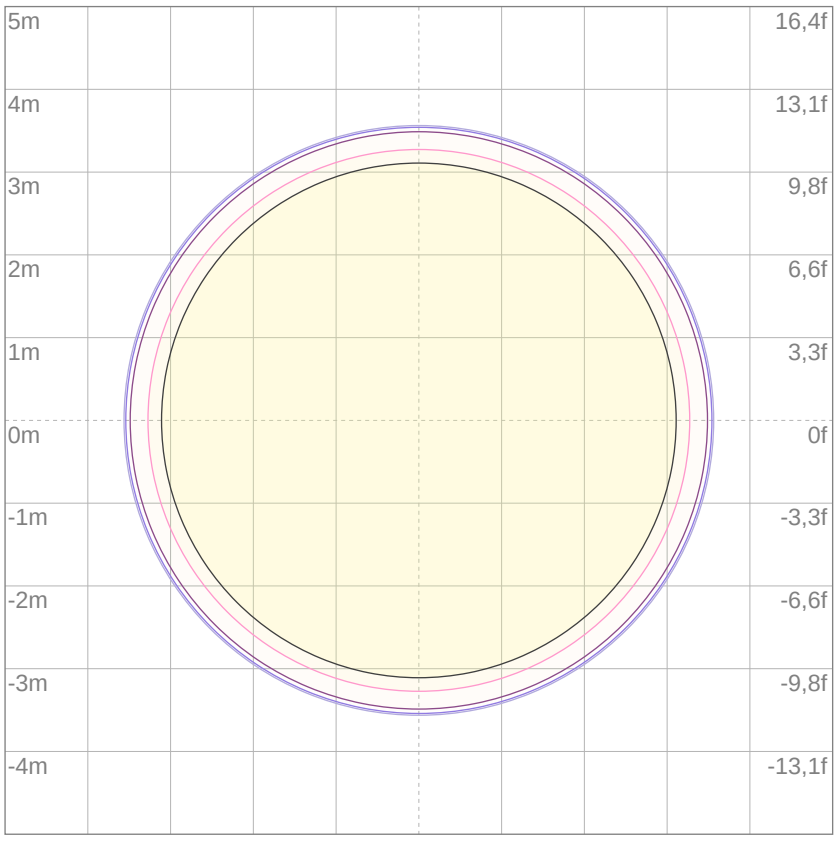
10%	1343 cd
20%	2687 cd
30%	4030 cd
40%	5373 cd
50%	6717 cd
60%	8060 cd
70%	9403 cd
80%	10747 cd

Conditions:

Number of c-planes: 2

Candela at center: 13433 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	4,03 lx
5%	6,72 lx
10%	13,4 lx
30%	40,3 lx
50%	67,2 lx

Conditions:

Number of c-planes: 2

Lux at center: 134 lx

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

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Tel: +39 0771 72190

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Total lumen output:

3964 lm

Peak candela output:

14309 cd

Light quality:

CRI: 85,8

Color temperature:

2989 K

PRODUCT NAME:

ECLFS

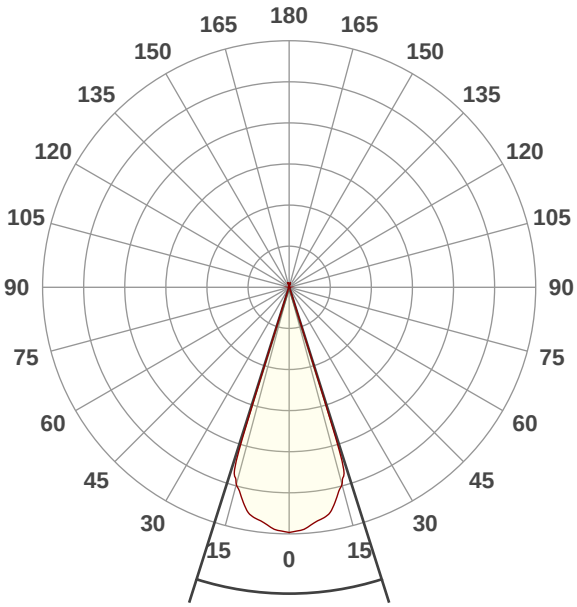
MEASURAMENT CONDITIONS:

Beam angle:
PRL36

Target:
2800K

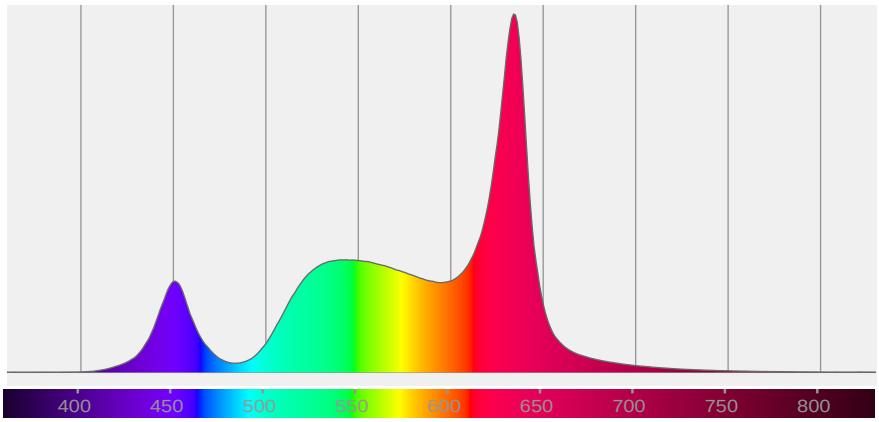
Operator:
Paolo Carvone

Date and time:
30/04/2020 11:23:37

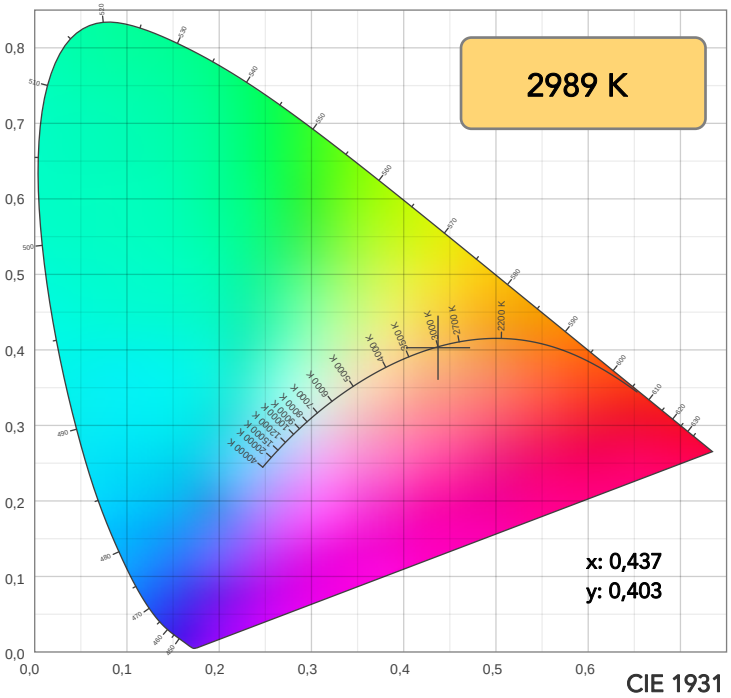


Beam angle 50%: 35,2°
Field angle 10%: 37,3°
Cut off angle 2.5%: 38,9°

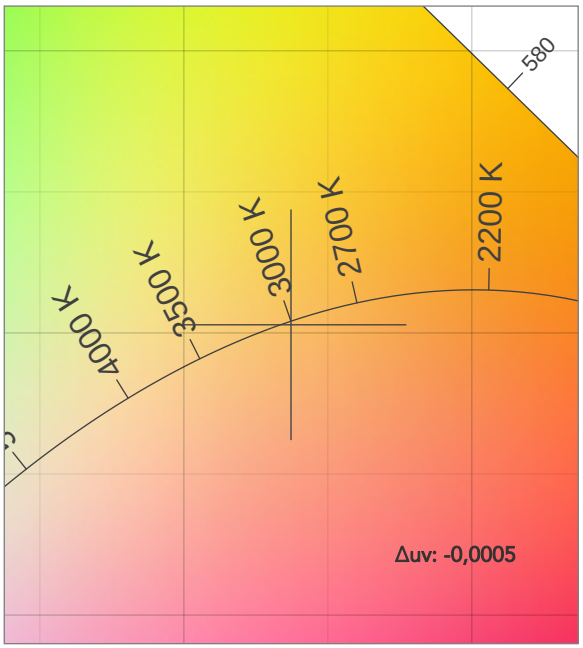
Spectra



COLOR DETAILS

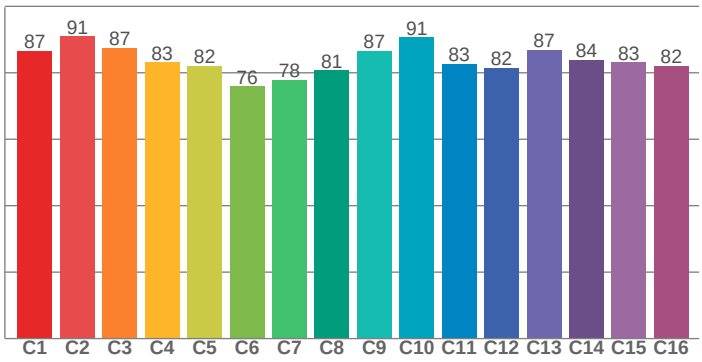


CIE 1931

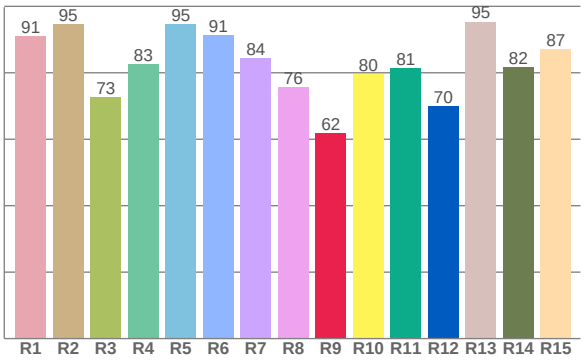


CIE 1931 ZOOM

TM30: 84,4



CRI: 85,8 (R1-R8)



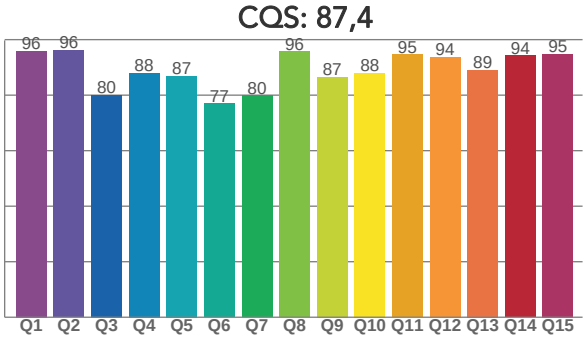
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
91,0	94,6	72,7	82,5	94,7	91,2	84,4	75,6	61,8	79,6	81,4	69,9	95,3	81,7	87,0

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
86,6	90,9	87,4	83,1	82,1	75,9	77,8	80,7	86,6	90,7	82,6	81,5	86,9	83,9	83,1	82,1

CQS: 87,4



CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
95,9	96,2	80,1	88,0	86,8	76,9	79,8	95,7	86,6	87,9	94,6	93,7	89,0	94,2	94,8

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
2989 K	85,8	61,8	84,4	110,9	87,4	73	0,437	0,403	-0,0005

Via A. Olivetti snc
04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

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info@prolights.it

TM30 DETAILS

PROLiGHTS

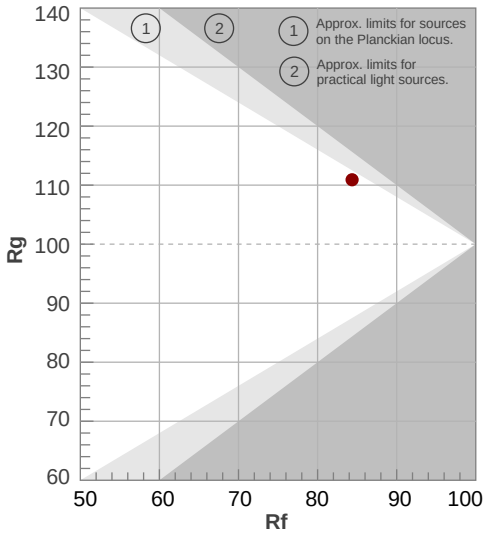
Rf 84,4

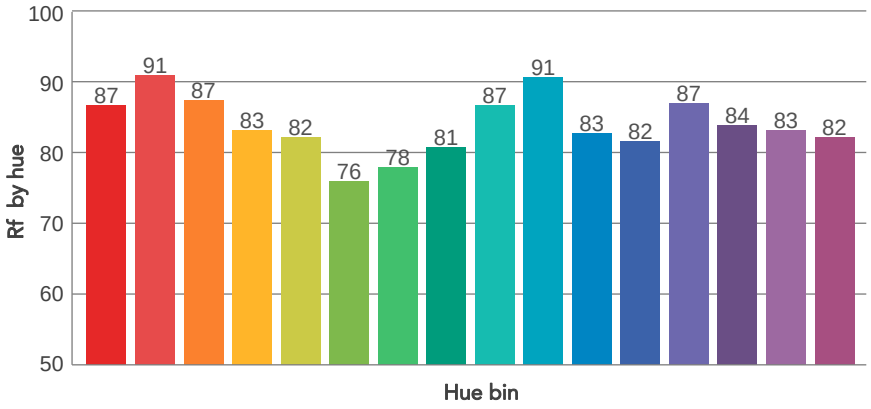
Fidelity index Rf

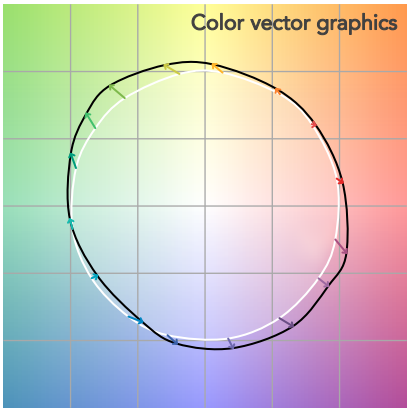
Rg 110,9

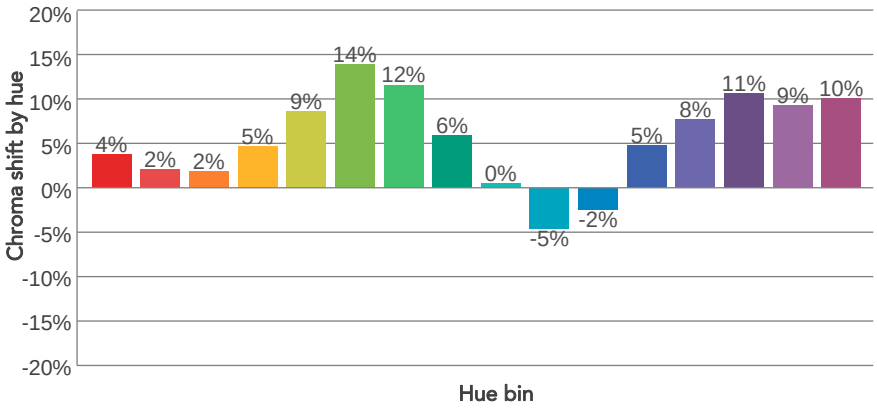
Gammut index

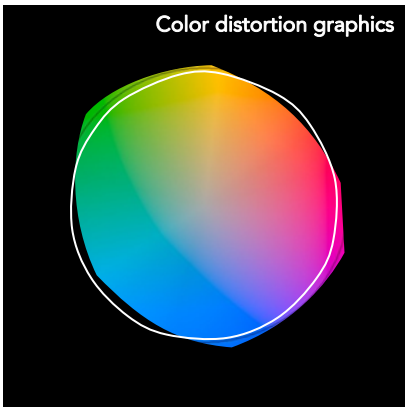
Hue Bin	R_f	Graphic shifts (%) Chroma	Hue
1	87	4%	-4%
2	91	2%	-2%
3	87	2%	4%
4	83	5%	8%
5	82	9%	10%
6	76	14%	4%
7	78	12%	-5%
8	81	6%	-10%
9	87	0%	-7%
10	91	-5%	1%
11	83	-2%	11%
12	82	5%	8%
13	87	8%	2%
14	84	11%	5%
15	83	9%	-1%
16	82	10%	-8%

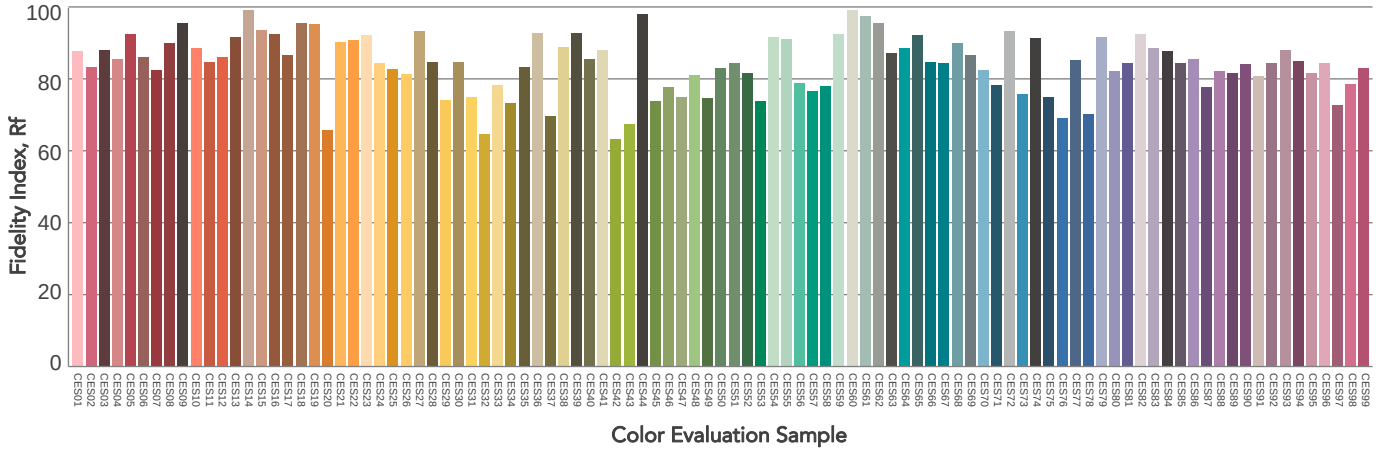












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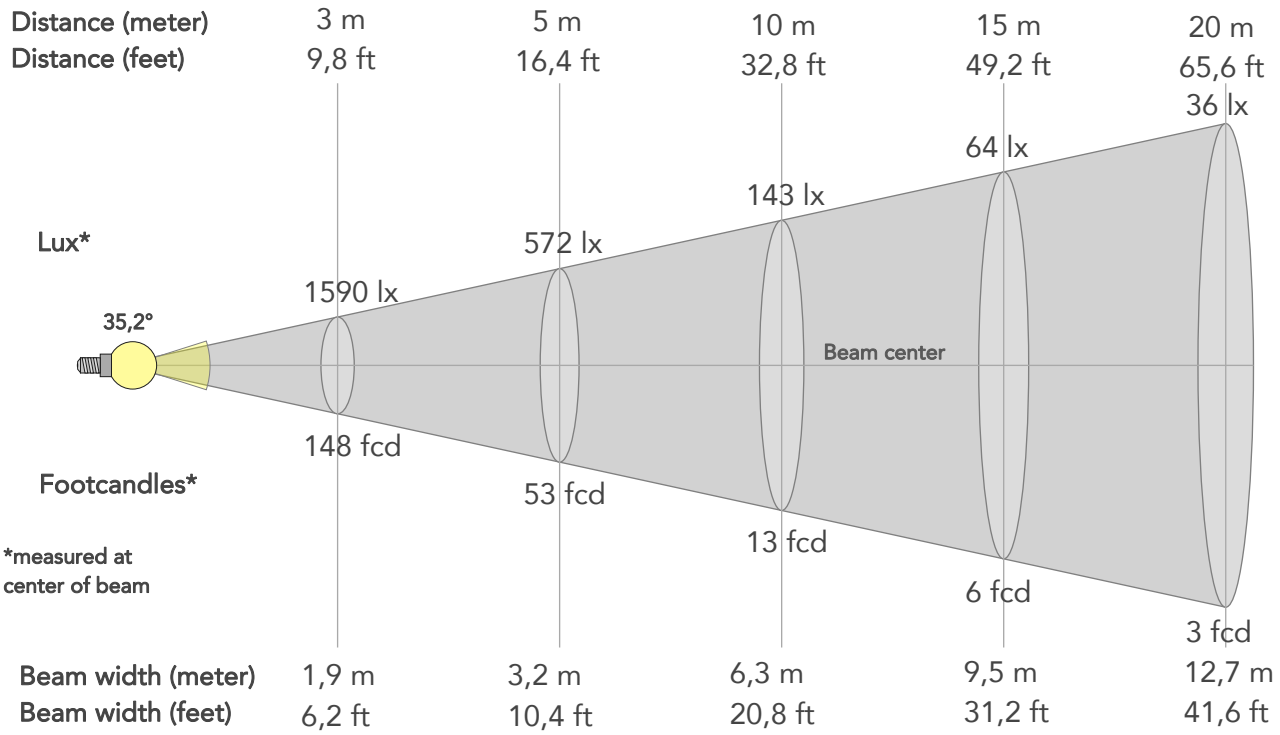
04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

prolights.it
info@prolights.it

BEAM DETAILS

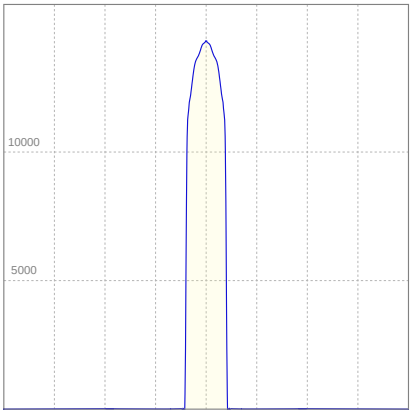
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
35,2°	37,3°	38,9°	96,9%	96,7%



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	14309lx	3577lx	1590lx	894lx	572lx	254lx	143lx	64lx	36lx	23lx	16lx	9lx	6lx
Footcand.	1329fcd	332fcd	148fcd	83fcd	53fcd	24fcd	13fcd	6fcd	3fcd	2fcd	1fcd	1fcd	1fcd
Beam wid.	0,6m	1,3m	1,9m	2,5m	3,2m	4,8m	6,3m	9,5m	12,7m	15,9m	19m	25,4m	31,7m
Beam wid.	2,1ft	4,2ft	6,2ft	8,3ft	10,4ft	15,6ft	20,8ft	31,2ft	41,6ft	52ft	62,4ft	83,2ft	104ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,554A	115,1W	34lm/W

Power FC
0,95

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04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

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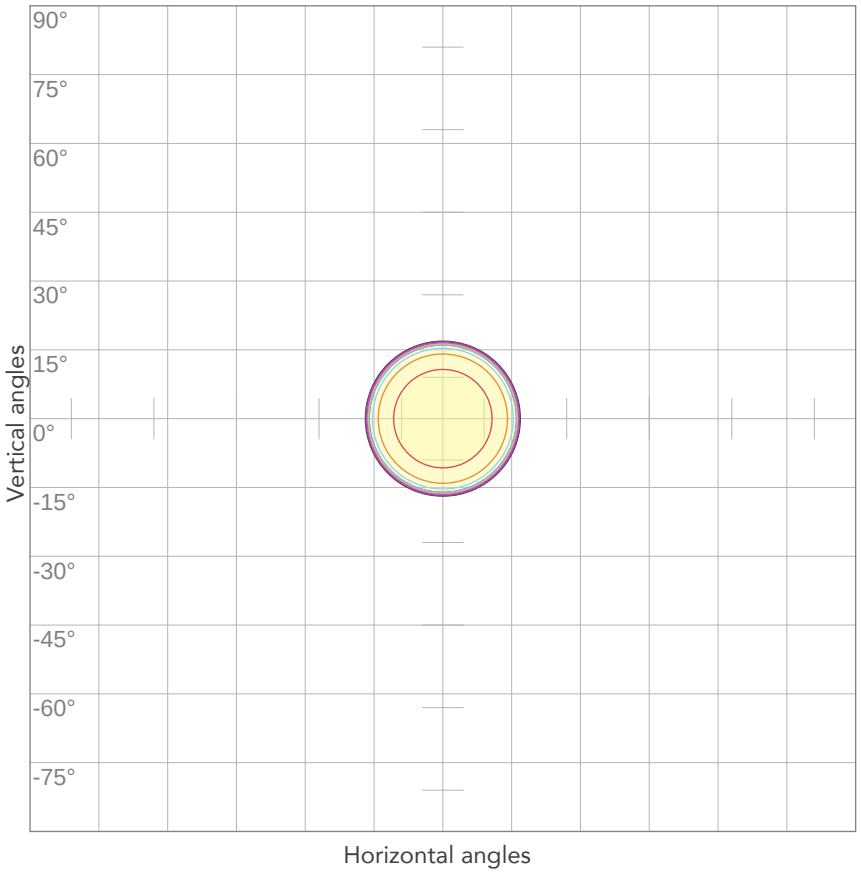
ISO DIAGRAMS

ISO CANDELA DIAGRAM



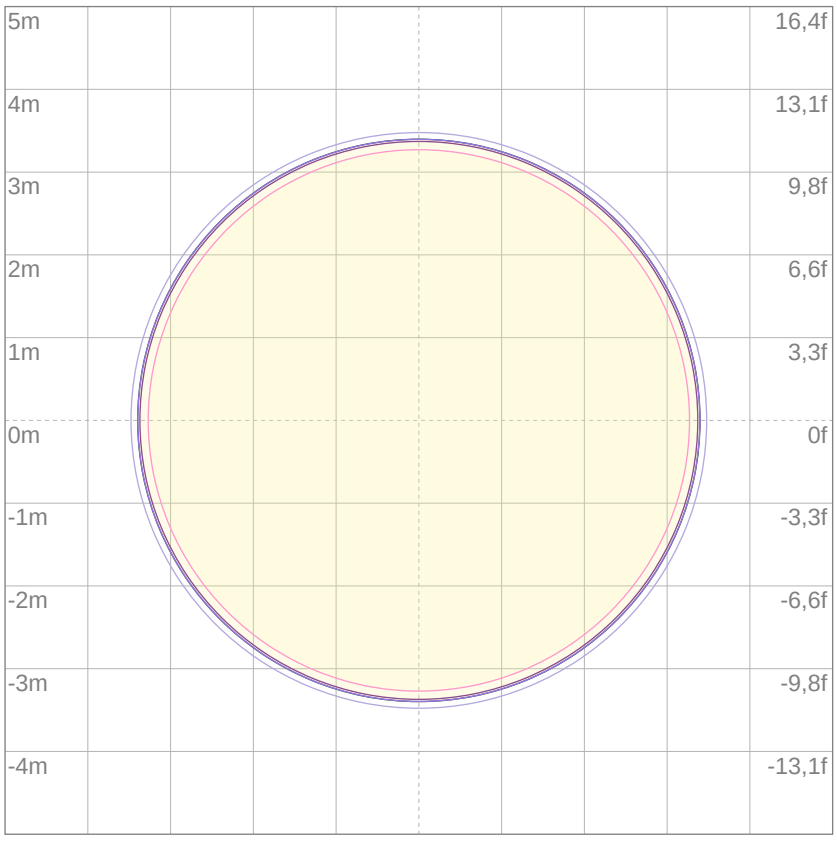
10%	1431 cd
20%	2862 cd
30%	4293 cd
40%	5724 cd
50%	7154 cd
60%	8585 cd
70%	10016 cd
80%	11447 cd

Conditions:

Number of c-planes: 2

Candela at center: 14309 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	4,29 lx
5%	7,15 lx
10%	14,3 lx
30%	42,9 lx
50%	71,5 lx

Conditions:

Number of c-planes: 2

Lux at center: 143 lx

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

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Tel: +39 0771 72190

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Total lumen output:

4344 lm

Peak candela output:

15689 cd

Light quality:

CRI: 86,9

Color temperature:

3349 K

PRODUCT NAME:

ECLFS

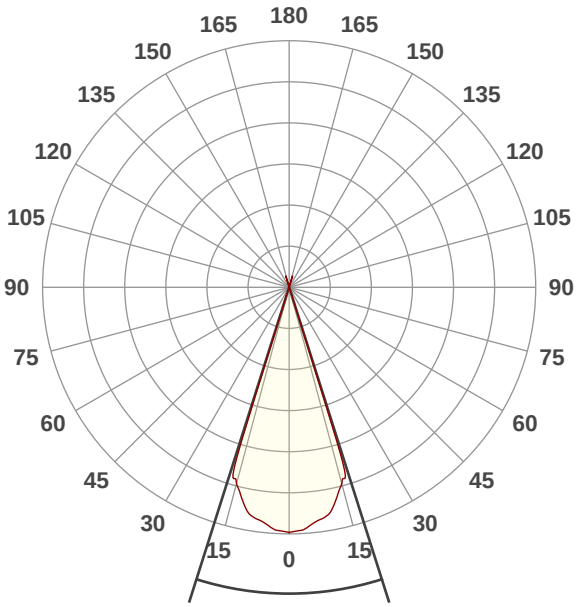
MEASURAMENT CONDITIONS:

Beam angle:
PRL36

Target:
3200K

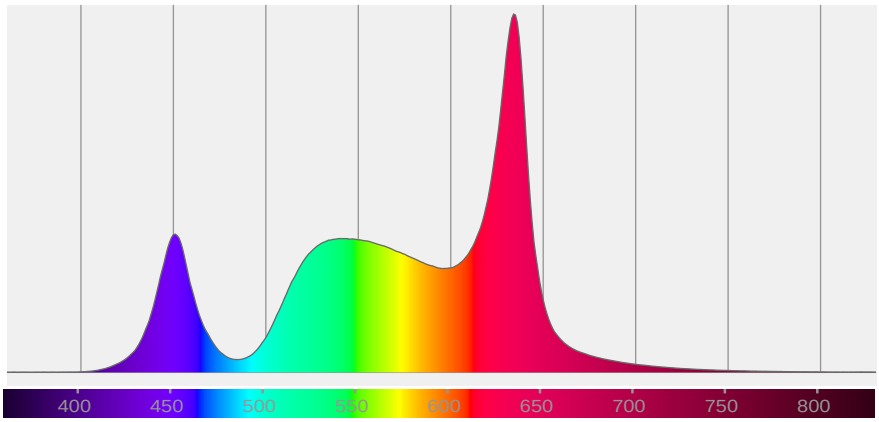
Operator:
Paolo Carvone

Date and time:
30/04/2020 11:22:01

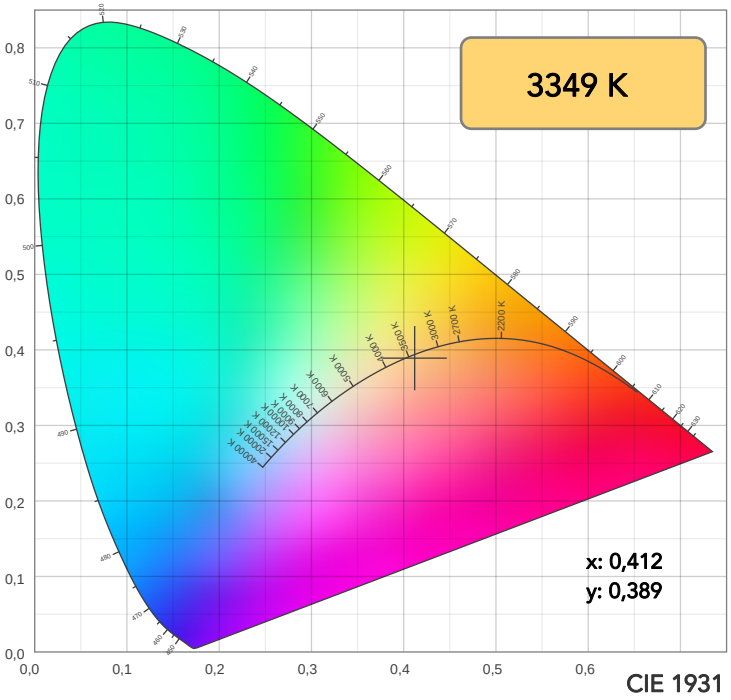


Beam angle 50%: 35,2°
Field angle 10%: 37,1°
Cut off angle 2.5%: 37,5°

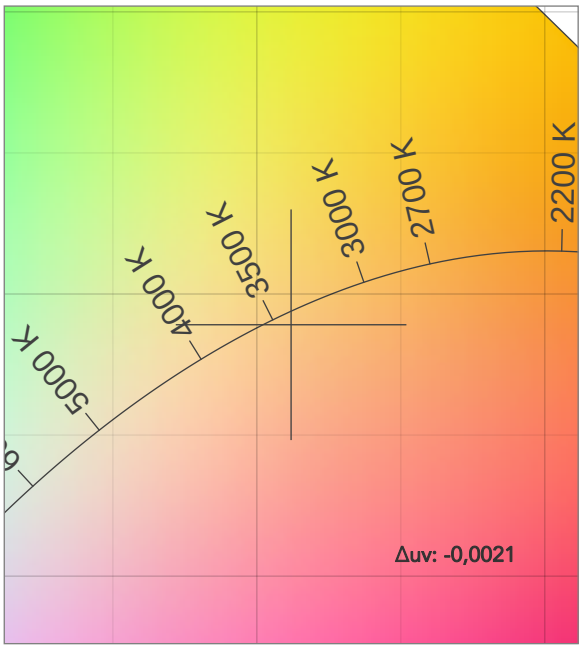
Spectra



COLOR DETAILS

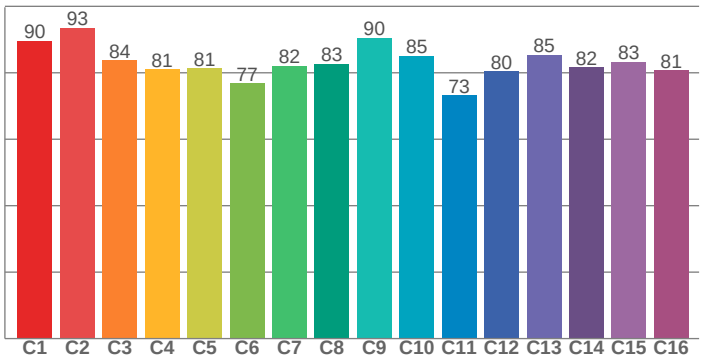


CIE 1931

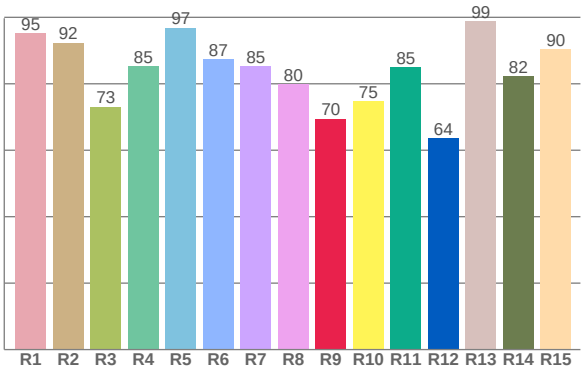


CIE 1931 ZOOM

TM30: 83,5



CRI: 86,9 (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
95,1	92,4	73,1	85,3	96,8	87,3	85,2	79,8	69,5	74,8	84,9	63,6	98,8	82,3	90,3

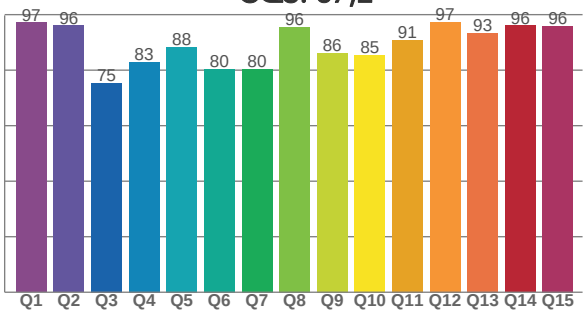
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
89,7	93,5	83,8	81,1	81,3	76,8	82,0	82,7	90,4	85,2	73,2	80,5	85,4	81,6	83,3	80,8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
97,2	96,1	75,4	82,9	88,4	80,4	80,5	95,5	86,2	85,5	90,8	97,4	93,4	96,1	95,9

CQS: 87,2



COLOR PARAMETERS

Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
3349 K	86,9	69,5	83,5	109,7	87,2	75	0,412	0,389	-0,0021

Via A. Olivetti snc
04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

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TM30 DETAILS

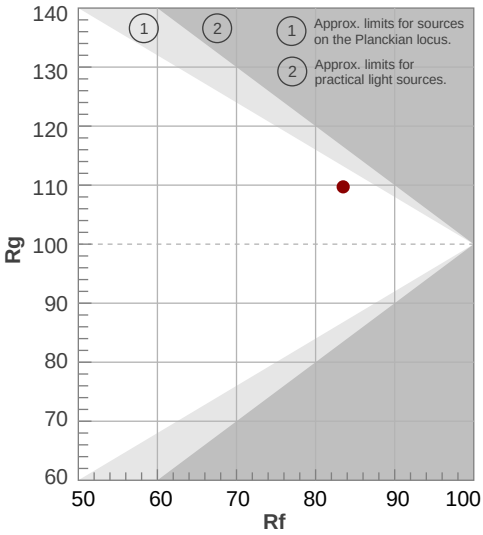
Rf 83,5

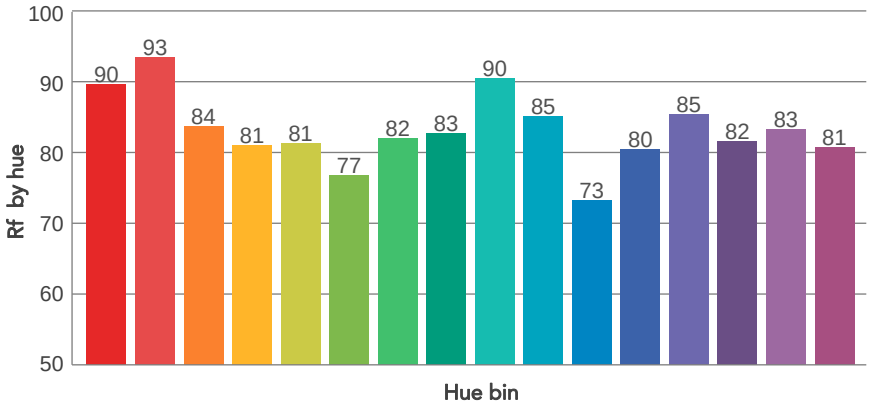
Fidelity index Rf

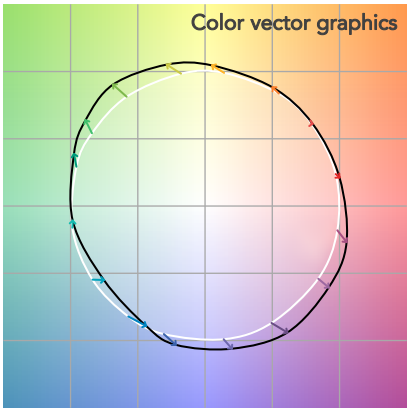
Rg 109,7

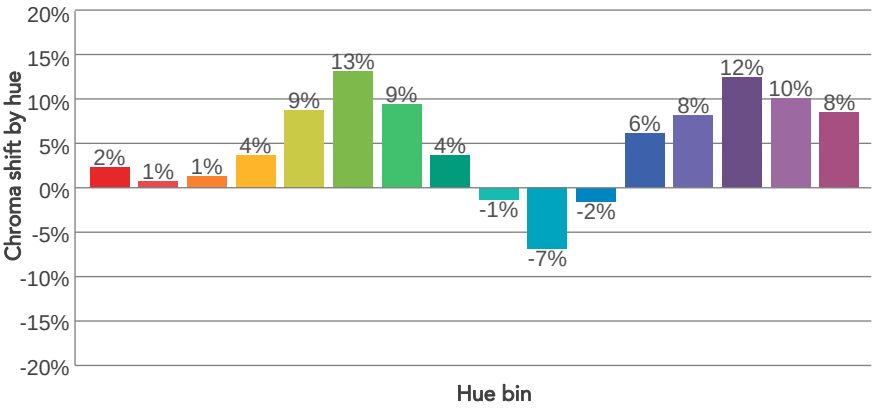
Gammut index

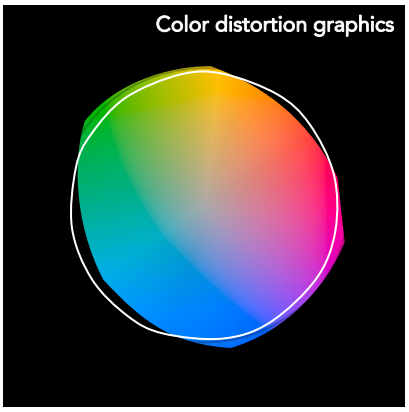
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	90	2%	-3%
2	93	1%	-1%
3	84	1%	7%
4	81	4%	10%
5	81	9%	9%
6	77	13%	3%
7	82	9%	-5%
8	83	4%	-9%
9	90	-1%	-5%
10	85	-7%	5%
11	73	-2%	15%
12	80	6%	10%
13	85	8%	5%
14	82	12%	6%
15	83	10%	-1%
16	81	8%	-7%

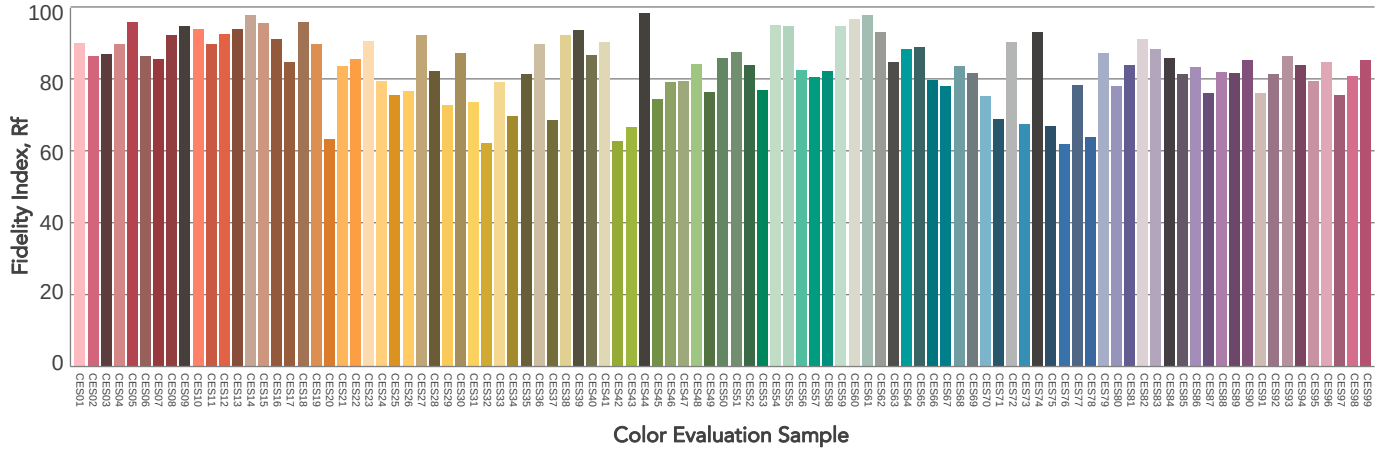












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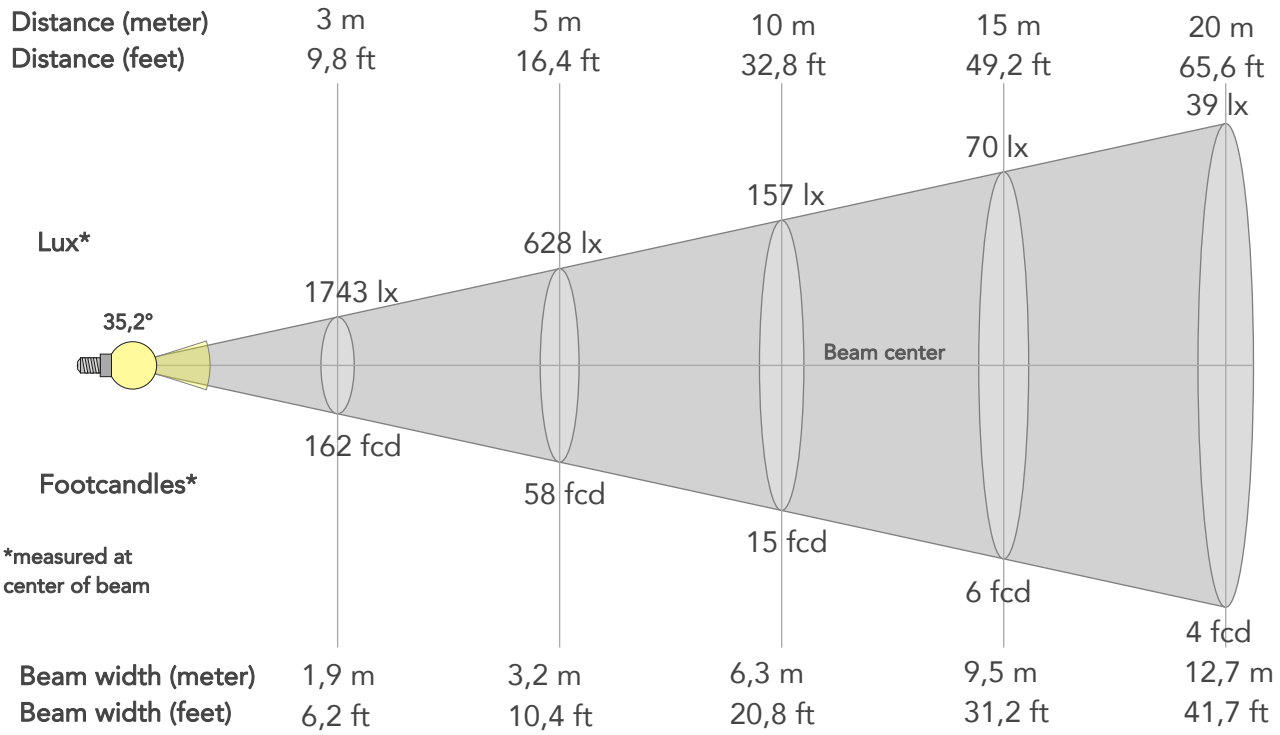
Via A. Olivetti snc
04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

prolights.it
info@prolights.it

BEAM DETAILS

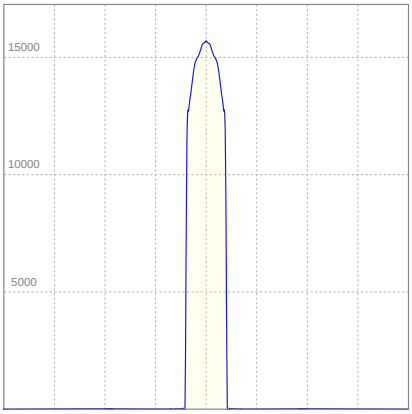
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
35,2°	37,1°	37,5°	96,8%	96,6%



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	15689lx	3922lx	1743lx	981lx	628lx	279lx	157lx	70lx	39lx	25lx	17lx	10lx	6lx
Footcand.	1458fcd	364fcd	162fcd	91fcd	58fcd	26fcd	15fcd	6fcd	4fcd	2fcd	2fcd	1fcd	1fcd
Beam wid.	0,6m	1,3m	1,9m	2,5m	3,2m	4,8m	6,3m	9,5m	12,7m	15,9m	19m	25,4m	31,7m
Beam wid.	2,1ft	4,2ft	6,2ft	8,3ft	10,4ft	15,6ft	20,8ft	31,2ft	41,7ft	52,1ft	62,5ft	83,3ft	104,1ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,598A	125,5W	35lm/W

Power FC
0,95

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Tel: +39 0771 72190

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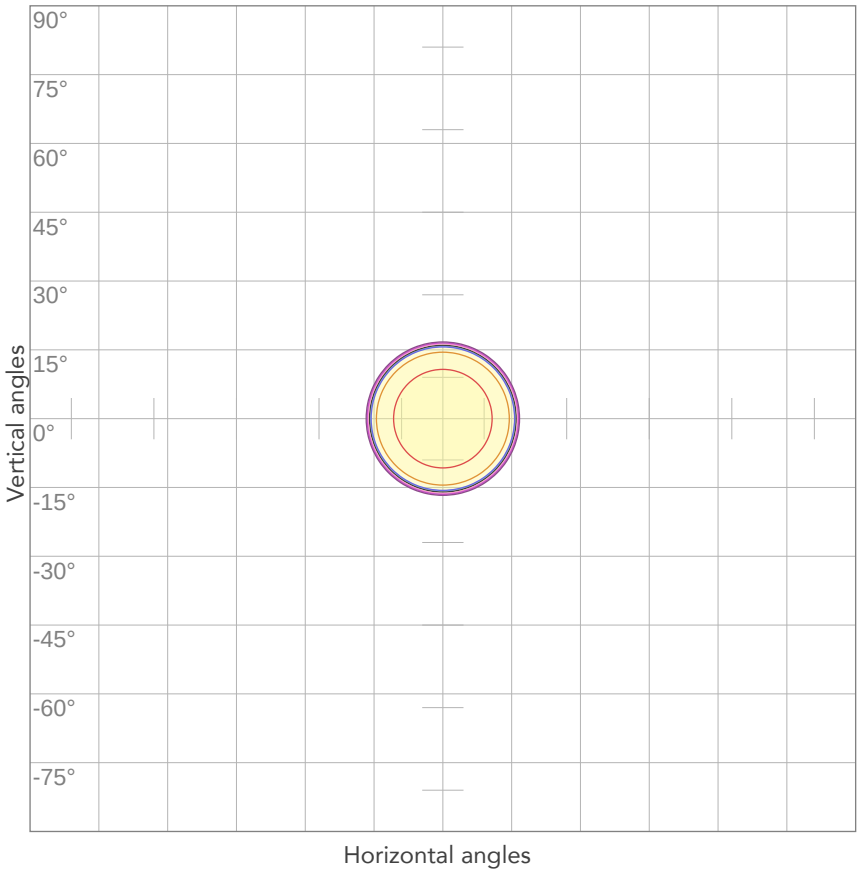
ISO DIAGRAMS

ISO CANDELA DIAGRAM



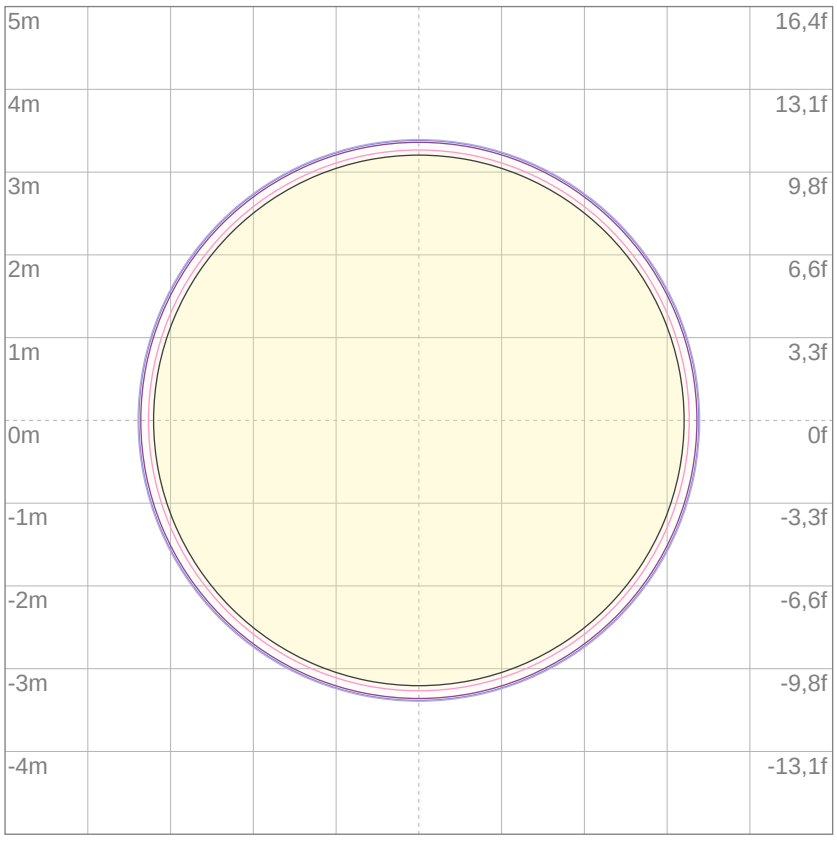
10%	1569 cd
20%	3138 cd
30%	4707 cd
40%	6276 cd
50%	7845 cd
60%	9414 cd
70%	10983 cd
80%	12551 cd

Conditions:

Number of c-planes: 2

Candela at center: 15689 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	4,71 lx
5%	7,84 lx
10%	15,7 lx
30%	47,1 lx
50%	78,4 lx

Conditions:

Number of c-planes: 2

Lux at center: 157 lx

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

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Total lumen output:

4736 lm

Peak candela output:

17138 cd

Light quality:

CRI: 86,4

Color temperature:

4003 K

PRODUCT NAME:

ECLFS

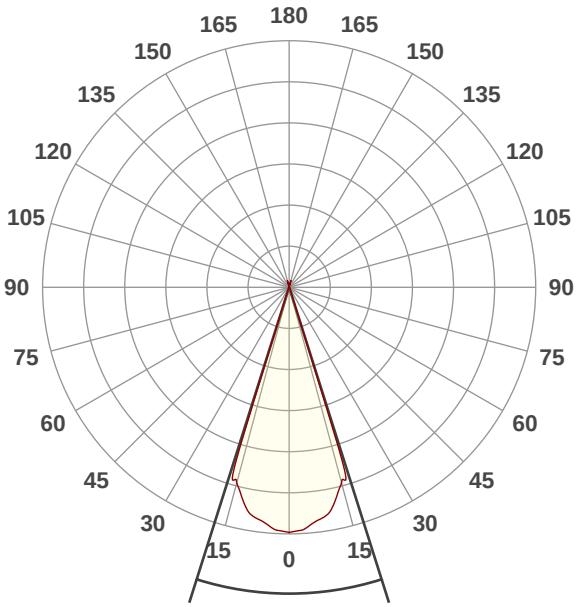
MEASURAMENT CONDITIONS:

Beam angle:
PRL36

Target:
4000K

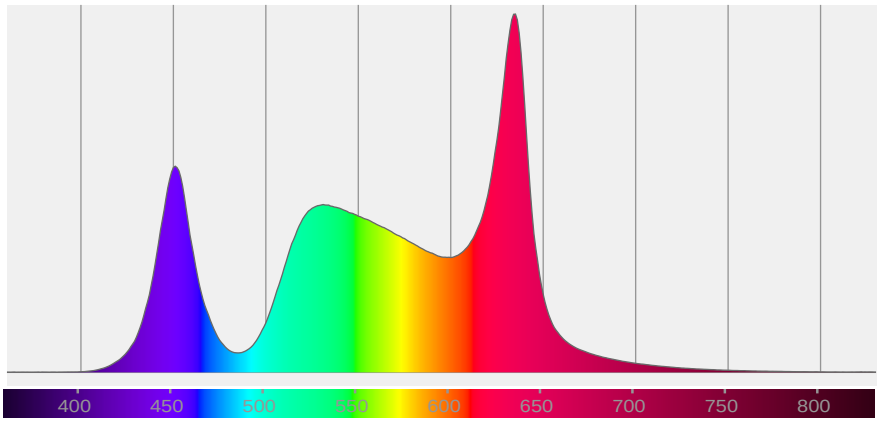
Operator:
Paolo Carvone

Date and time:
30/04/2020 11:20:29

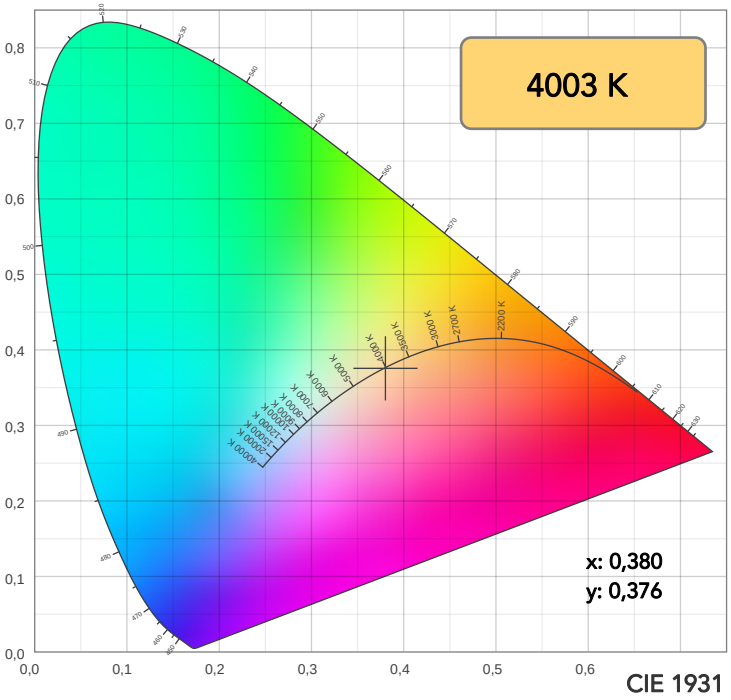


Beam angle 50%: 35,1°
Field angle 10%: 37,1°
Cut off angle 2.5%: 38,4°

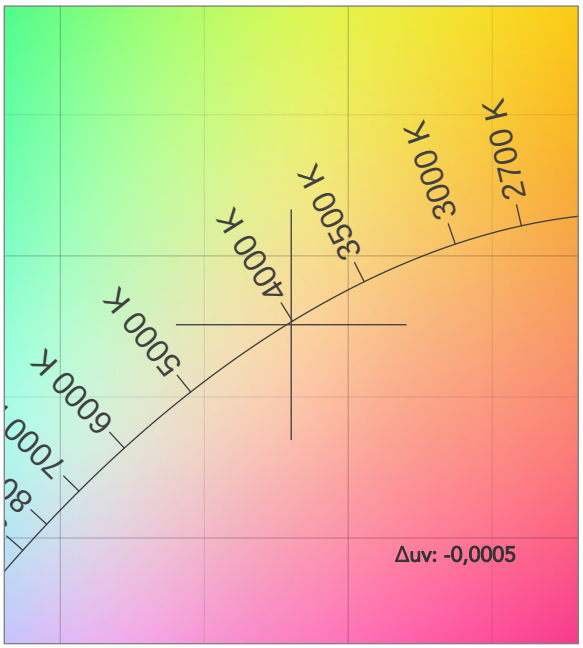
Spectra



COLOR DETAILS

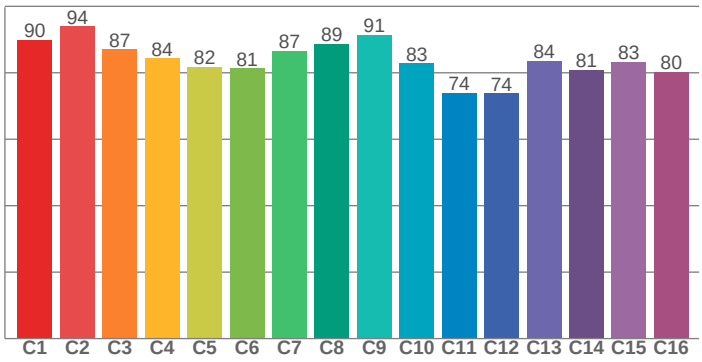


CIE 1931

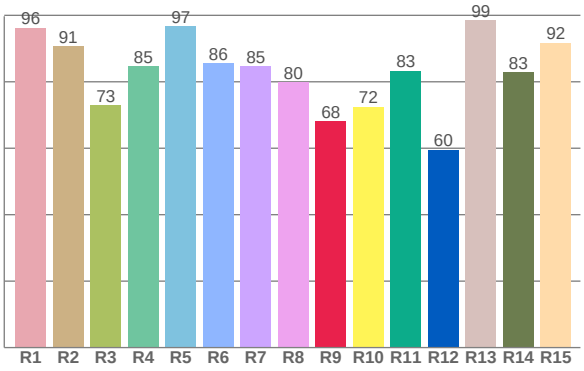


CIE 1931 ZOOM

TM30: 84,2



CRI: 86,4 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
96,3	90,8	72,9	84,8	96,7	85,5	84,6	79,9	68,2	72,4	83,4	59,5	98,5	82,8	91,8

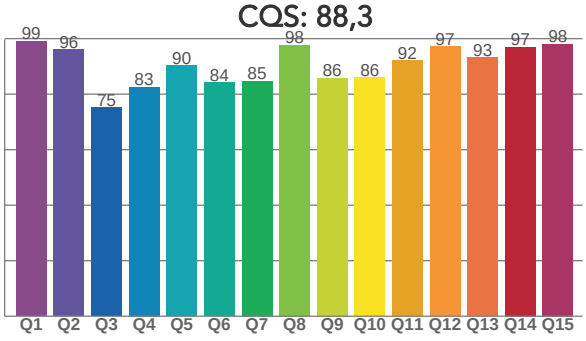
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
89,9	94,0	87,0	84,3	81,8	81,4	86,6	88,7	91,4	82,8	73,9	73,8	83,6	80,9	83,3	80,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
99,0	96,1	75,1	82,6	90,3	84,1	84,8	97,7	85,9	86,0	92,0	97,1	93,1	97,0	98,0

CQS: 88,3



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
4003 K	86,4	68,2	84,2	108,2	88,3	78	0,380	0,376	-0,0005

Via A. Olivetti snc
04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

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TM30 DETAILS

PROLiGHTS

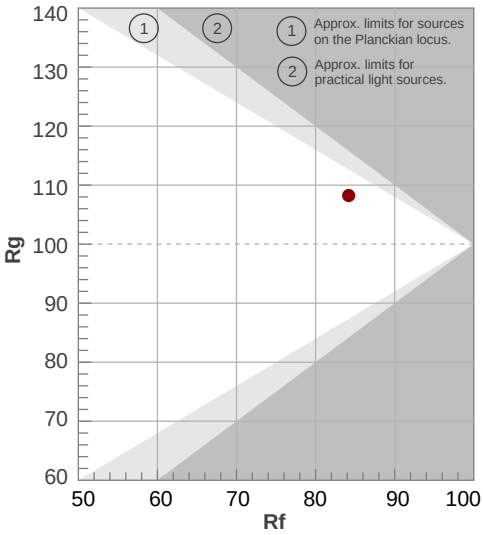
Rf 84,2

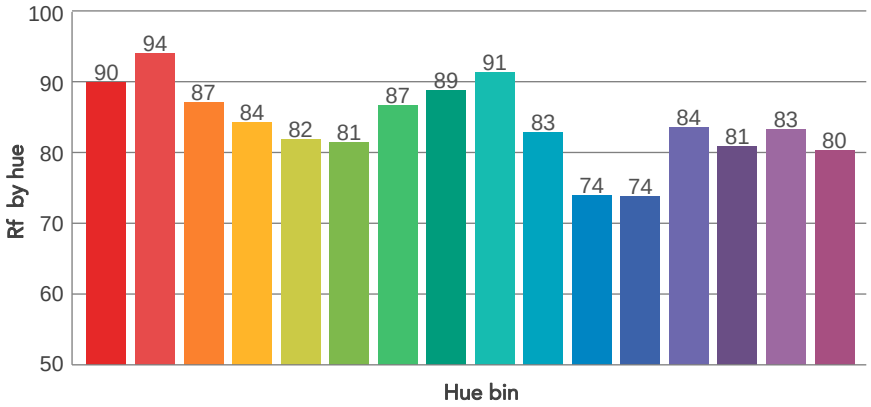
Fidelity index Rf

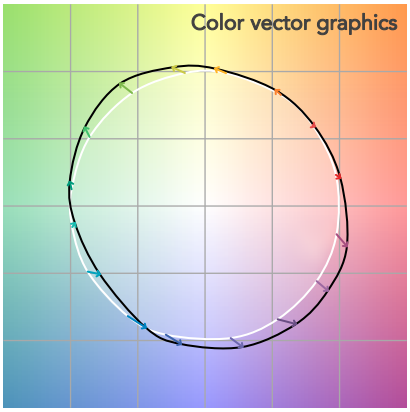
Rg 108,2

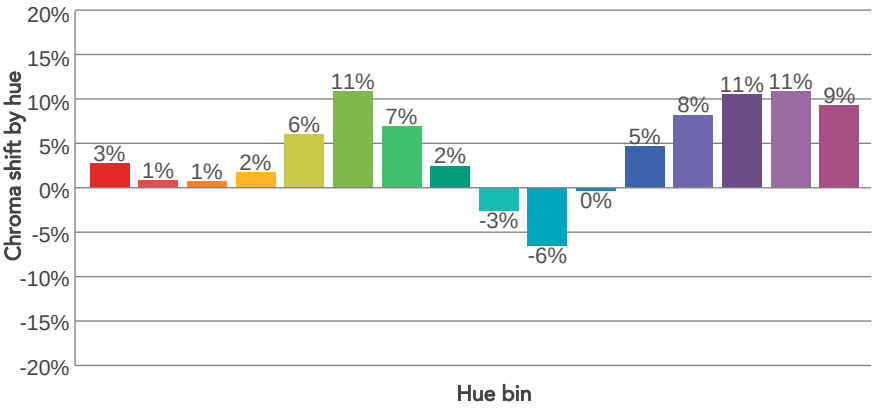
Gammut index

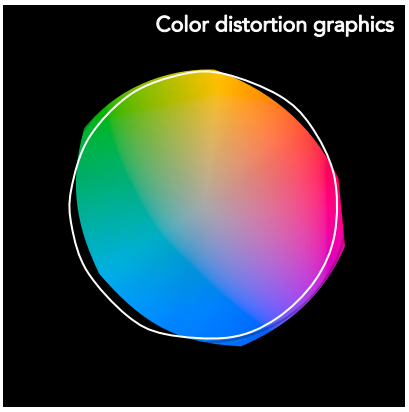
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	90	3%	-3%
2	94	1%	-2%
3	87	1%	5%
4	84	2%	9%
5	82	6%	8%
6	81	11%	4%
7	87	7%	-4%
8	89	2%	-5%
9	91	-3%	-2%
10	83	-6%	7%
11	74	0%	16%
12	74	5%	13%
13	84	8%	7%
14	81	11%	9%
15	83	11%	-1%
16	80	9%	-7%

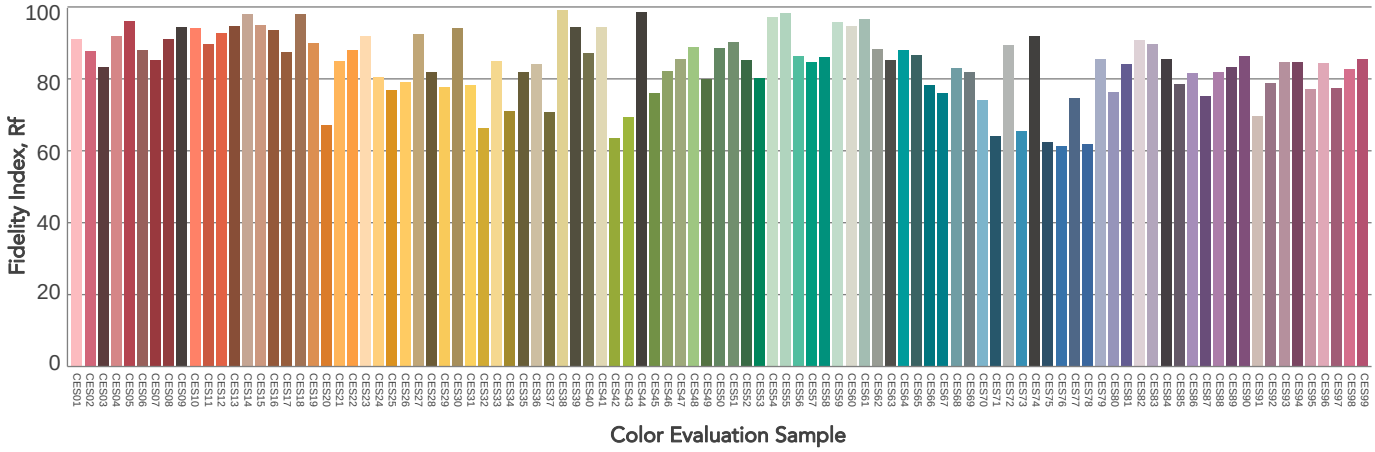












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04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

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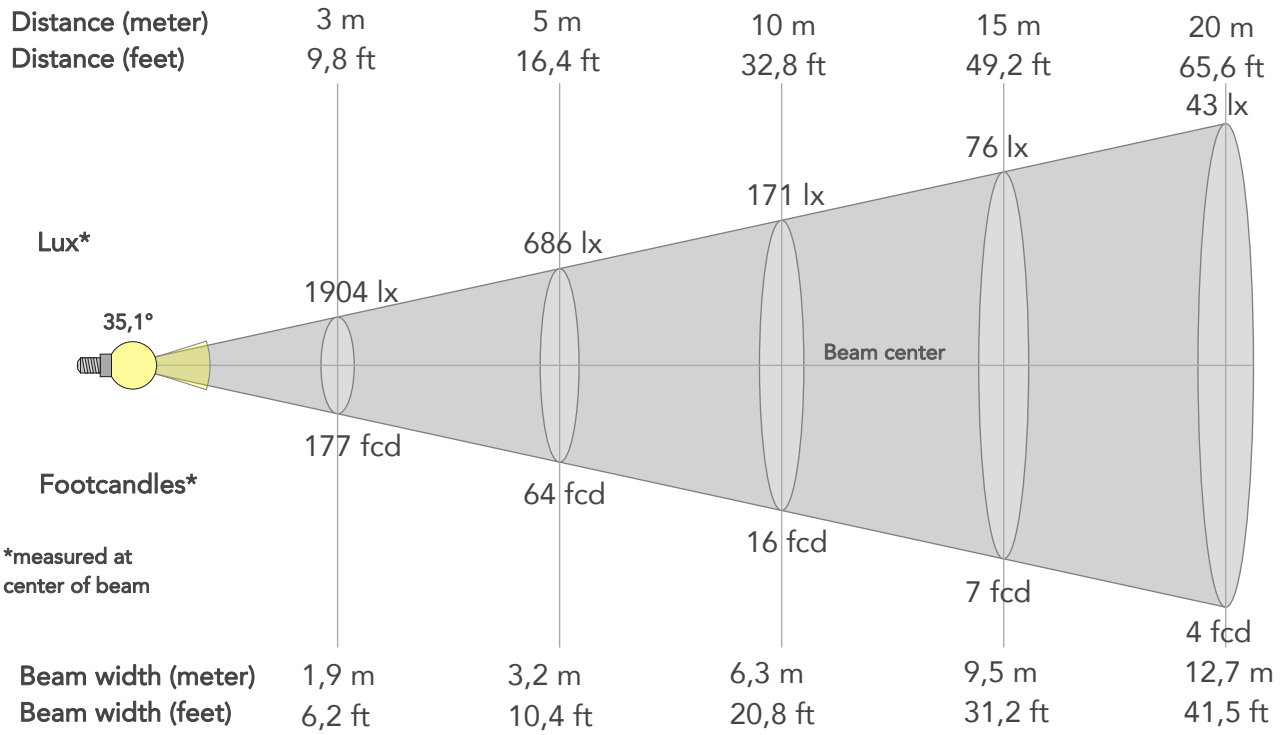
info@prolights.it

BEAM DETAILS

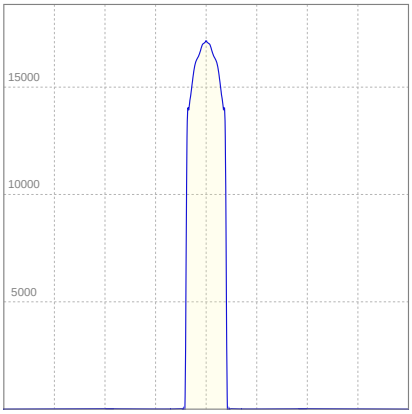
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
35,1°	37,1°	38,4°	96,8%	96,5%



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	17138lx	4285lx	1904lx	1071lx	686lx	305lx	171lx	76lx	43lx	27lx	19lx	11lx	7lx
Footcand.	1592fcd	398fcd	177fcd	100fcd	64fcd	28fcd	16fcd	7fcd	4fcd	3fcd	2fcd	1fcd	1fcd
Beam wid.	0,6m	1,3m	1,9m	2,5m	3,2m	4,7m	6,3m	9,5m	12,7m	15,8m	19m	25,3m	31,7m
Beam wid.	2,1ft	4,2ft	6,2ft	8,3ft	10,4ft	15,6ft	20,8ft	31,2ft	41,5ft	51,9ft	62,3ft	83,1ft	103,9ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,668A	141W	34lm/W

Power FC
0,95

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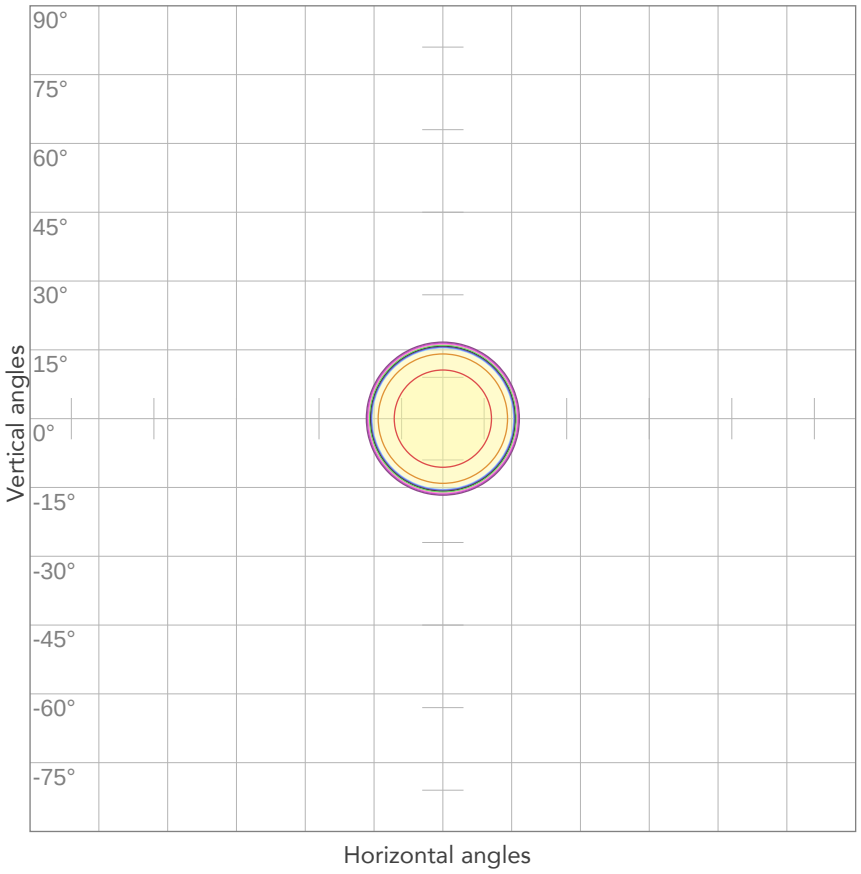
ISO DIAGRAMS

ISO CANDELA DIAGRAM



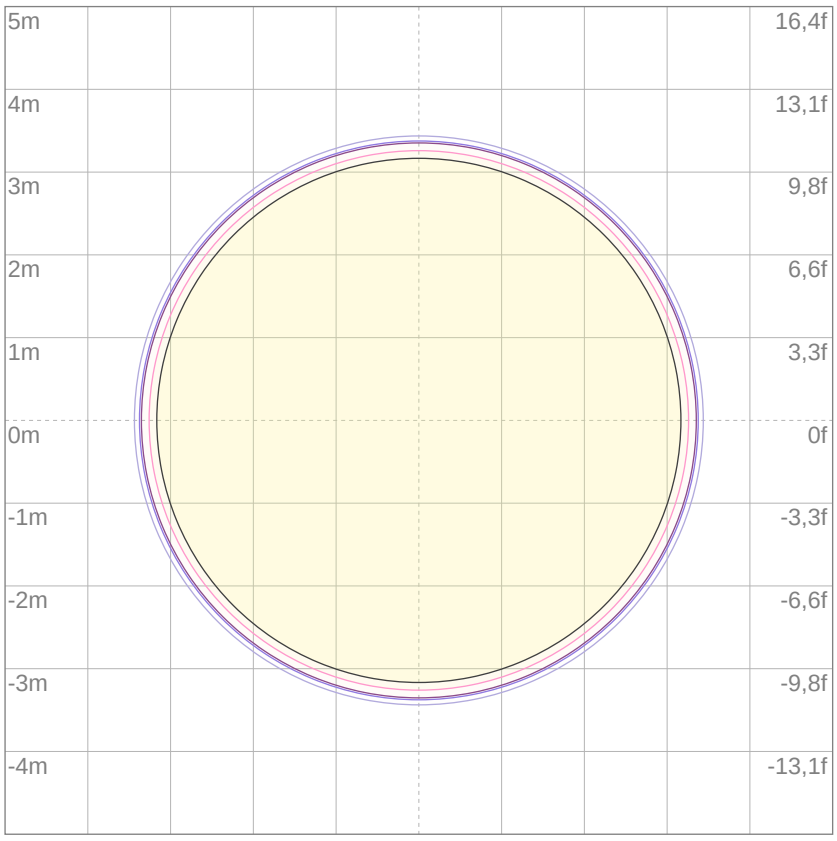
10%	1714 cd
20%	3428 cd
30%	5142 cd
40%	6855 cd
50%	8569 cd
60%	10283 cd
70%	11997 cd
80%	13711 cd

Conditions:

Number of c-planes: 2

Candela at center: 17138 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	5,14 lx
5%	8,57 lx
10%	17,1 lx
30%	51,4 lx
50%	85,7 lx

Conditions:

Number of c-planes: 2

Lux at center: 171 lx

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

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Total lumen output:

4989 lm

Peak candela output:

17968 cd

Light quality:

CRI: 86,1

Color temperature:

5560 K

PRODUCT NAME:

ECLFS

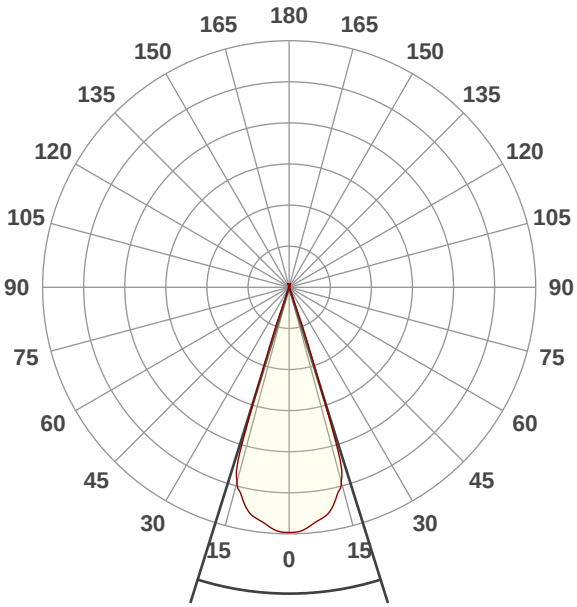
MEASURAMENT CONDITIONS:

Beam angle:
PRL36

Target:
5600K

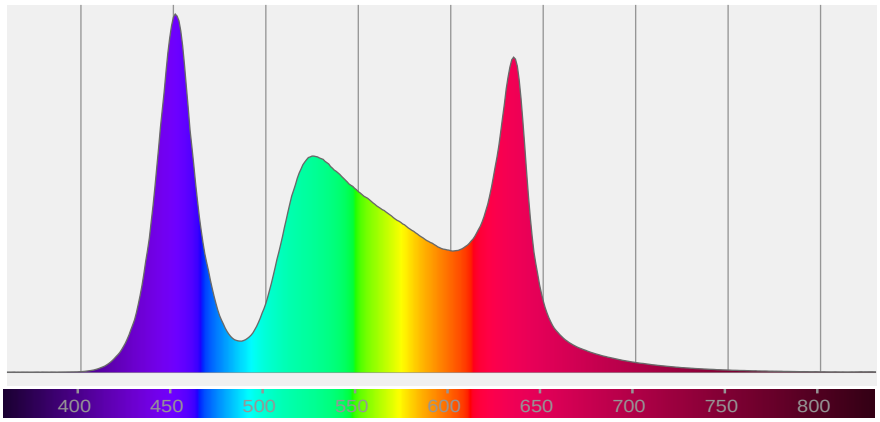
Operator:
Paolo Carvone

Date and time:
30/04/2020 11:18:46

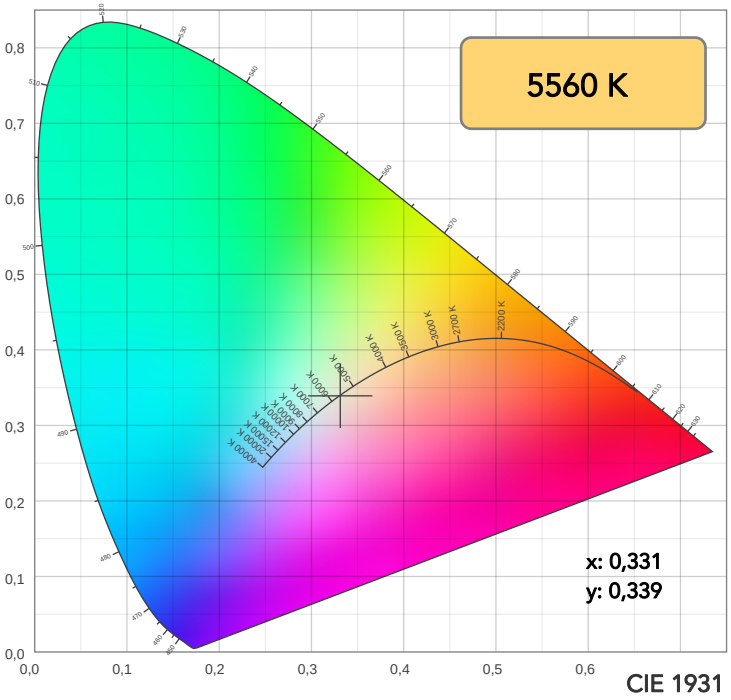


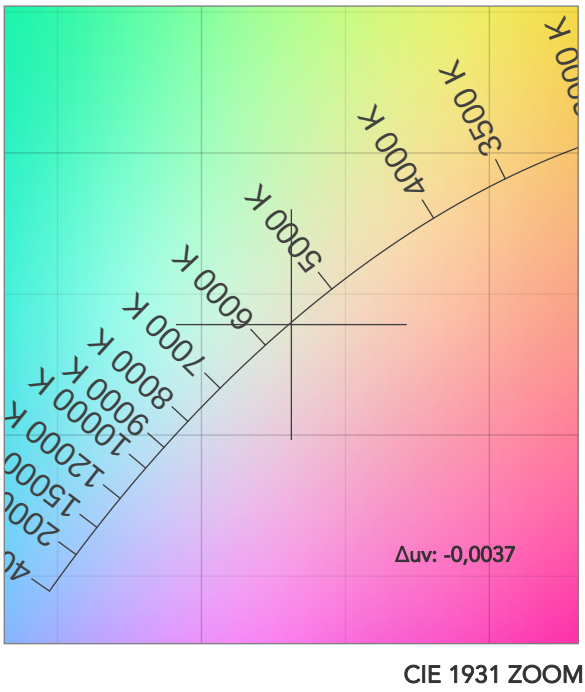
Beam angle 50%: 34,8°
Field angle 10%: 38,7°
Cut off angle 2.5%: 39,8°

Spectra

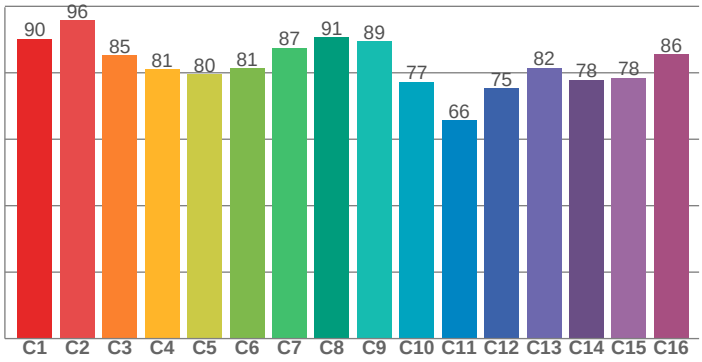


COLOR DETAILS

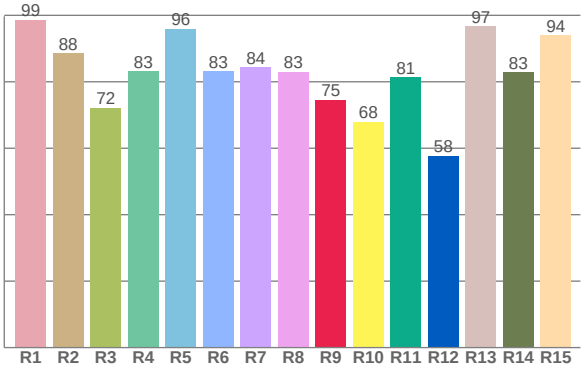




TM30: 82,5



CRI: 86,1 (R1-R8)



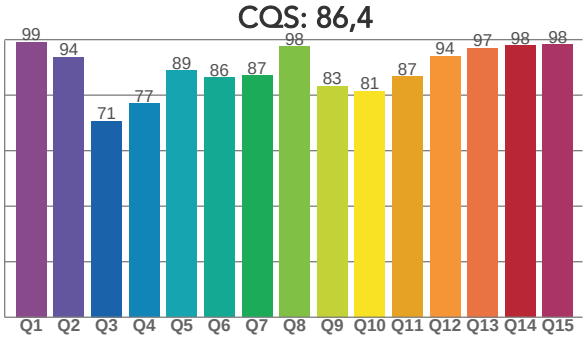
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
98,7	88,5	72,2	83,2	96,0	83,1	84,4	83,0	74,6	68,0	81,3	57,8	96,7	82,9	94,0

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
90,3	95,8	85,2	81,1	79,5	81,4	87,5	90,7	89,4	77,3	65,6	75,3	81,5	77,8	78,5	85,6

CQS: 86,4



CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
99,2	93,6	70,8	77,0	88,9	86,3	87,0	97,5	83,4	81,4	86,8	94,1	97,0	97,8	98,2

COLOR PARAMETERS

Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5560 K	86,1	74,6	82,5	107,6	86,4	82	0,331	0,339	-0,0037

Via A. Olivetti snc
04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

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TM30 DETAILS

PROLiGHTS

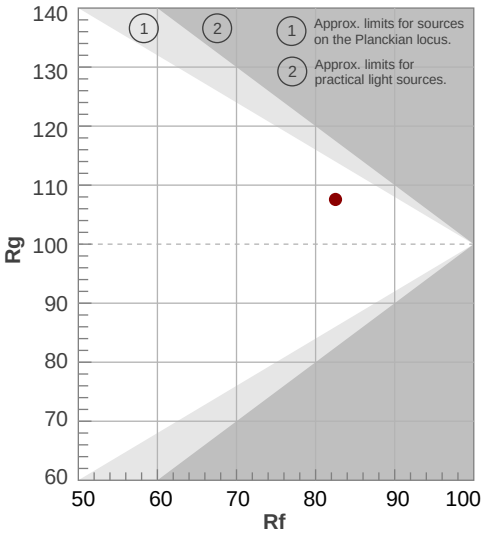
Rf 82,5

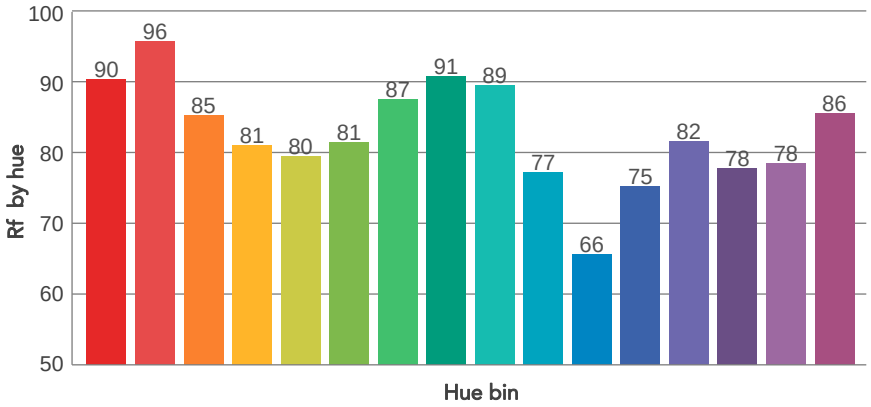
Fidelity index Rf

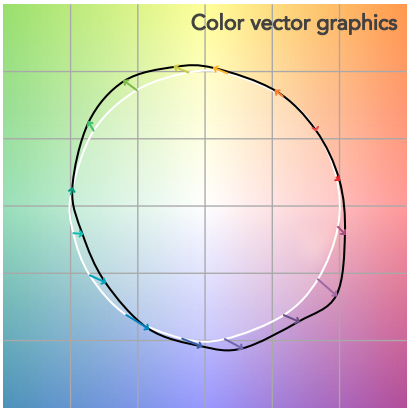
Rg 107,6

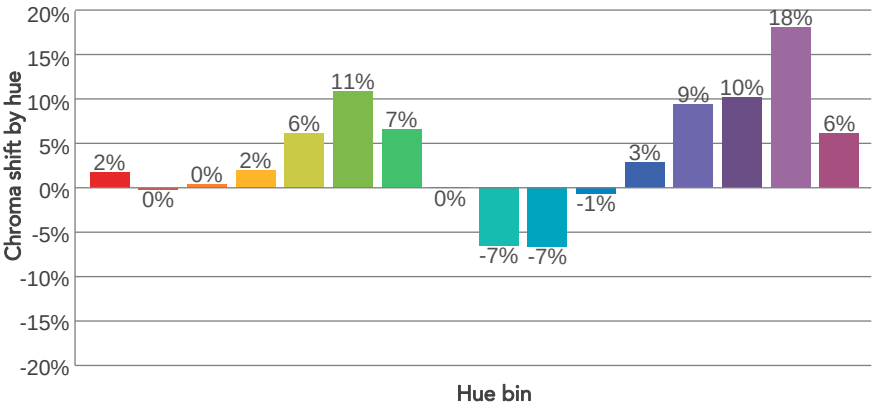
Gammut index

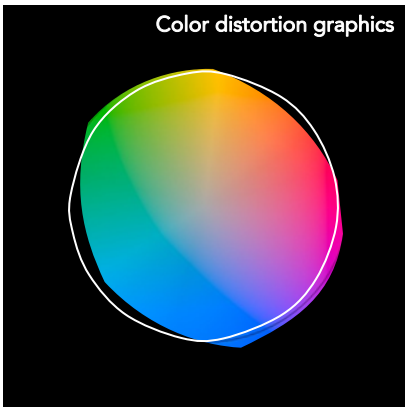
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	90	2%	-2%
2	96	0%	0%
3	85	0%	7%
4	81	2%	10%
5	80	6%	9%
6	81	11%	4%
7	87	7%	-3%
8	91	0%	-4%
9	89	-7%	2%
10	77	-7%	11%
11	66	-1%	19%
12	75	3%	15%
13	82	9%	11%
14	78	10%	7%
15	78	18%	-2%
16	86	6%	-4%

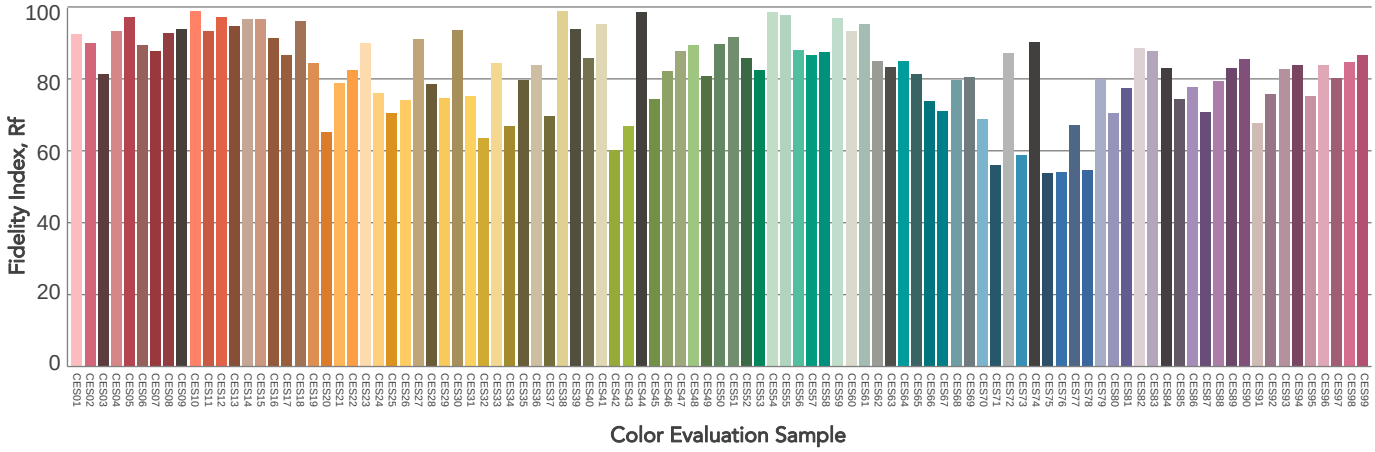












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Via A. Olivetti snc
04026 - Minturno (LT) ITALY
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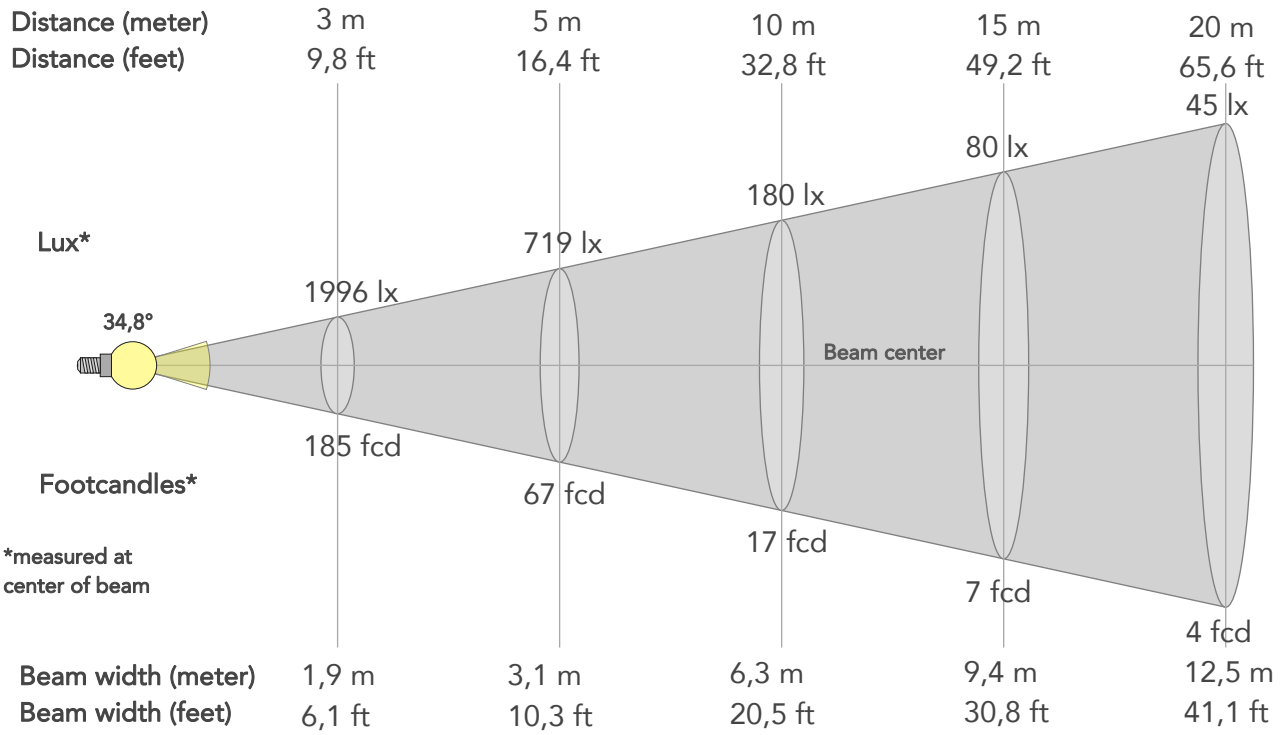
BEAM DETAILS

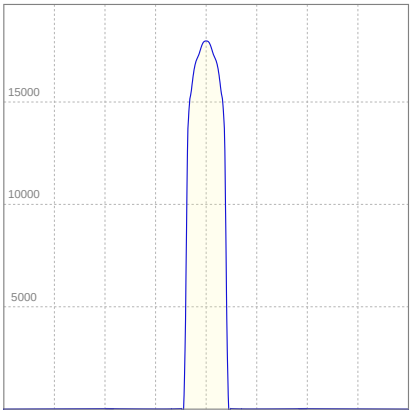
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
34,8°	38,7°	39,8°	96,6%	96,4%



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	17968lx	4492lx	1996lx	1123lx	719lx	319lx	180lx	80lx	45lx	29lx	20lx	11lx	7lx
Footcand.	1669fcd	417fcd	185fcd	104fcd	67fcd	30fcd	17fcd	7fcd	4fcd	3fcd	2fcd	1fcd	1fcd
Beam wid.	0,6m	1,3m	1,9m	2,5m	3,1m	4,7m	6,3m	9,4m	12,5m	15,6m	18,8m	25m	31,3m
Beam wid.	2,1ft	4,1ft	6,1ft	8,2ft	10,3ft	15,4ft	20,5ft	30,8ft	41,1ft	51,3ft	61,6ft	82,1ft	102,6ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,727A	153,9W	32lm/W

Power FC
0,95

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Tel: +39 0771 72190

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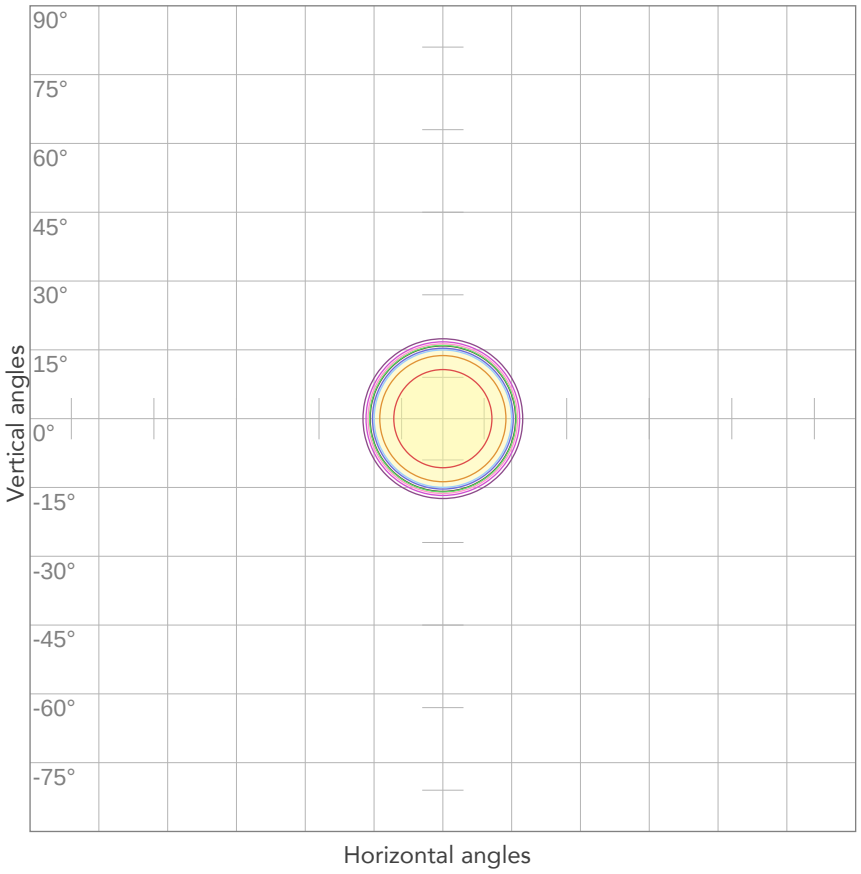
ISO DIAGRAMS

ISO CANDELA DIAGRAM



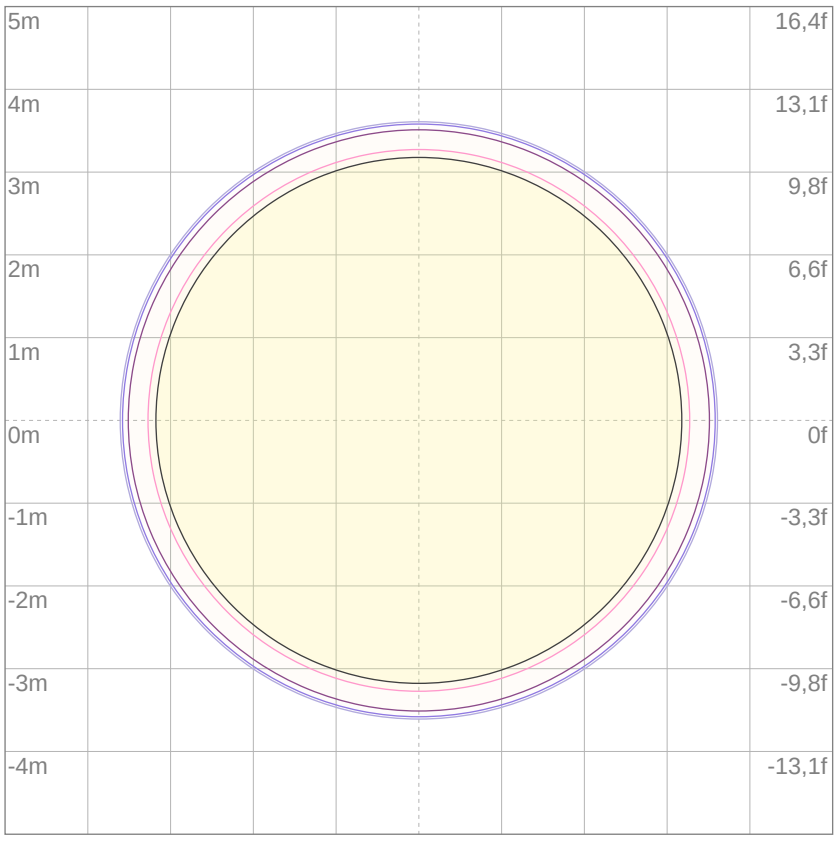
10%	1797 cd
20%	3594 cd
30%	5390 cd
40%	7187 cd
50%	8984 cd
60%	10781 cd
70%	12577 cd
80%	14374 cd

Conditions:

Number of c-planes: 2

Candela at center: 17968 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	5,39 lx
5%	8,98 lx
10%	18,0 lx
30%	53,9 lx
50%	89,8 lx

Conditions:

Number of c-planes: 2

Lux at center: 180 lx

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

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Total lumen output:

4862 lm

Peak candela output:

17567 cd

Light quality:

CRI: 86,1

Color temperature:

6021 K

PRODUCT NAME:

ECLFS

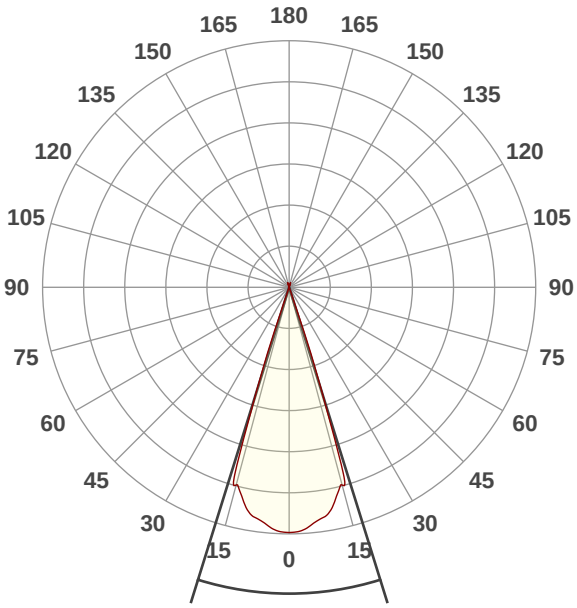
MEASURAMENT CONDITIONS:

Beam angle:
PRL36

Target:
6000K

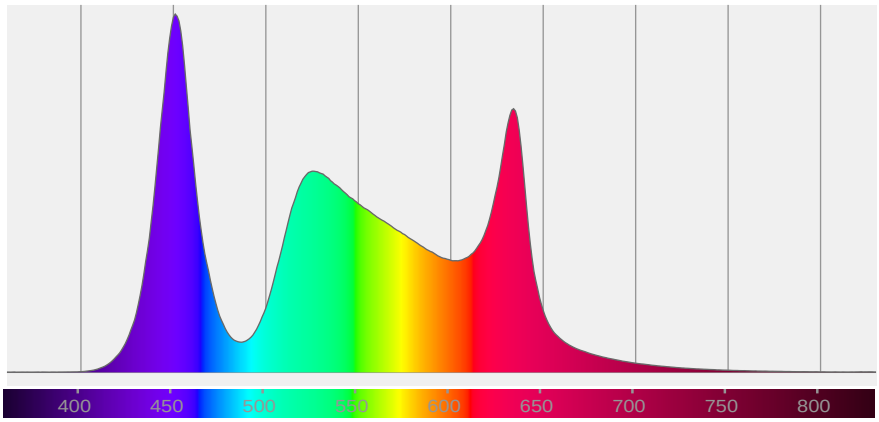
Operator:
Paolo Carvone

Date and time:
30/04/2020 11:17:08



Beam angle 50%: 34,6°
Field angle 10%: 38,3°
Cut off angle 2.5%: 39,1°

Spectra



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Tel: +39 0771 72190

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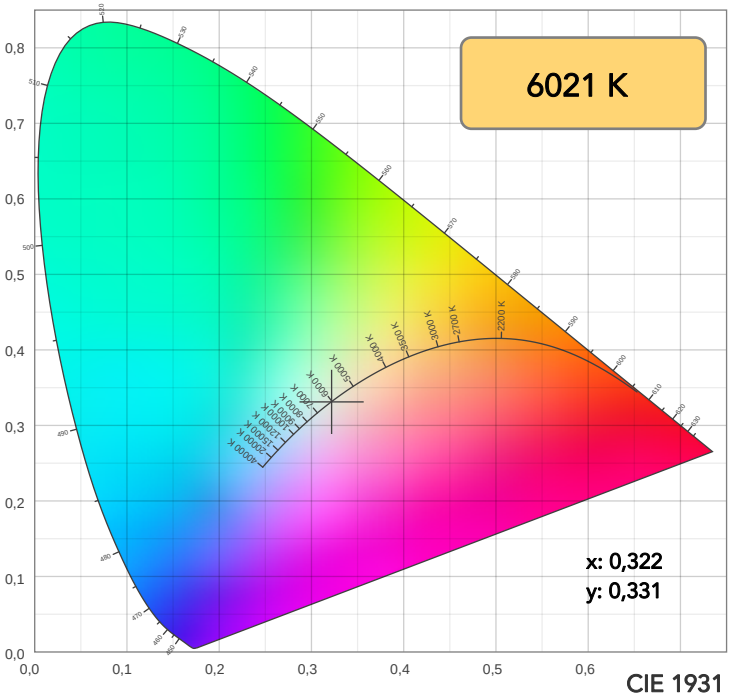
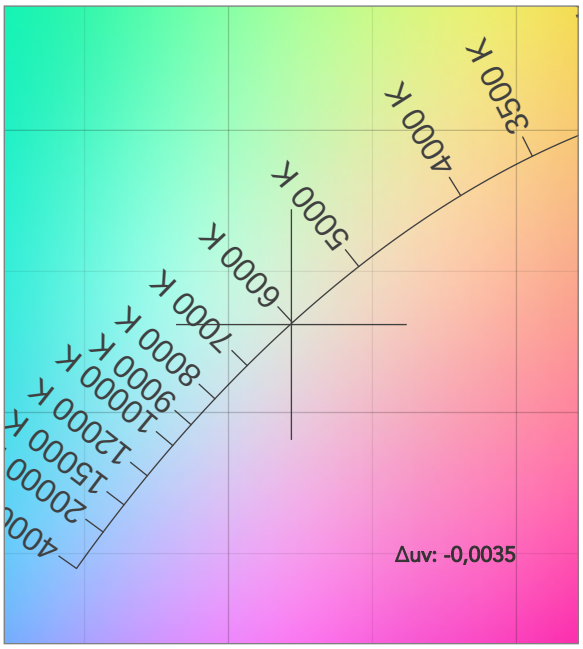
COLOR DETAILS

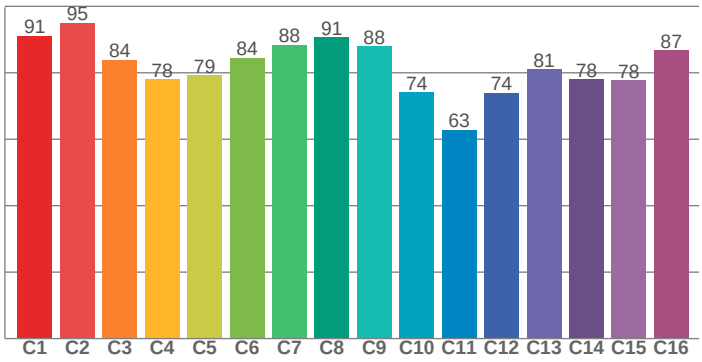


CIE 1931

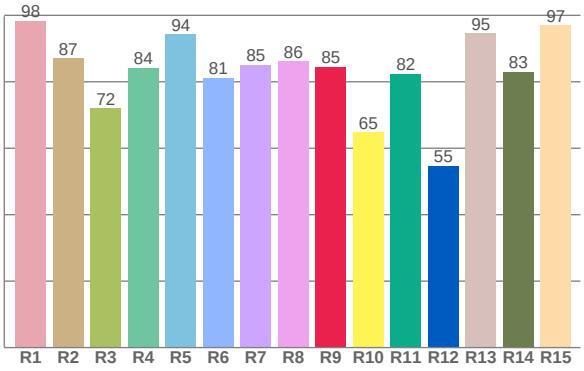


CIE 1931 ZOOM

TM30: 81,9



CRI: 86,1 (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
98,4	87,1	72,1	84,2	94,2	81,2	85,1	86,3	84,5	64,8	82,4	54,7	94,6	83,1	97,0

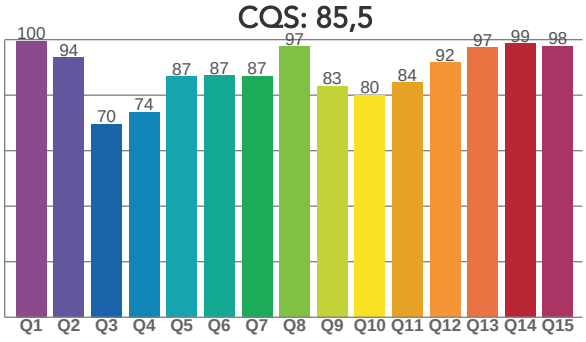
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91,1	95,0	83,8	78,0	79,2	84,4	88,4	90,7	87,9	74,1	62,8	74,0	81,0	78,1	77,8	86,7

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
99,5	93,5	69,6	74,0	86,8	87,0	87,0	97,5	83,3	80,1	84,5	91,7	97,1	98,6	97,7

CQS: 85,5



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
6021 K	86,1	84,5	81,9	106,4	85,5	82	0,322	0,331	-0,0035

Via A. Olivetti snc
04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

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TM30 DETAILS

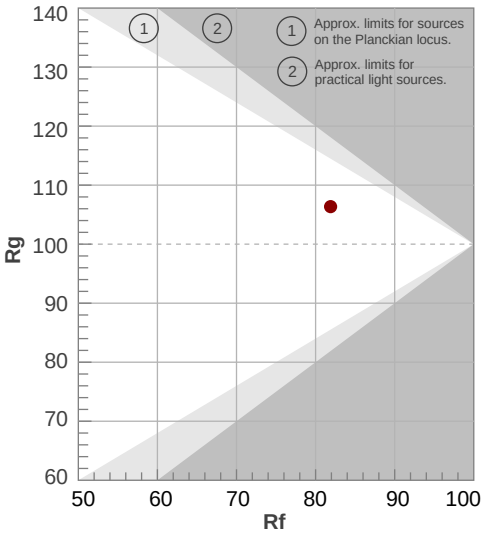
Rf 81,9

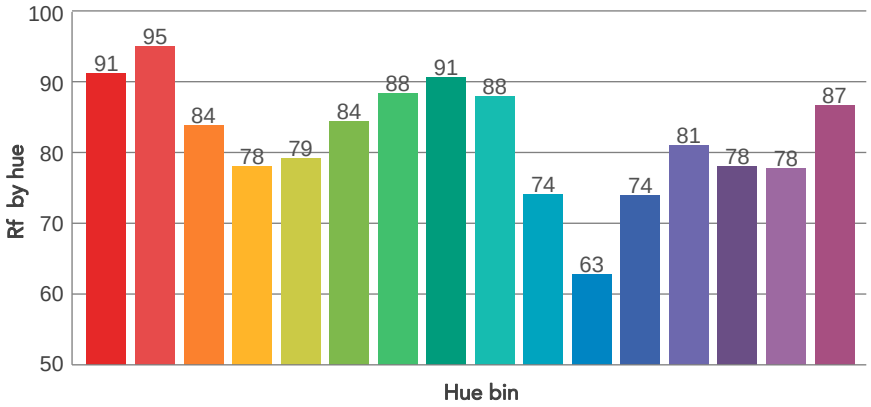
Fidelity index Rf

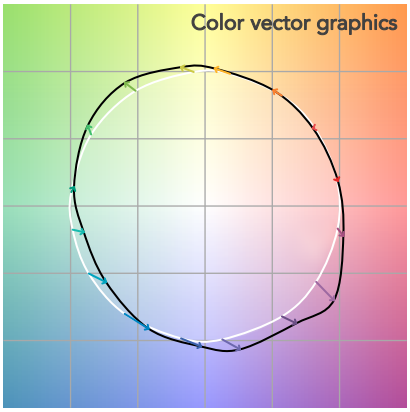
Rg 106,4

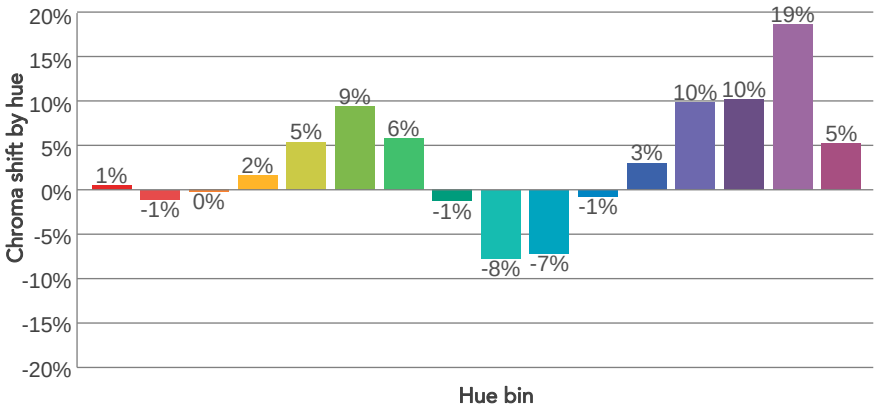
Gammut index

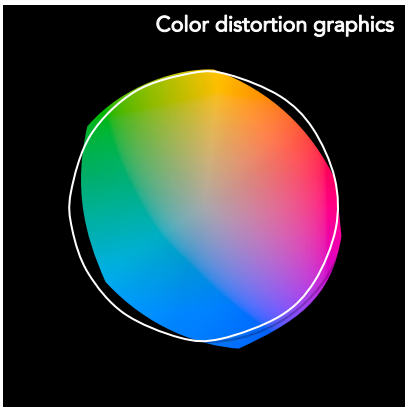
Hue Bin	R_f	Graphic shifts (%) Chroma	Hue
1	91	1%	-2%
2	95	-1%	0%
3	84	0%	7%
4	78	2%	12%
5	79	5%	9%
6	84	9%	3%
7	88	6%	-4%
8	91	-1%	-4%
9	88	-8%	3%
10	74	-7%	13%
11	63	-1%	21%
12	74	3%	16%
13	81	10%	12%
14	78	10%	6%
15	78	19%	-4%
16	87	5%	-5%

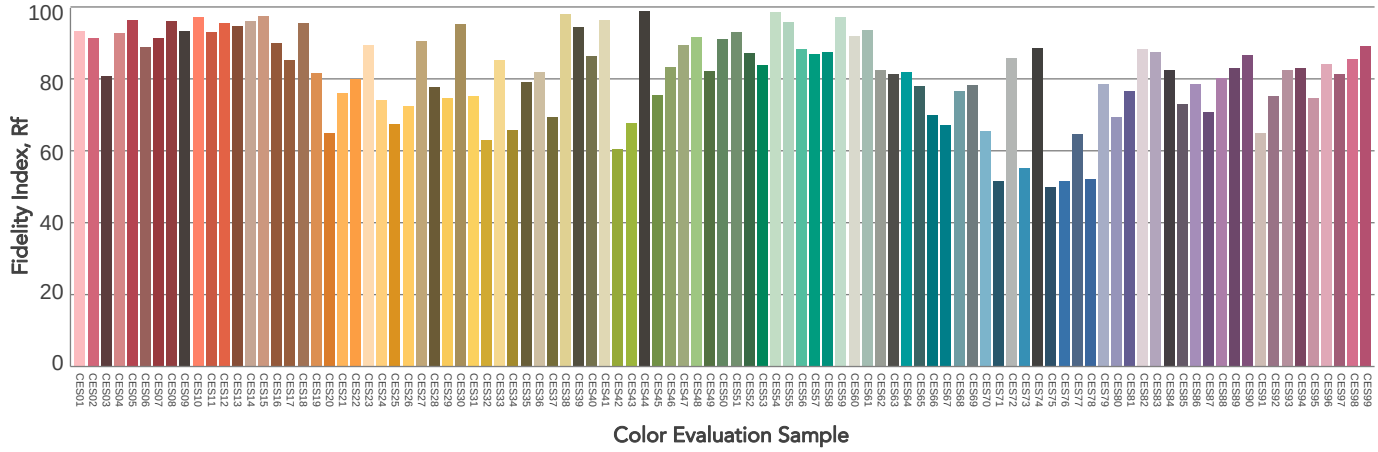












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04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

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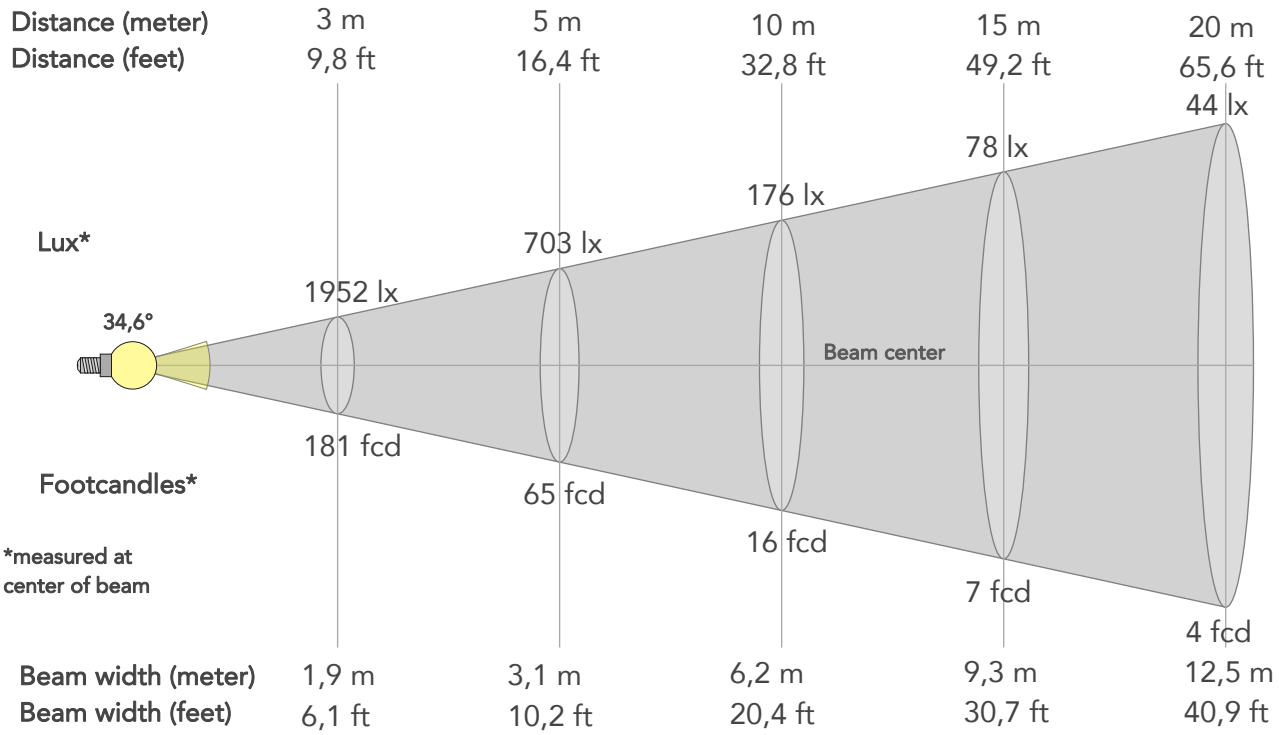
BEAM DETAILS

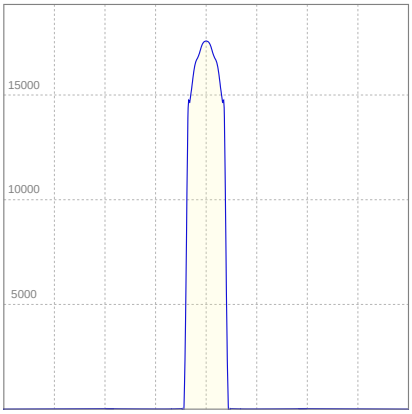
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
34,6°	38,3°	39,1°	96,7%	96,5%



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	17567lx	4392lx	1952lx	1098lx	703lx	312lx	176lx	78lx	44lx	28lx	20lx	11lx	7lx
Footcand.	1632fcd	408fcd	181fcd	102fcd	65fcd	29fcd	16fcd	7fcd	4fcd	3fcd	2fcd	1fcd	1fcd
Beam wid.	0,6m	1,2m	1,9m	2,5m	3,1m	4,7m	6,2m	9,3m	12,5m	15,6m	18,7m	24,9m	31,2m
Beam wid.	2,1ft	4,1ft	6,1ft	8,2ft	10,2ft	15,3ft	20,4ft	30,7ft	40,9ft	51,1ft	61,3ft	81,8ft	102,2ft

LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,710A	150,4W	32lm/W

Power FC
0,95

Via A. Olivetti snc
04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

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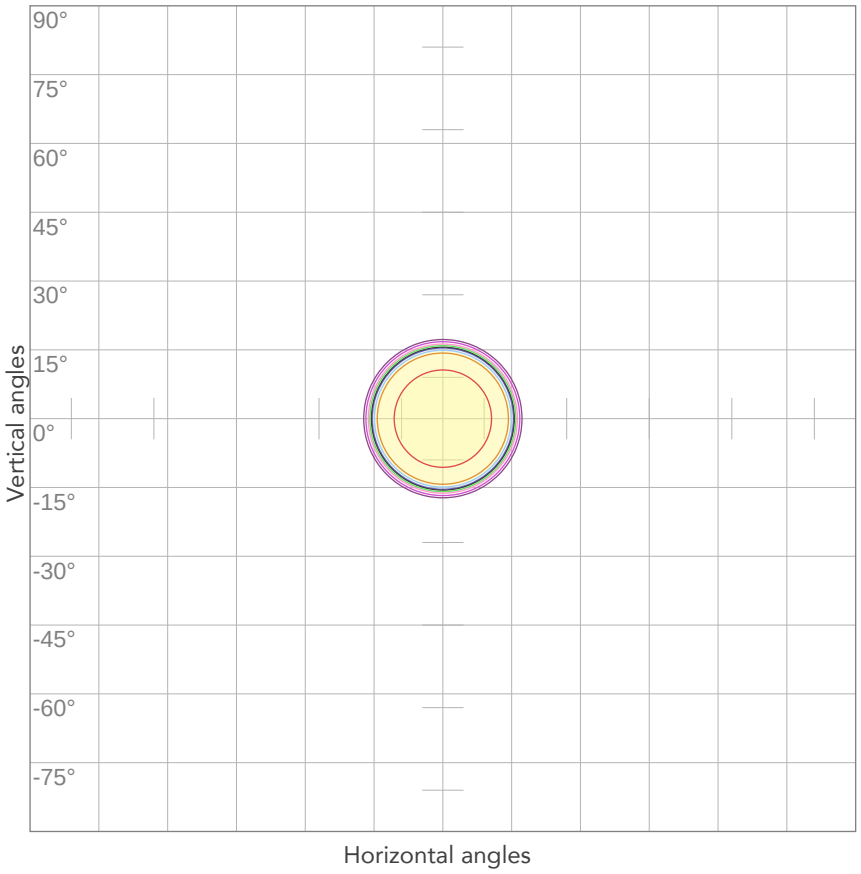
ISO DIAGRAMS

ISO CANDELA DIAGRAM



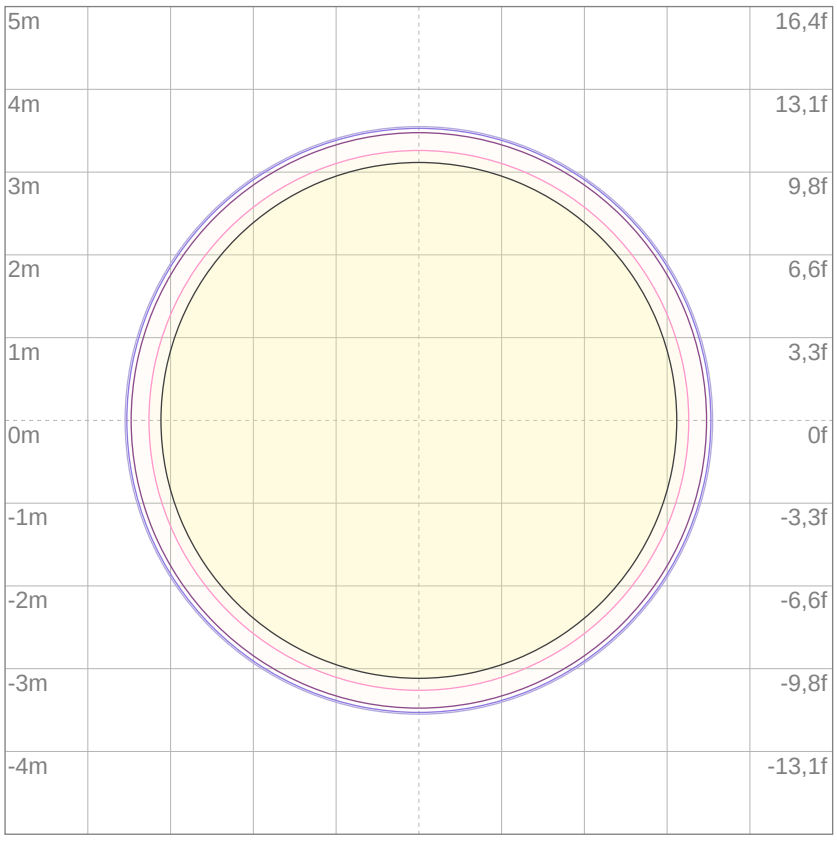
10%	1757 cd
20%	3513 cd
30%	5270 cd
40%	7027 cd
50%	8784 cd
60%	10540 cd
70%	12297 cd
80%	14054 cd

Conditions:

Number of c-planes: 2

Candela at center: 17567 cd

ISO LUX DIAGRAM



Mounting height: 10 meters (33 feet)

3%	5,27 lx
5%	8,78 lx
10%	17,6 lx
30%	52,7 lx
50%	87,8 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.

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04026 - Minturno (LT) ITALY
Tel: +39 0771 72190

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