



# Photometric Test Report



## ECLFS PRL70

High power RGBL full spectrum ellipsoidal LED

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## TESTING PROCESS

Prolights has its own optical testing laboratory in order to provide accurate photometric reports for its lighting products. The testing laboratory contains certain variety of precise lighting measurement systems that ensure an optimal reading of all the characteristic parameters of the lighting devices. All measurements are made at a controlled room temperature of 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:

5475 lm

Peak candela output:

5900 cd

**PRODUCT NAME:**

ECLFS

**MEASURAMENT CONDITIONS:**

Beam angle:

PRL70

Target:

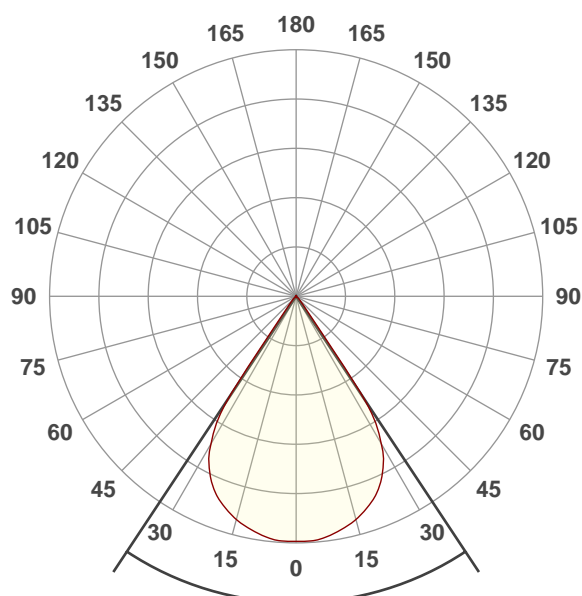
Full On

Operator:

Paolo Carvone

Date and time:

09/07/2021 12:40:11

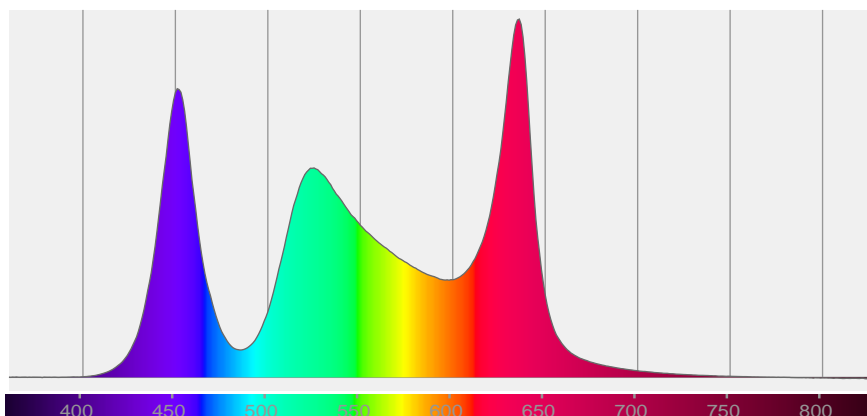


Beam angle 50%: 67,1°

Field angle 10%: 73,8°

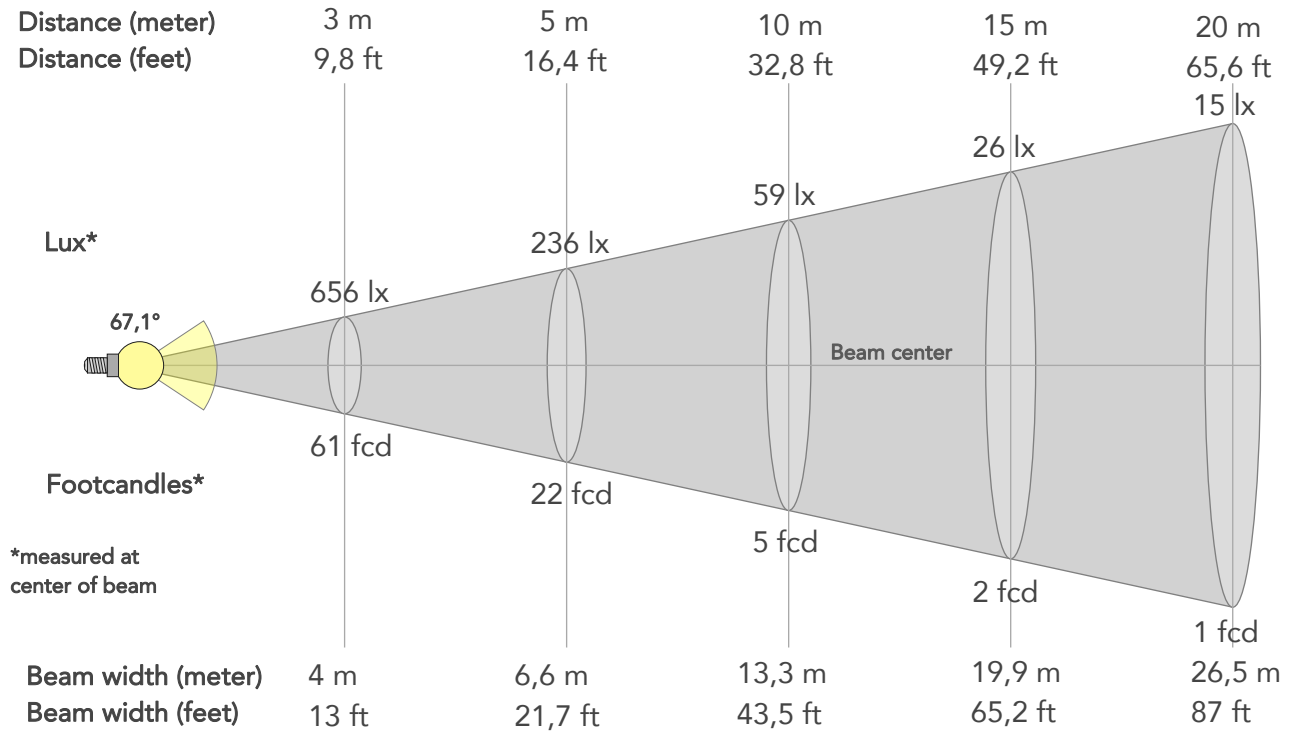
Cut off angle 2.5%: 79,3°

**Spectra**



## BEAM DETAILS

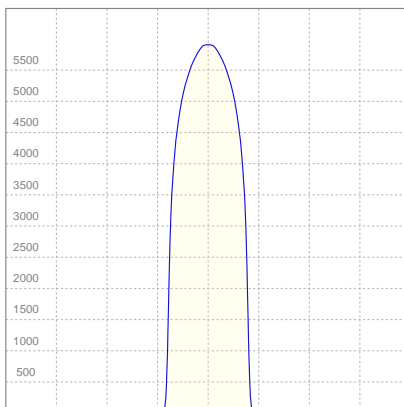
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
67,1°	73,8°	79,3°	100,0%	100,0%



### BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	5900lx	1475lx	656lx	369lx	236lx	105lx	59lx	26lx	15lx	9lx	7lx	4lx	2lx
Footcand.	548fcd	137fcd	61fcd	34fcd	22fcd	10fcd	5fcd	2fcd	1fcd	1fcd	1fcd	0fcd	0fcd
Beam wid.	1,3m	2,7m	4m	5,3m	6,6m	9,9m	13,3m	19,9m	26,5m	33,2m	39,8m	53m	66,3m
Beam wid.	4,4ft	8,8ft	13ft	17,4ft	21,7ft	32,6ft	43,5ft	65,2ft	87ft	108,7ft	130,5ft	174ft	217,5ft

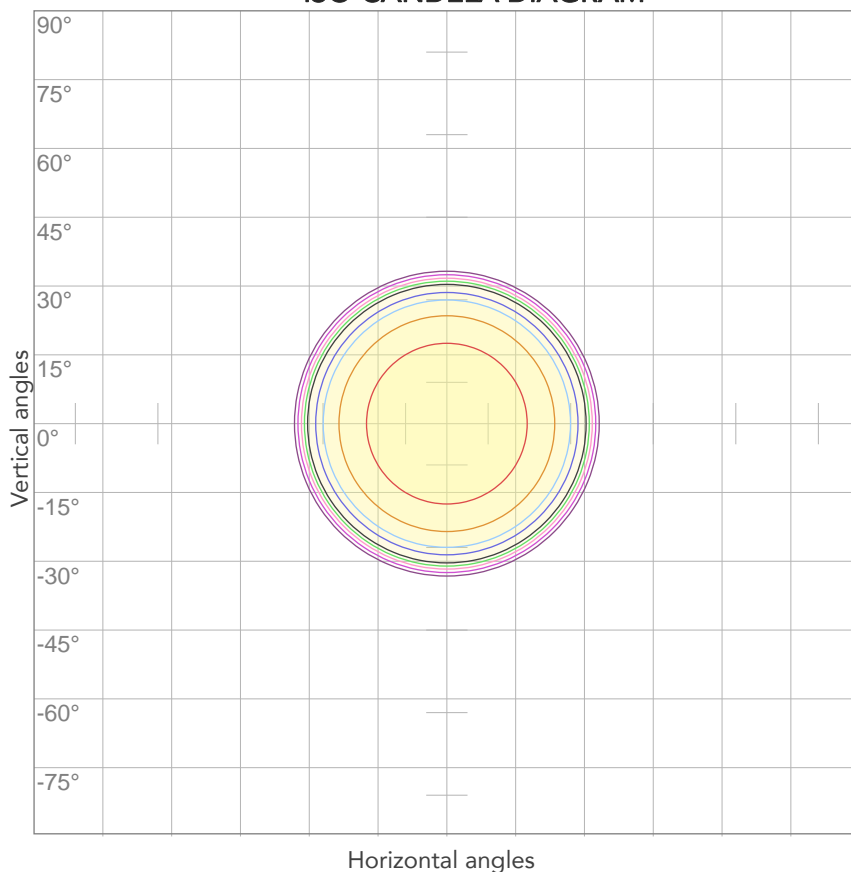
### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,912A	195,4W	28lm/W
Power FC			
0,95			

## ISO CANDELA DIAGRAM



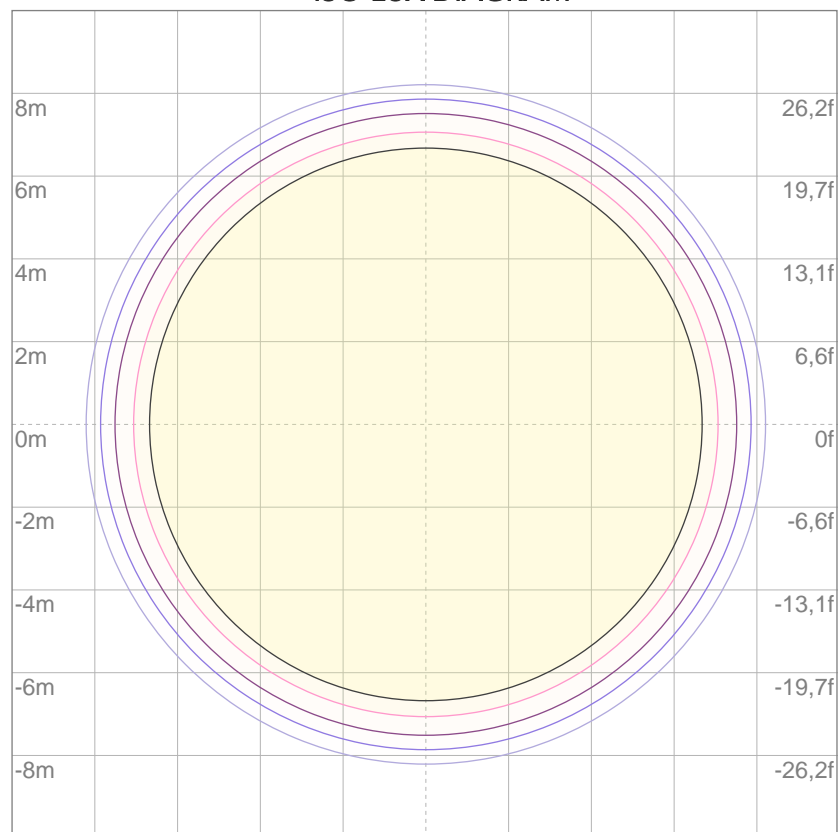
10%	590 cd
20%	1180 cd
30%	1770 cd
40%	2360 cd
50%	2950 cd
60%	3540 cd
70%	4130 cd
80%	4720 cd

### Conditions:

Number of c-planes: 2

Candela at center: 5900 cd

## ISO LUX DIAGRAM



3%	1,77 lx
5%	2,95 lx
10%	5,90 lx
30%	17,7 lx
50%	29,5 lx

### Conditions:

Number of c-planes: 2

Lux at center: 59,0 lx

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



Total lumen output:

764 lm

Peak candela output:

841 cd

PRODUCT NAME:

ECLFS

MEASURAMENT CONDITIONS:

Beam angle:

PRL70

Target:

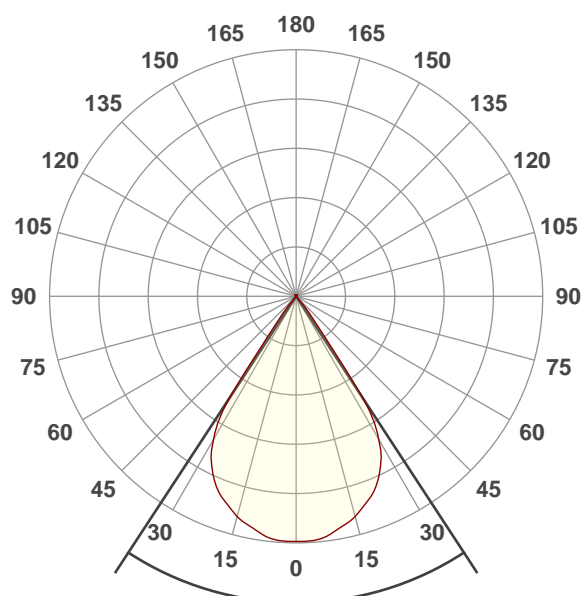
Red

Operator:

Paolo Carvone

Date and time:

09/07/2021 12:44:38

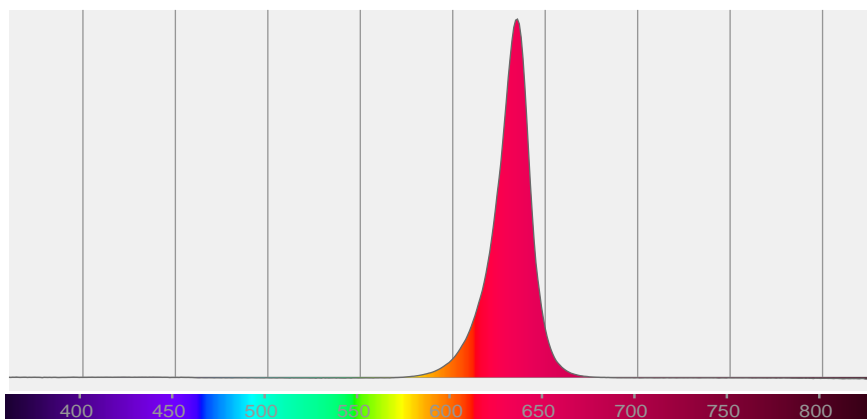


Beam angle 50%: 66,4°

Field angle 10%: 74,6°

Cut off angle 2.5%: 79,4°

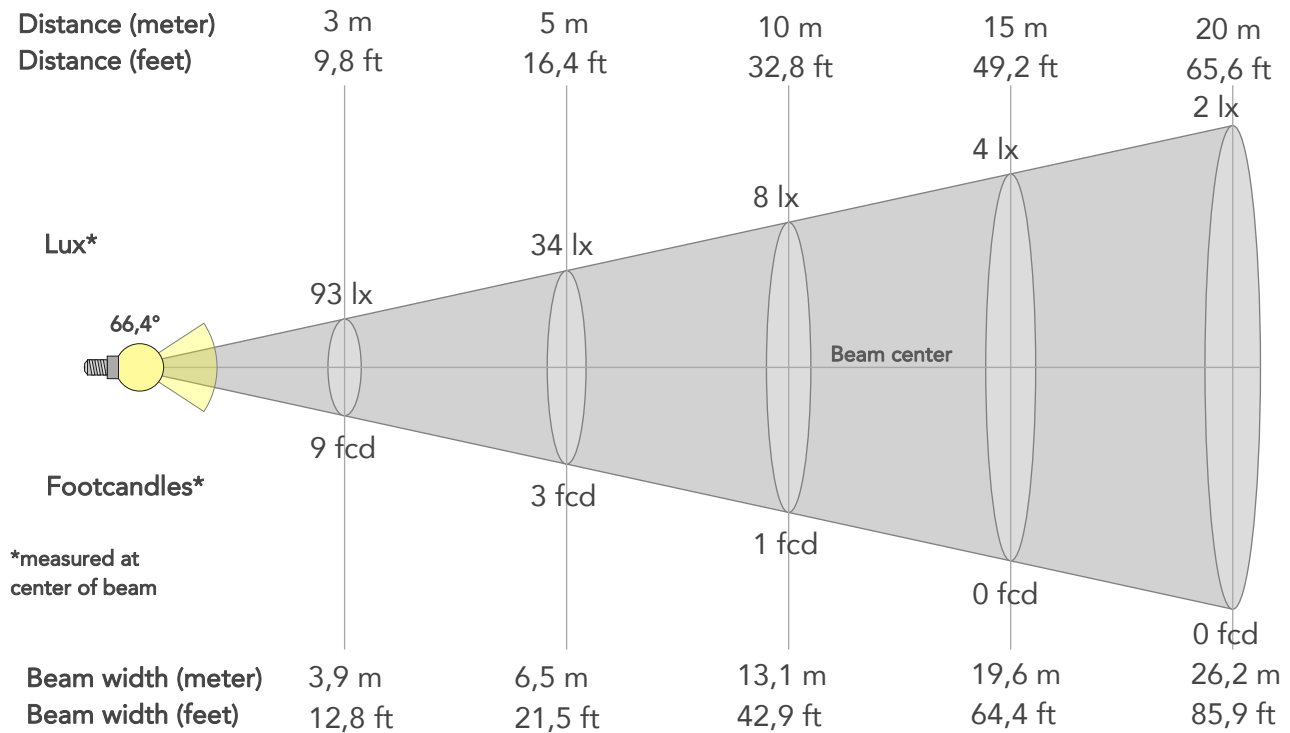
Spectra



# BEAM DETAILS



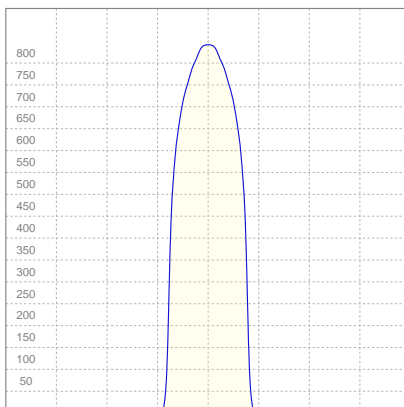
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
66,4°	74,6°	79,4°	100,0%	100,0%



## BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	841lx	210lx	93lx	53lx	34lx	15lx	8lx	4lx	2lx	1lx	1lx	1lx	0lx
Footcand.	78fcd	20fcd	9fcd	5fcd	3fcd	1fcd	1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	3,9m	5,2m	6,5m	9,8m	13,1m	19,6m	26,2m	32,7m	39,3m	52,4m	65,5m
Beam wid.	4,3ft	8,6ft	12,8ft	17,2ft	21,5ft	32,2ft	42,9ft	64,4ft	85,9ft	107,4ft	128,8ft	171,8ft	214,7ft

## LINEAR DISTRIBUTION DIAGRAM



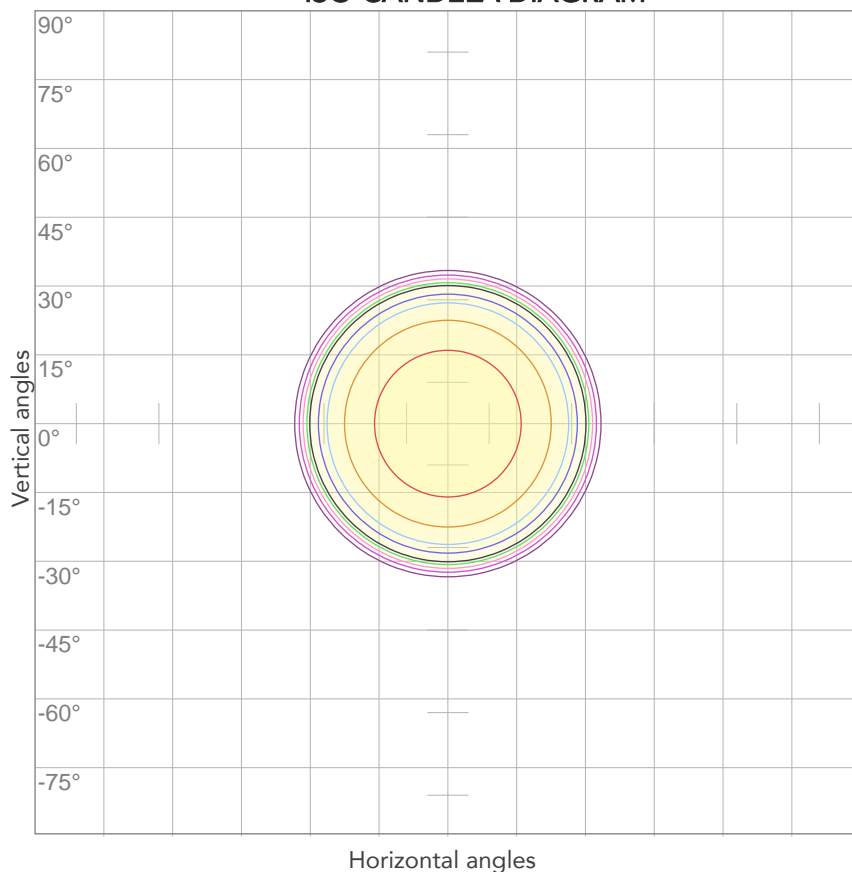
## ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,281A	47,0W	16lm/W

Power FC
0,74



## ISO CANDELA DIAGRAM



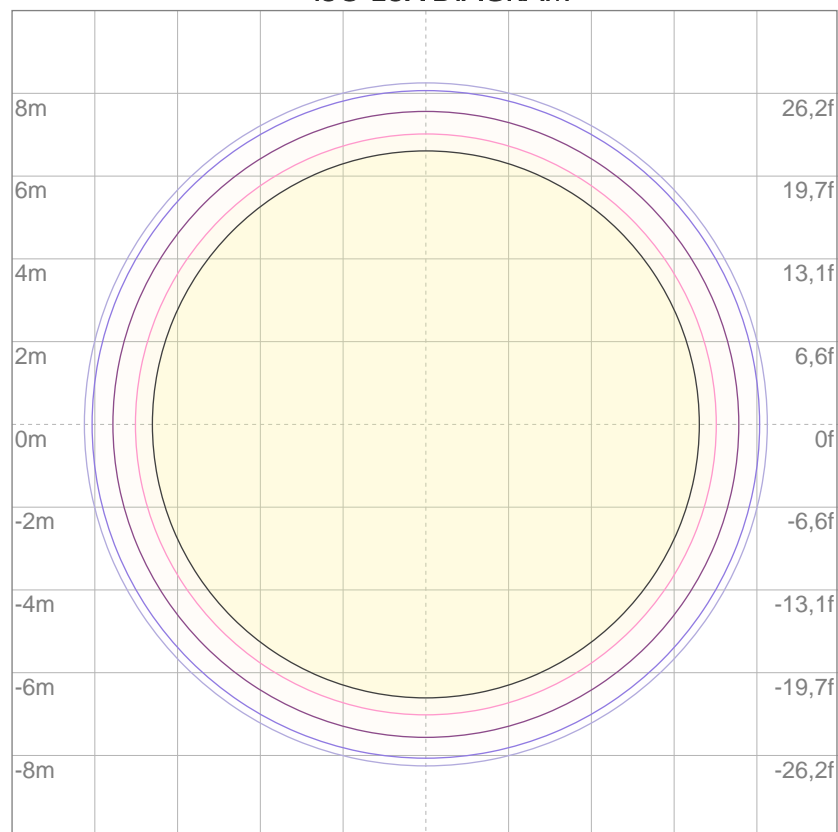
10%	84 cd
20%	168 cd
30%	252 cd
40%	336 cd
50%	420 cd
60%	504 cd
70%	588 cd
80%	672 cd

### Conditions:

Number of c-planes: 2

Candela at center: 841 cd

## ISO LUX DIAGRAM



3%	0,252 lx
5%	0,420 lx
10%	0,841 lx
30%	2,52 lx
50%	4,20 lx

### Conditions:

Number of c-planes: 2

Lux at center: 8,41 lx

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



Total lumen output:

1092 lm

Peak candela output:

1227 cd

PRODUCT NAME:

ECLFS

MEASURAMENT CONDITIONS:

Beam angle:

PRL70

Target:

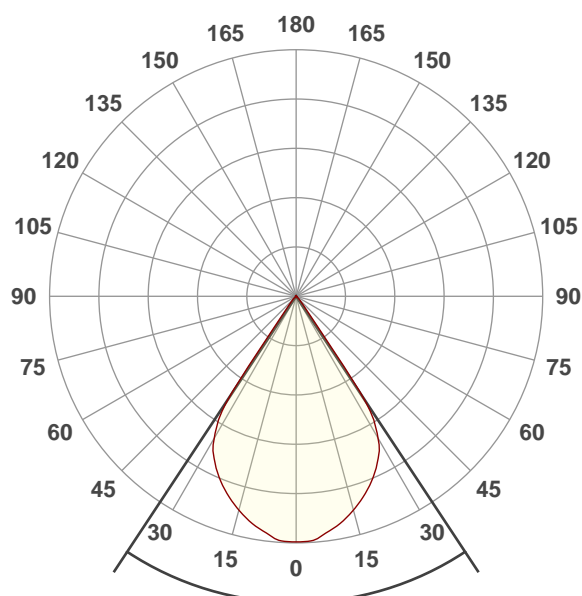
Green

Operator:

Paolo Carvone

Date and time:

09/07/2021 12:46:40

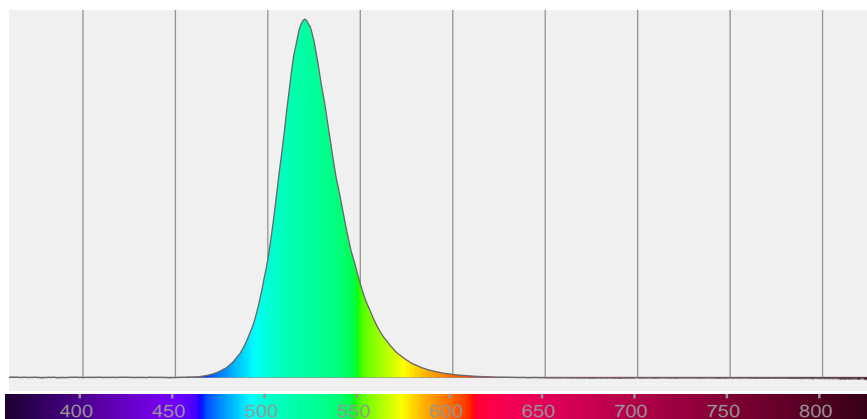


Beam angle 50%: 66,9°

Field angle 10%: 73,8°

Cut off angle 2.5%: 79,3°

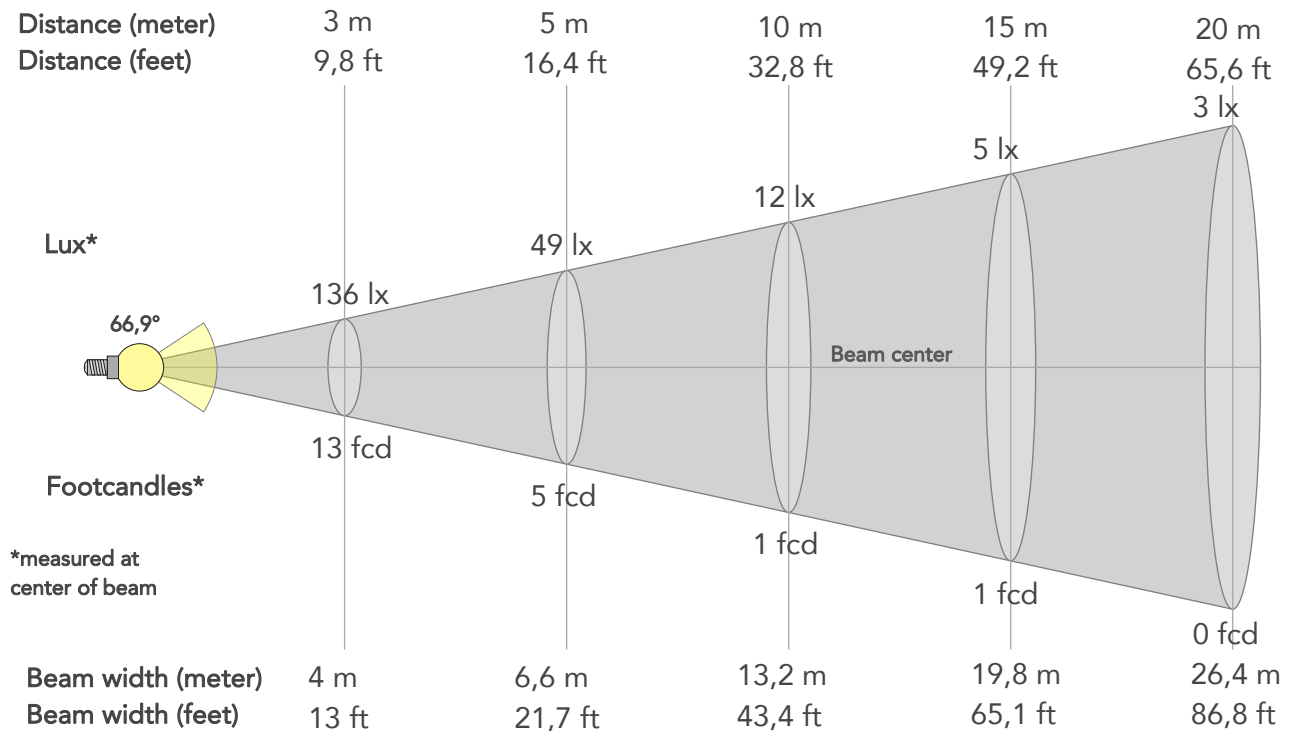
Spectra



## BEAM DETAILS



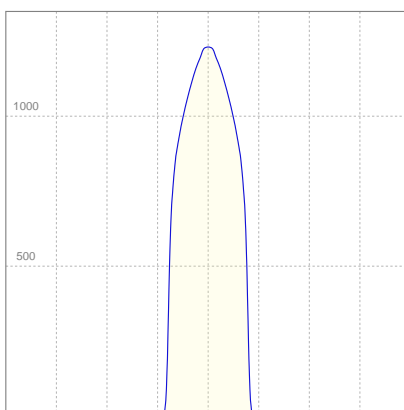
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
66,9°	73,8°	79,3°	100,0%	100,0%



### BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	1227lx	307lx	136lx	77lx	49lx	22lx	12lx	5lx	3lx	2lx	1lx	1lx	0lx
Footcand.	114fcd	28fcd	13fcd	7fcd	5fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	4m	5,3m	6,6m	9,9m	13,2m	19,8m	26,4m	33,1m	39,7m	52,9m	66,1m
Beam wid.	4,4ft	8,7ft	13ft	17,3ft	21,7ft	32,5ft	43,4ft	65,1ft	86,8ft	108,4ft	130,1ft	173,5ft	216,9ft

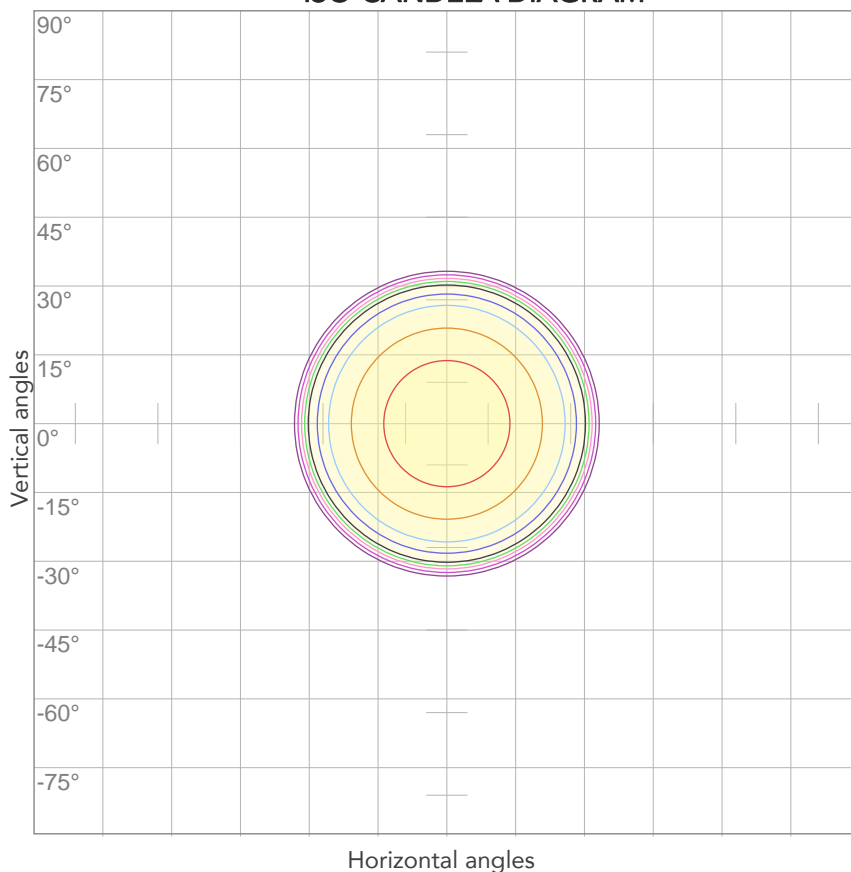
### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,269A	43,9W	25lm/W
Power FC			
0,72			

## ISO CANDELA DIAGRAM



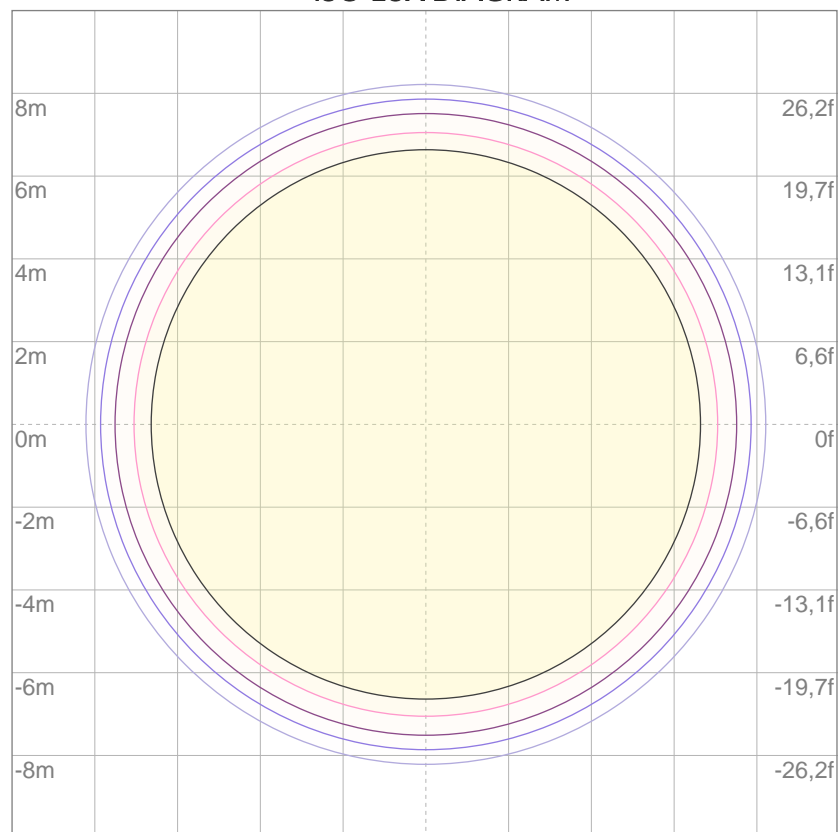
10%	123 cd
20%	245 cd
30%	368 cd
40%	491 cd
50%	613 cd
60%	736 cd
70%	859 cd
80%	981 cd

### Conditions:

Number of c-planes: 2

Candela at center: 1227 cd

## ISO LUX DIAGRAM



3%	0,368 lx
5%	0,613 lx
10%	1,23 lx
30%	3,68 lx
50%	6,13 lx

### Conditions:

Number of c-planes: 2

Lux at center: 12,3 lx

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



Total lumen output:

165 lm

Peak candela output:

191 cd

**PRODUCT NAME:**

ECLFS

**MEASURAMENT CONDITIONS:**

Beam angle:

PRL70

Target:

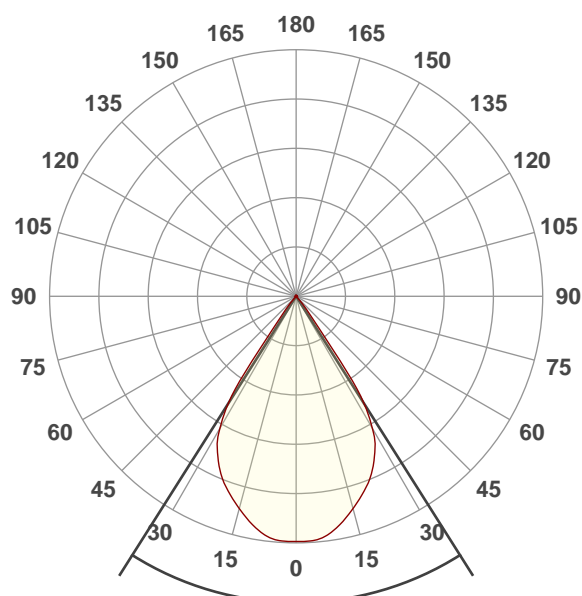
Blue

Operator:

Paolo Carvone

Date and time:

09/07/2021 12:48:23

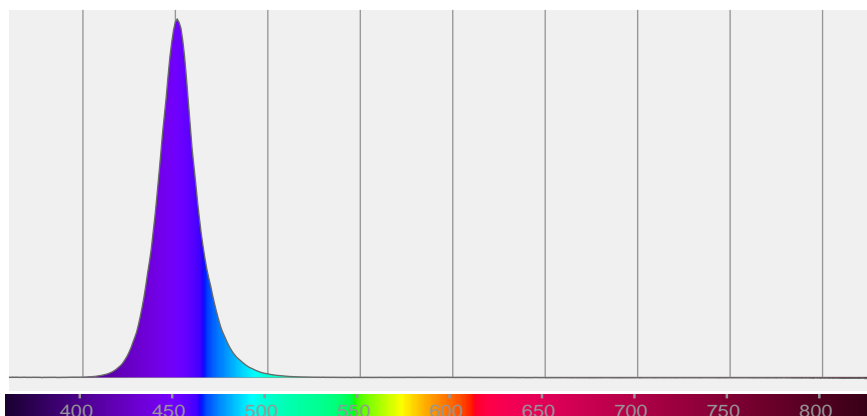


Beam angle 50%: 64,7°

Field angle 10%: 74°

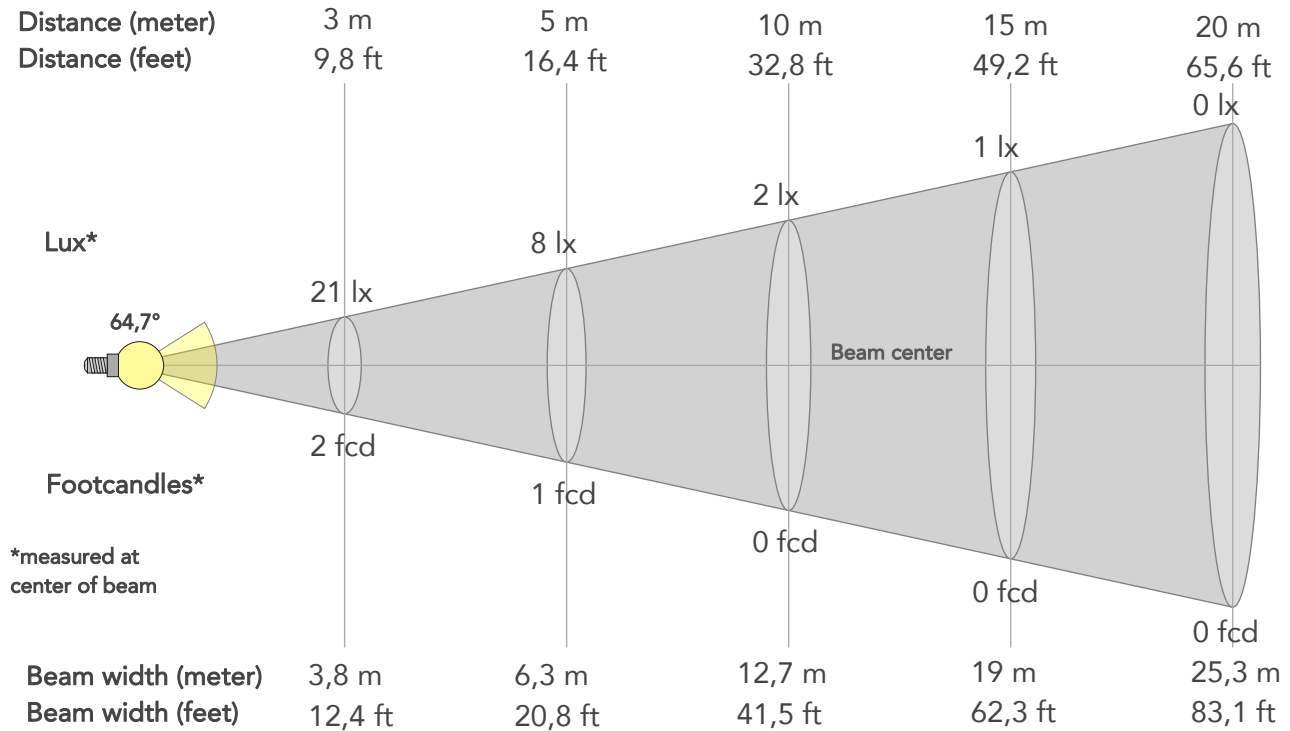
Cut off angle 2.5%: 79,6°

**Spectra**



## BEAM DETAILS

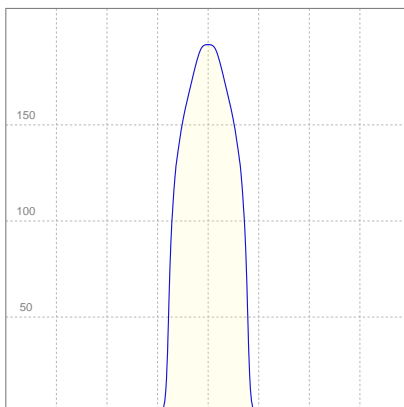
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
64,7°	74°	79,6°	99,9%	99,9%



### BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	191lx	48lx	21lx	12lx	8lx	3lx	2lx	1lx	0lx	0lx	0lx	0lx	0lx
Footcand.	18fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	1,3m	2,5m	3,8m	5,1m	6,3m	9,5m	12,7m	19m	25,3m	31,7m	38m	50,6m	63,3m
Beam wid.	4,2ft	8,4ft	12,4ft	16,6ft	20,8ft	31,1ft	41,5ft	62,3ft	83,1ft	103,8ft	124,6ft	166,1ft	207,6ft

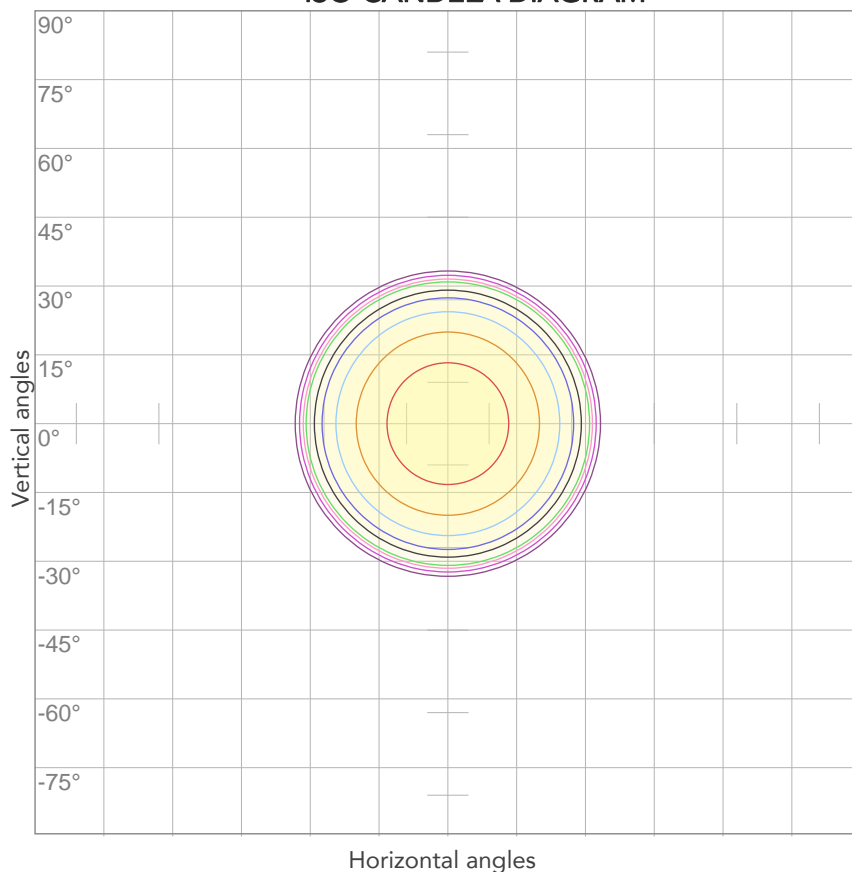
### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,236A	35,7W	5lm/W
Power FC			
0,67			

## ISO CANDELA DIAGRAM



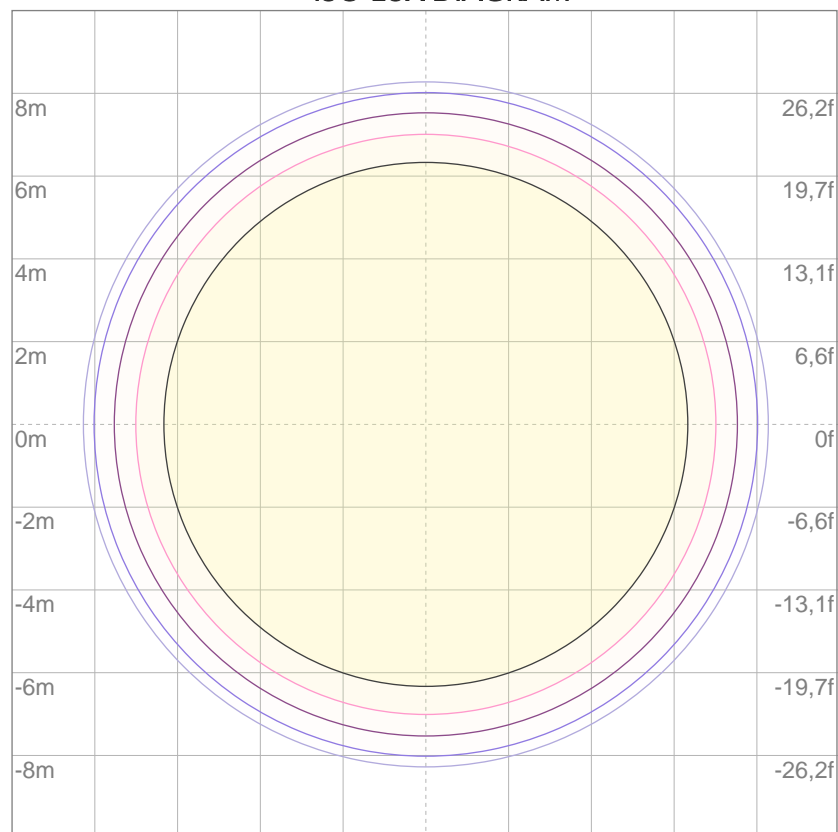
10%	19 cd
20%	38 cd
30%	57 cd
40%	77 cd
50%	96 cd
60%	115 cd
70%	134 cd
80%	153 cd

### Conditions:

Number of c-planes: 2

Candela at center: 191 cd

## ISO LUX DIAGRAM



3%	57,4m lx
5%	95,7m lx
10%	0,191 lx
30%	0,574 lx
50%	0,957 lx

### Conditions:

Number of c-planes: 2

Lux at center: 1,91 lx

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



Total lumen output:

3594 lm

Peak candela output:

3799 cd

PRODUCT NAME:

ECLFS

MEASURAMENT CONDITIONS:

Beam angle:

PRL70

Target:

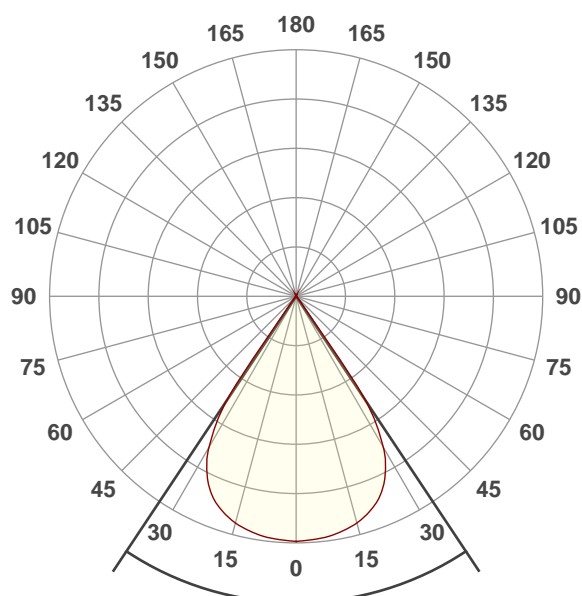
Lime

Operator:

Paolo Carvone

Date and time:

09/07/2021 12:50:14

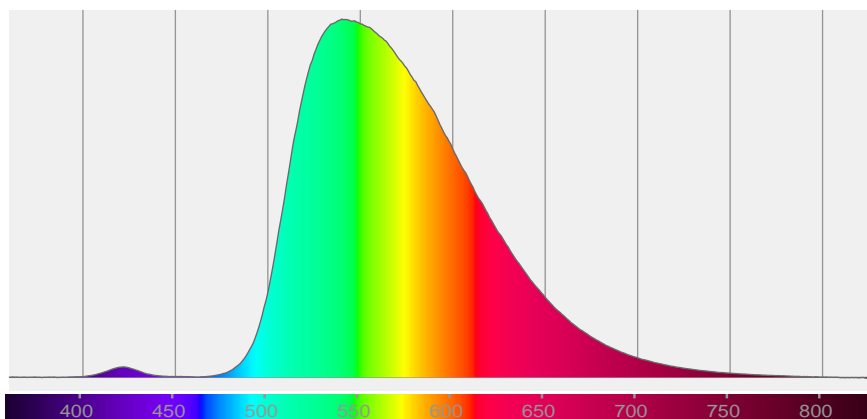


Beam angle 50%: 67,3°

Field angle 10%: 74,2°

Cut off angle 2.5%: 77,1°

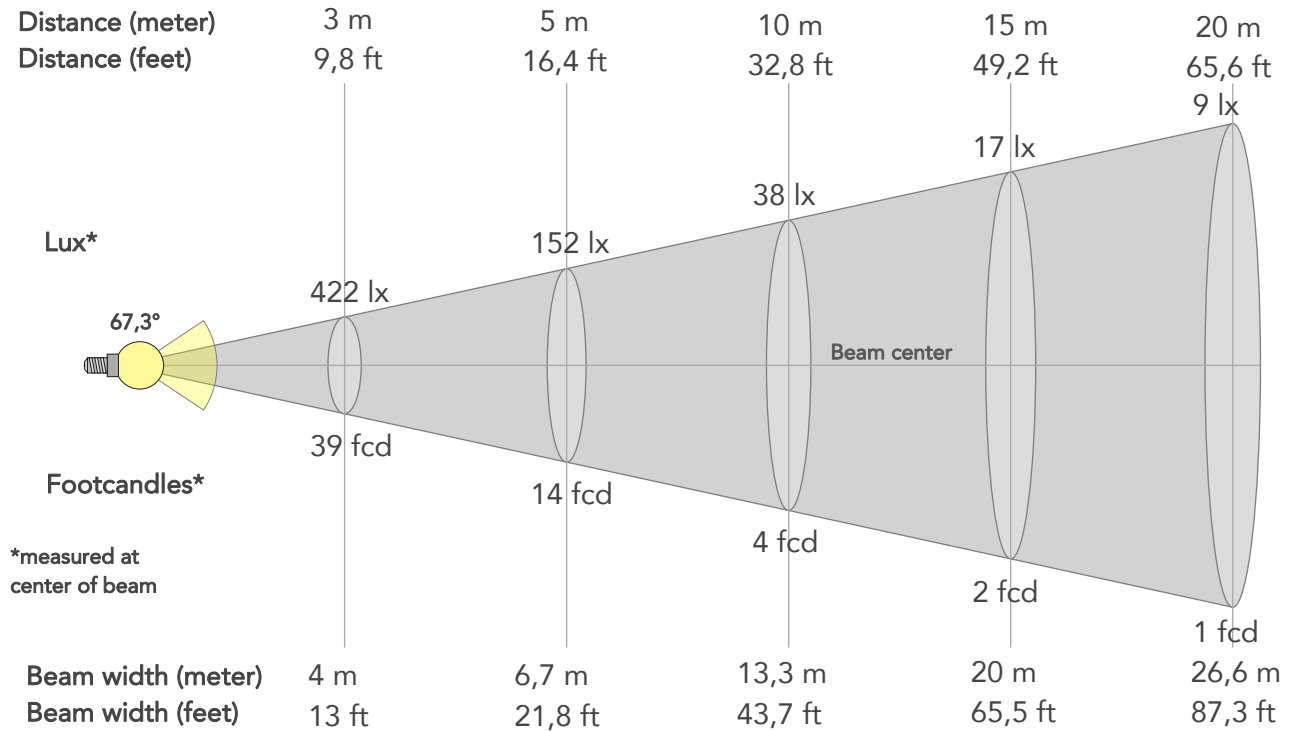
Spectra





## BEAM DETAILS

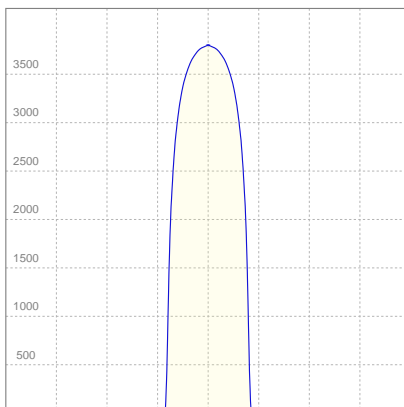
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
67,3°	74,2°	77,1°	100,0%	100,0%



### BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	3799lx	950lx	422lx	237lx	152lx	68lx	38lx	17lx	9lx	6lx	4lx	2lx	2lx
Footcand.	353fcd	88fcd	39fcd	22fcd	14fcd	6fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd
Beam wid.	1,3m	2,7m	4m	5,3m	6,7m	10m	13,3m	20m	26,6m	33,3m	39,9m	53,3m	66,6m
Beam wid.	4,4ft	8,8ft	13ft	17,4ft	21,8ft	32,7ft	43,7ft	65,5ft	87,3ft	109,2ft	131ft	174,7ft	218,3ft

### LINEAR DISTRIBUTION DIAGRAM

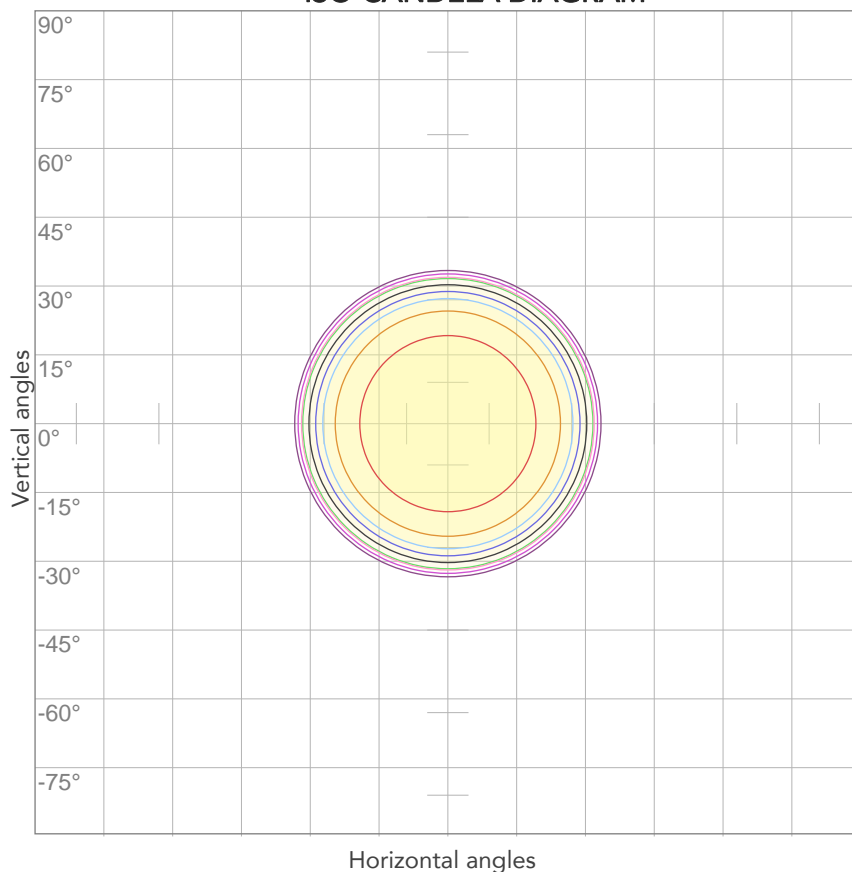


### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,437A	86,1W	42lm/W

Power FC
0,87

## ISO CANDELA DIAGRAM



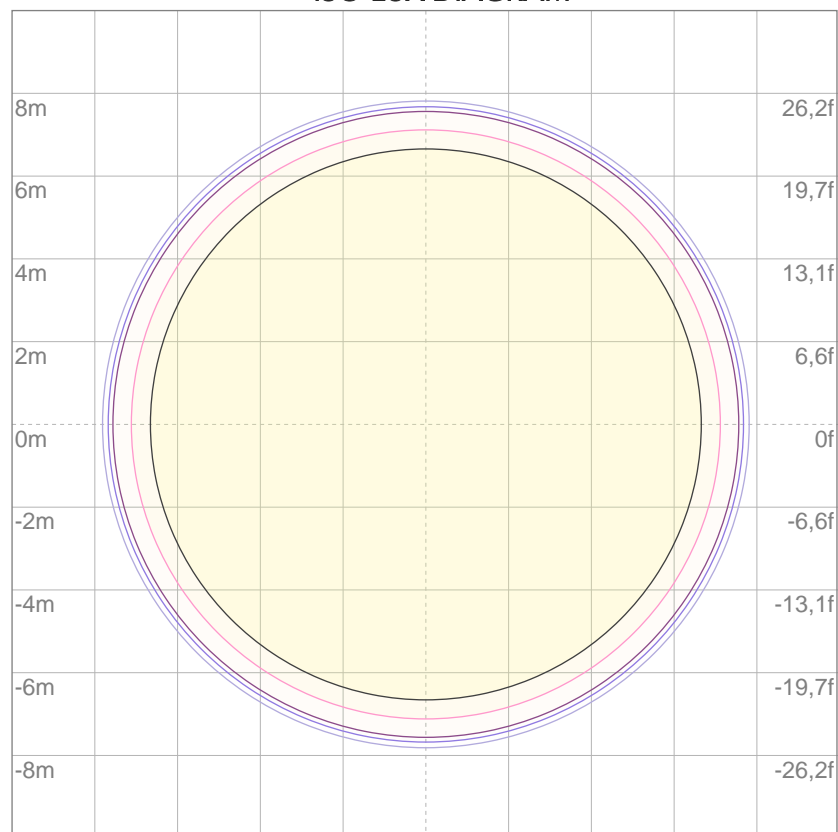
10%	380 cd
20%	760 cd
30%	1140 cd
40%	1520 cd
50%	1900 cd
60%	2280 cd
70%	2660 cd
80%	3040 cd

### Conditions:

Number of c-planes: 2

Candela at center: 3799 cd

## ISO LUX DIAGRAM



3%	1,14 lx
5%	1,90 lx
10%	3,80 lx
30%	11,4 lx
50%	19,0 lx

### Conditions:

Number of c-planes: 2

Lux at center: 38,0 lx

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



Total lumen output:

3444 lm

Peak candela output:

3679 cd

Light quality:

CRI: 84,6

Color temperature:

2855 K

**PRODUCT NAME:**

ECLFS

**MEASURAMENT CONDITIONS:**

Beam angle:

PRL70

Target:

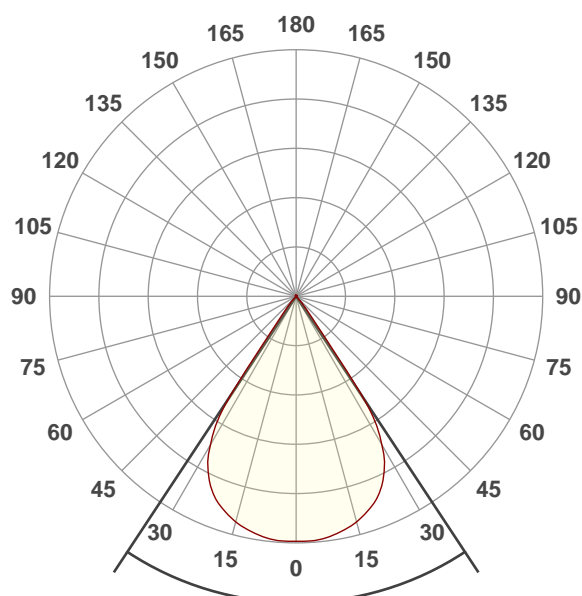
2800K

Operator:

Paolo Carvone

Date and time:

09/07/2021 12:08:28

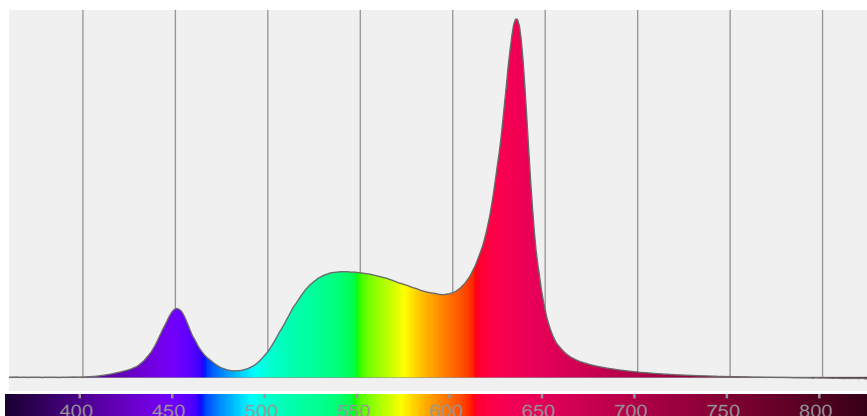


Beam angle 50%: 66,9°

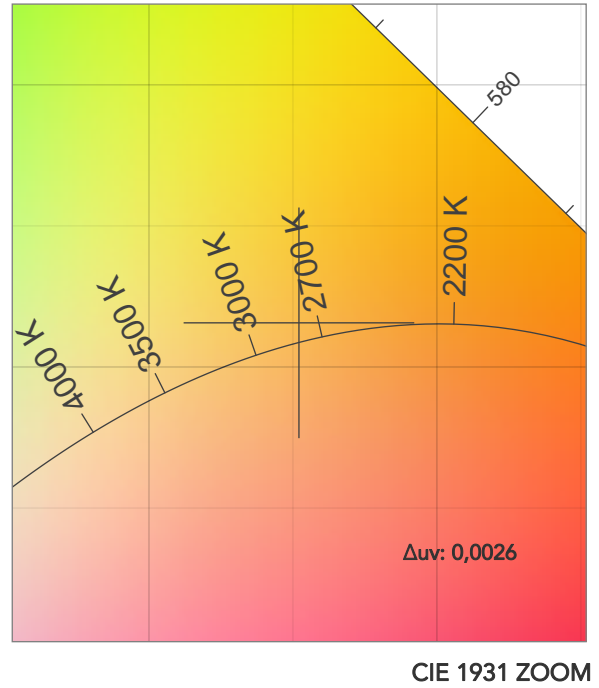
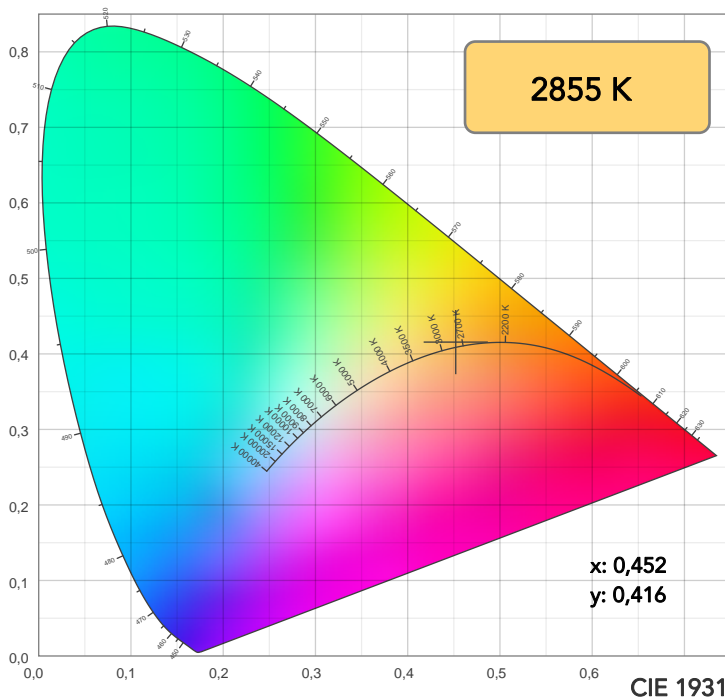
Field angle 10%: 73,8°

Cut off angle 2.5%: 79,4°

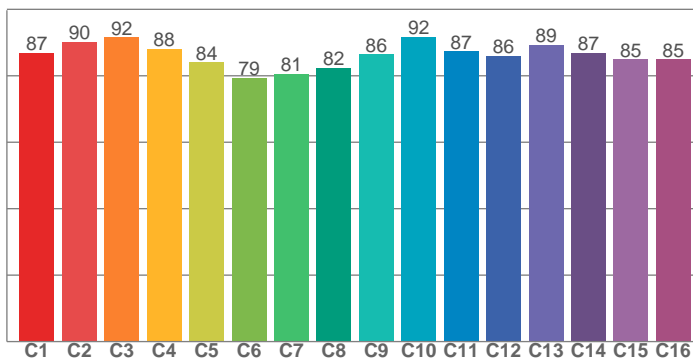
**Spectra**



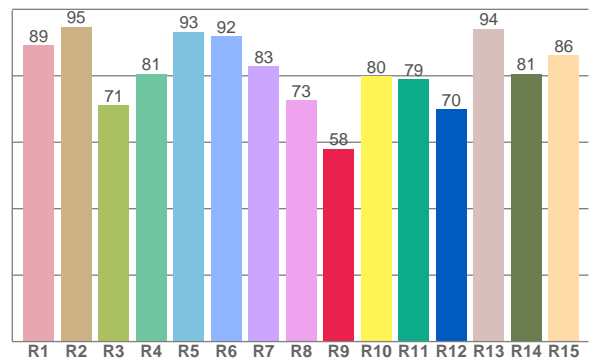
## COLOR DETAILS



TM30: 86,7



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
89,3	94,8	71,1	80,6	93,3	91,8	82,9	72,7	58,0	79,8	78,9	69,9	94,1	80,6	86,2

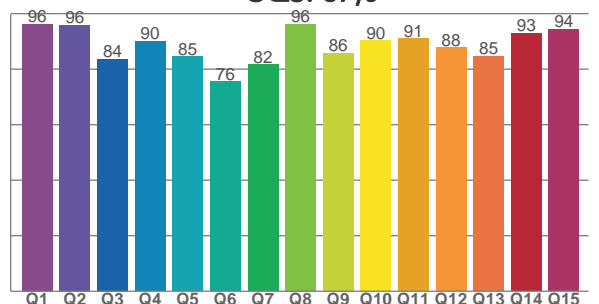
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
87,0	90,2	91,5	88,1	84,0	79,3	80,5	82,4	86,4	91,8	87,4	86,0	89,3	86,8	84,9	84,9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
96,2	95,8	83,6	90,0	84,6	75,5	81,7	96,2	85,9	90,3	91,0	87,8	84,6	92,9	94,3

CQS: 87,0



## COLOR PARAMETERS

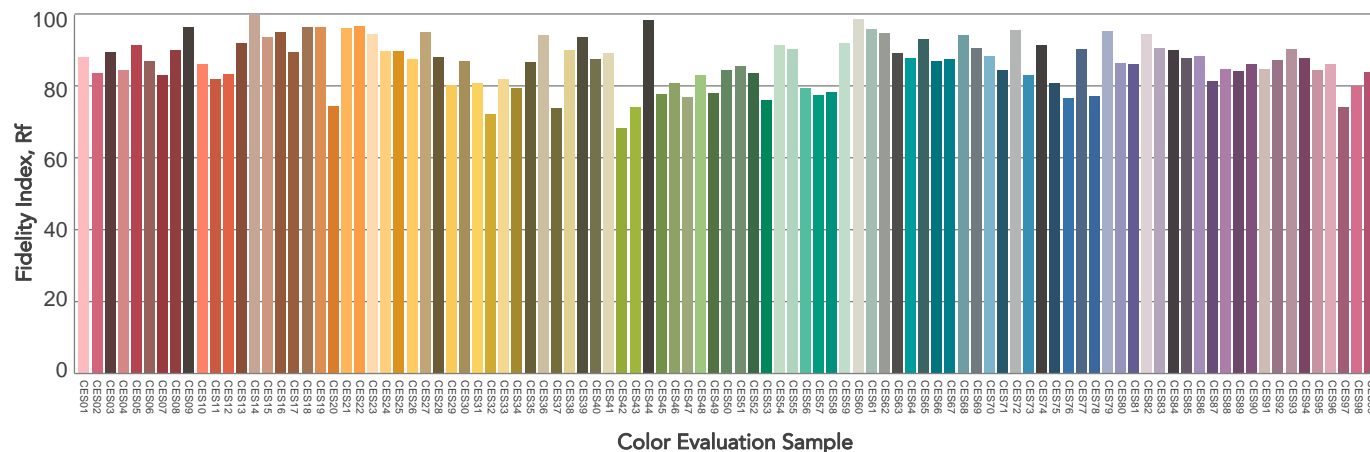
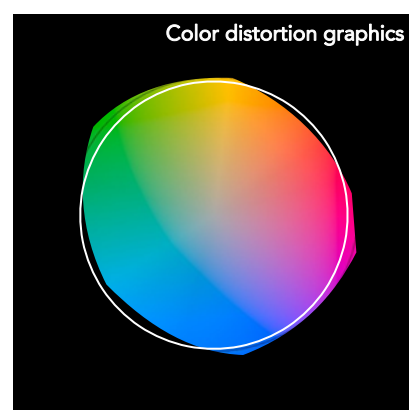
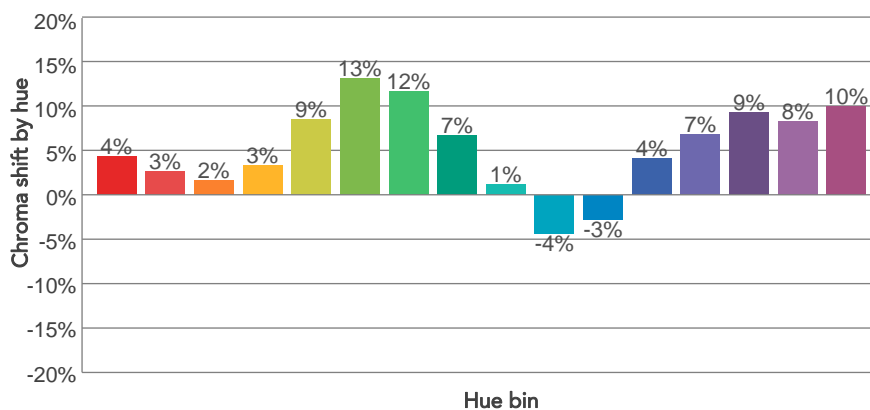
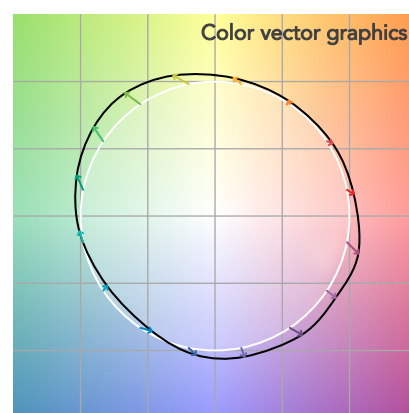
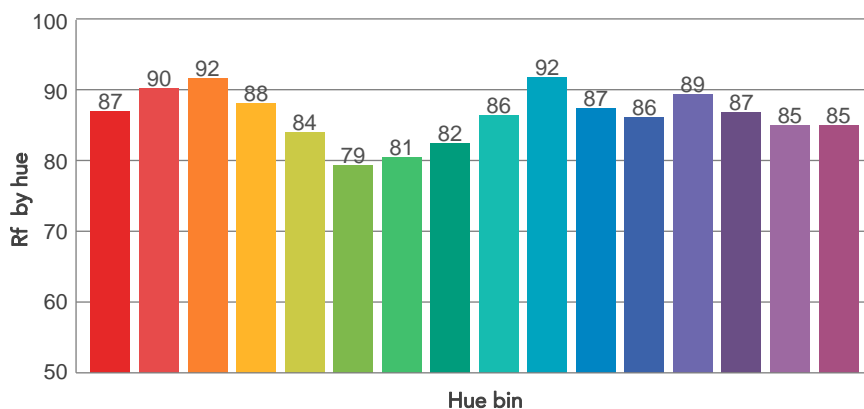
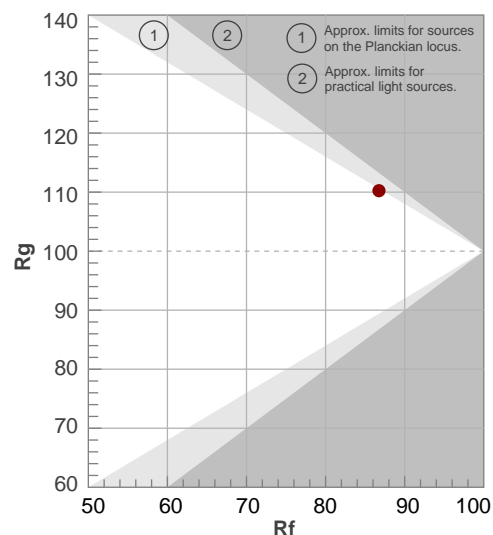
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
2855 K	84,6	58,0	86,7	110,2	87,0	72	0,452	0,416	0,0026

# TM30 DETAILS

**Rf 86,7**  
Fidelity index Rf

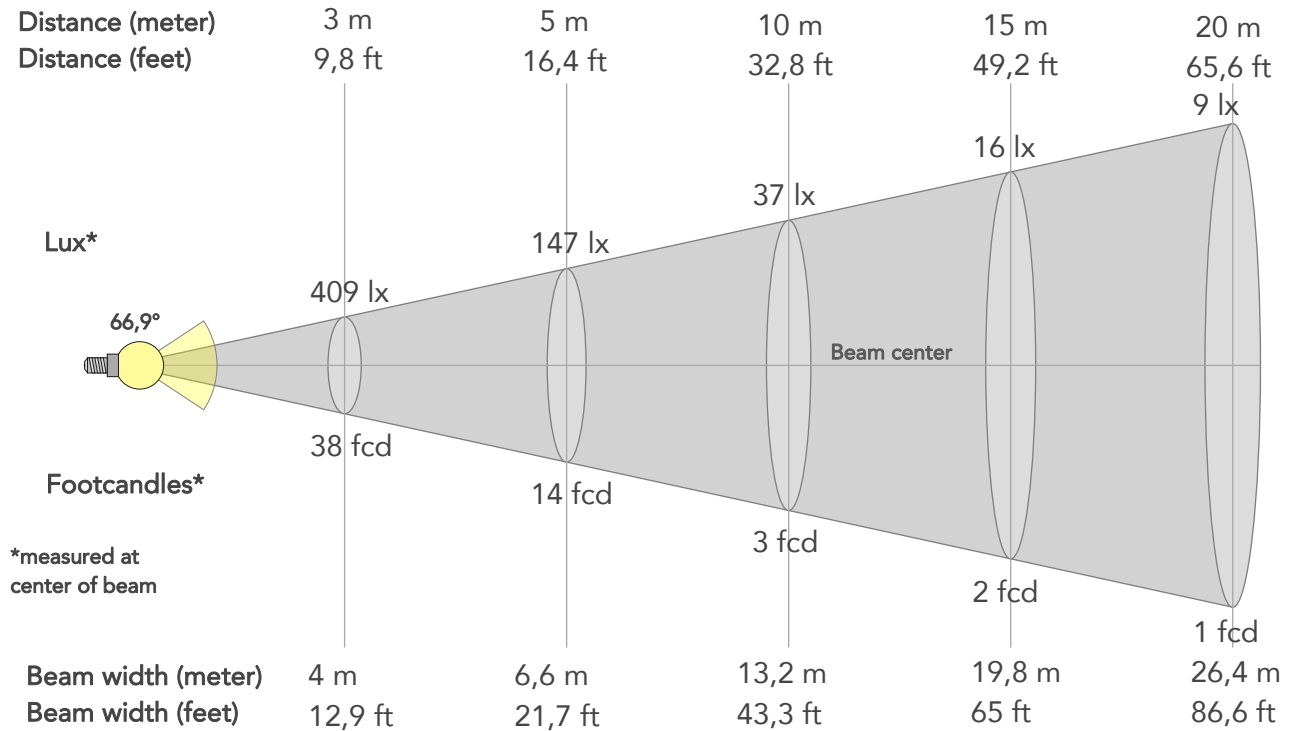
**Rg 110,2**  
Gammut index

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	87	4%	-4%
2	90	3%	-4%
3	92	2%	2%
4	88	3%	6%
5	84	9%	10%
6	79	13%	5%
7	81	12%	-5%
8	82	7%	-9%
9	86	1%	-8%
10	92	-4%	-2%
11	87	-3%	8%
12	86	4%	6%
13	89	7%	1%
14	87	9%	5%
15	85	8%	-1%
16	85	10%	-7%



## BEAM DETAILS

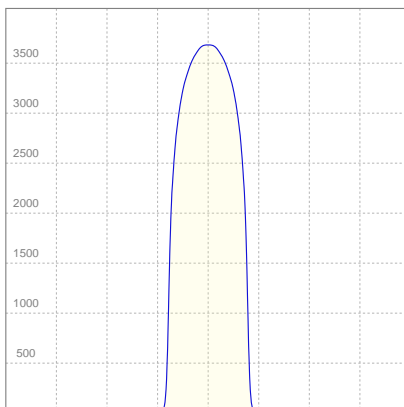
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
66,9°	73,8°	79,4°	100,0%	100,0%



### BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	3679lx	920lx	409lx	230lx	147lx	65lx	37lx	16lx	9lx	6lx	4lx	2lx	1lx
Footcand.	342fcd	85fcd	38fcd	21fcd	14fcd	6fcd	3fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	4m	5,3m	6,6m	9,9m	13,2m	19,8m	26,4m	33m	39,6m	52,8m	66m
Beam wid.	4,4ft	8,7ft	12,9ft	17,3ft	21,7ft	32,5ft	43,3ft	65ft	86,6ft	108,3ft	130ft	173,3ft	216,6ft

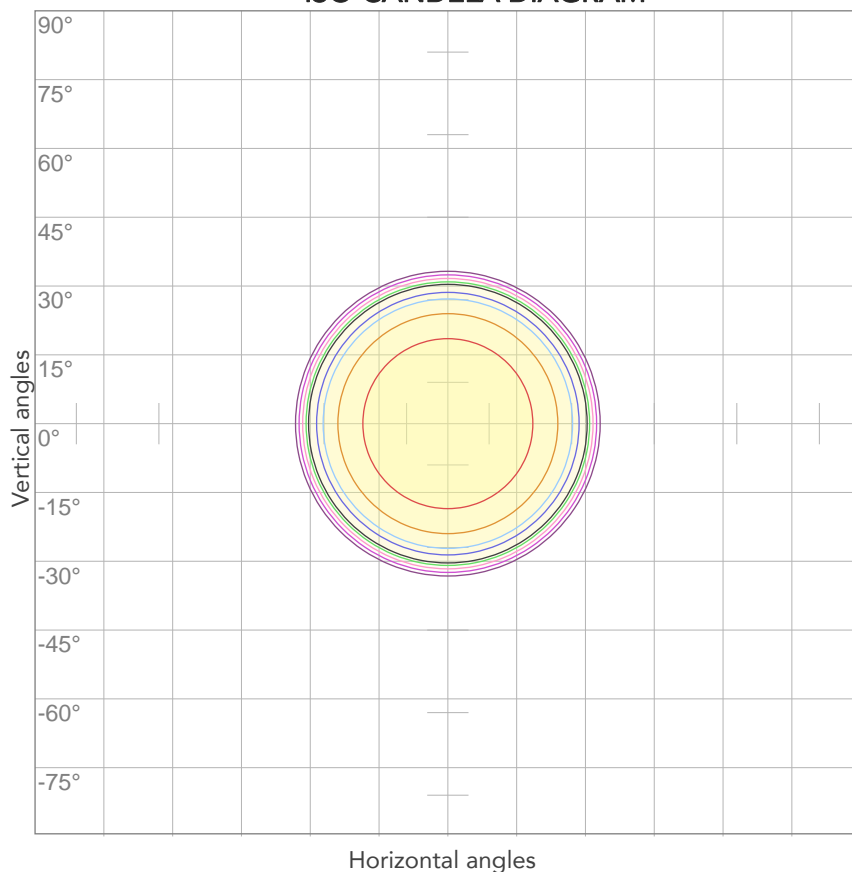
### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,532A	108,9W	32lm/W

## ISO CANDELA DIAGRAM



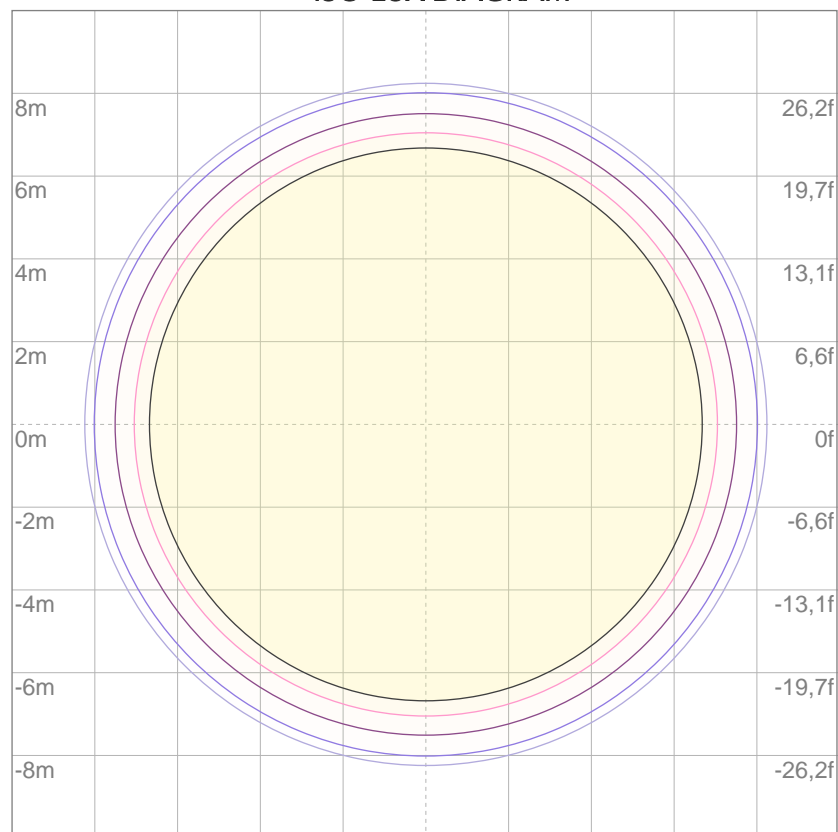
10%	368 cd
20%	736 cd
30%	1104 cd
40%	1472 cd
50%	1840 cd
60%	2208 cd
70%	2576 cd
80%	2944 cd

### Conditions:

Number of c-planes: 2

Candela at center: 3679 cd

## ISO LUX DIAGRAM



3%	1,10 lx
5%	1,84 lx
10%	3,68 lx
30%	11,0 lx
50%	18,4 lx

### Conditions:

Number of c-planes: 2

Lux at center: 36,8 lx

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



Total lumen output:

3996 lm

Peak candela output:

4255 cd

Light quality:

CRI: 86,3

Color temperature:

3258 K

PRODUCT NAME:

ECLFS

MEASURAMENT CONDITIONS:

Beam angle:

PRL70

Target:

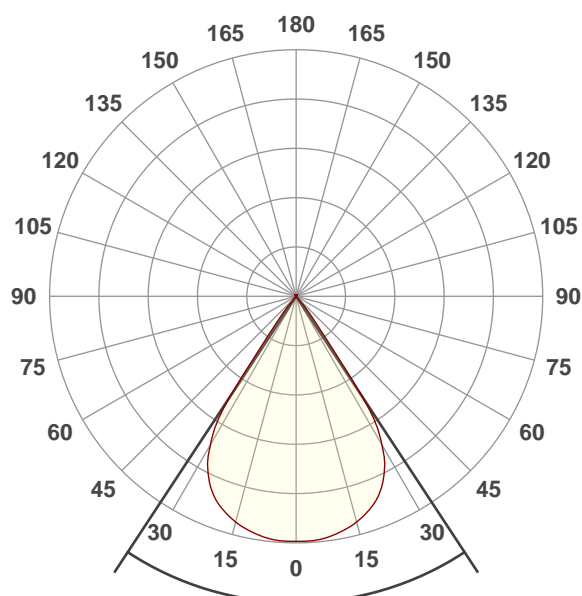
3200K

Operator:

Paolo Carvone

Date and time:

09/07/2021 12:16:07

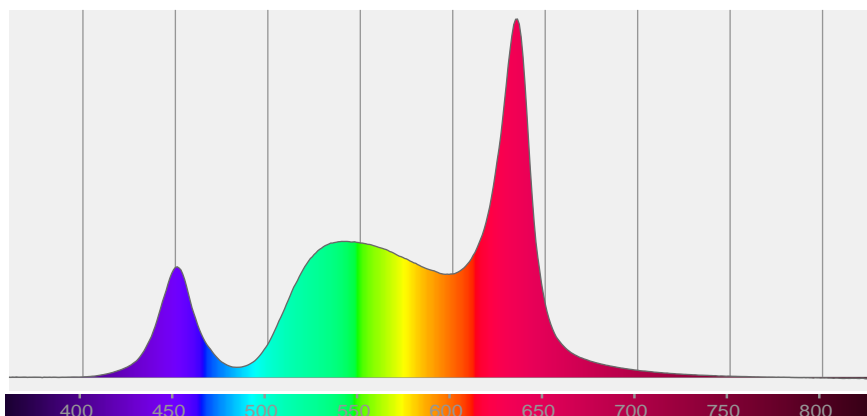


Beam angle 50%: 66,7°

Field angle 10%: 75,1°

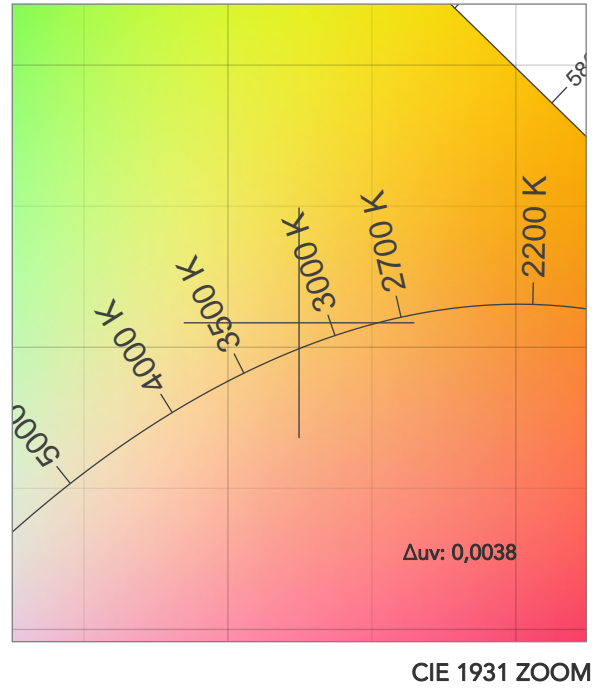
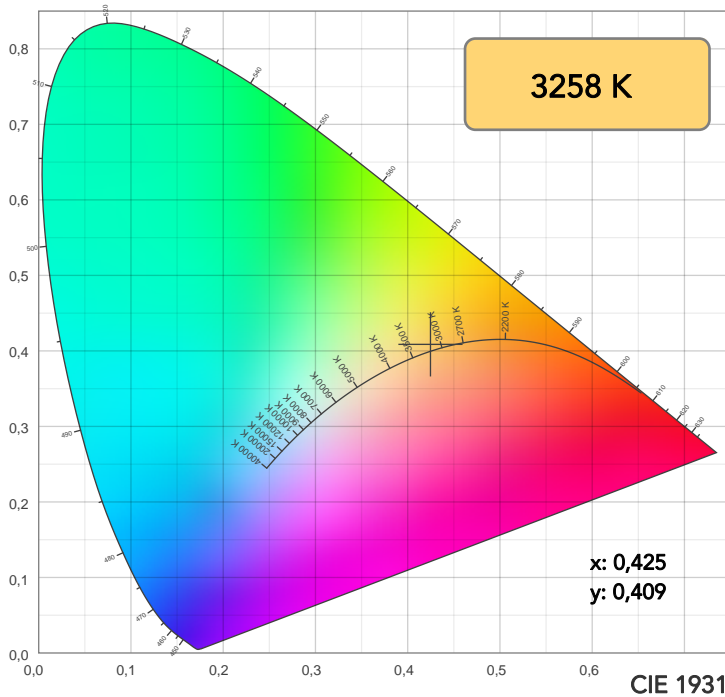
Cut off angle 2.5%: 79,4°

Spectra

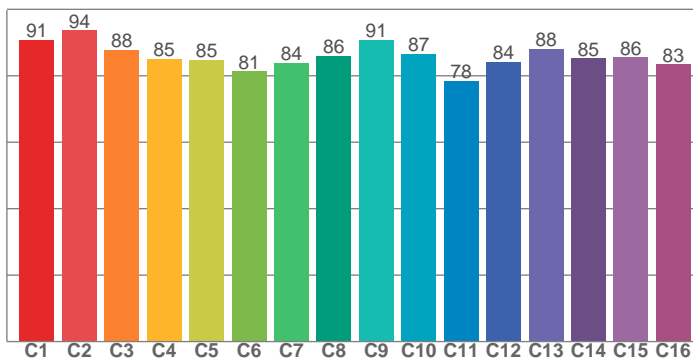




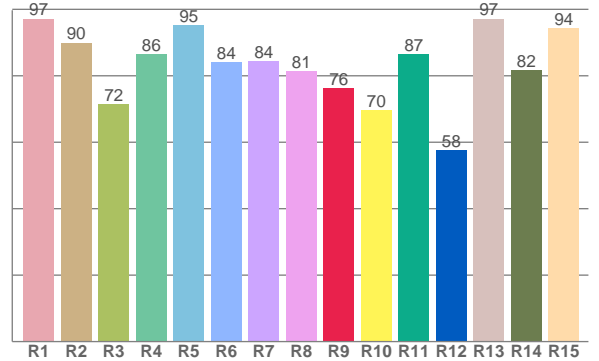
## COLOR DETAILS



TM30: 86,2



CRI: 86,3 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
97,2	89,9	71,5	86,5	95,2	84,1	84,5	81,4	76,2	69,7	86,5	57,5	97,1	81,6	94,4

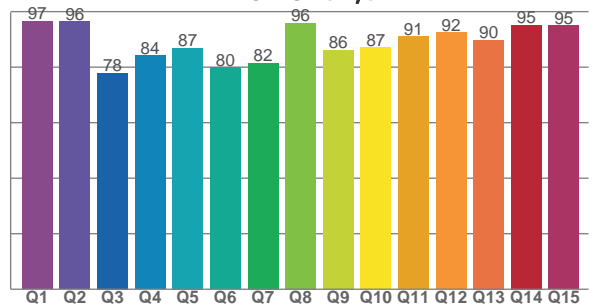
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
90,8	93,7	87,8	85,1	84,8	81,4	83,9	86,0	90,9	86,5	78,4	84,2	88,1	85,2	85,5	83,4

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
96,5	96,4	78,0	84,2	86,9	79,8	81,5	95,9	86,2	87,1	91,1	92,4	89,8	95,2	95,0

CQS: 87,3



## COLOR PARAMETERS

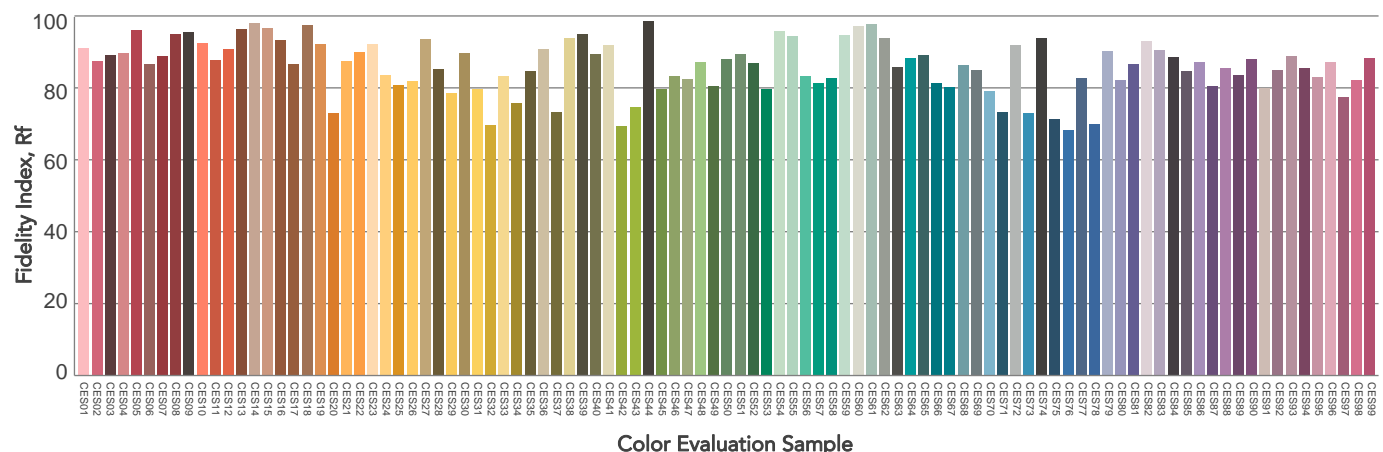
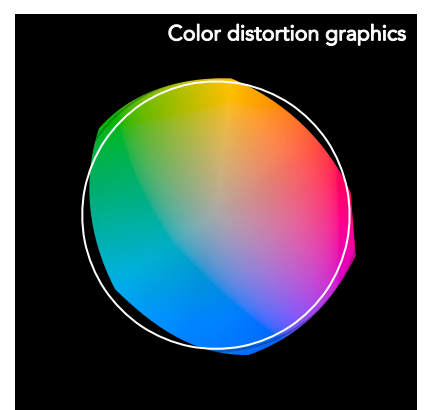
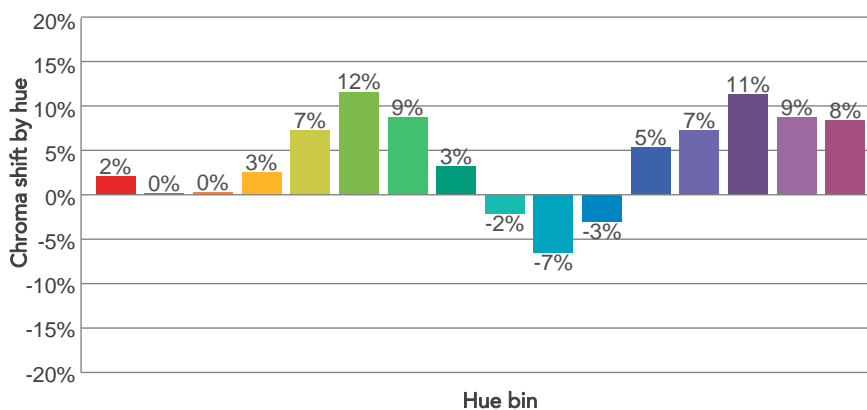
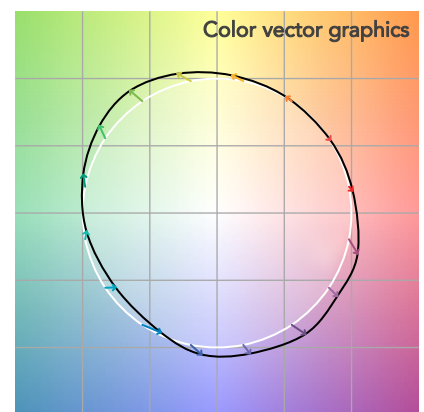
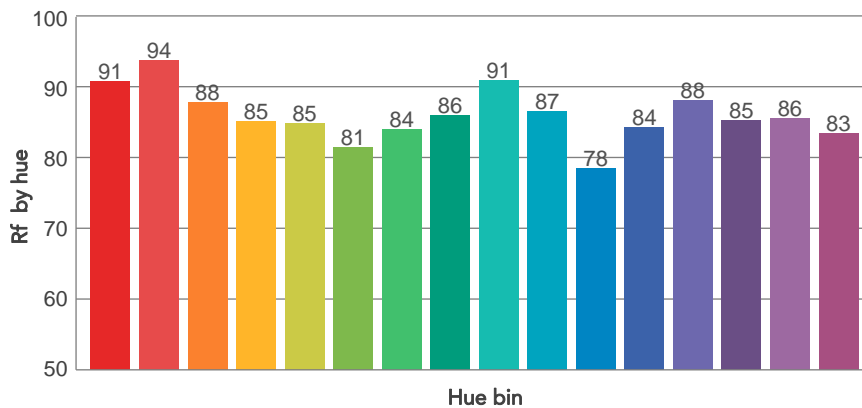
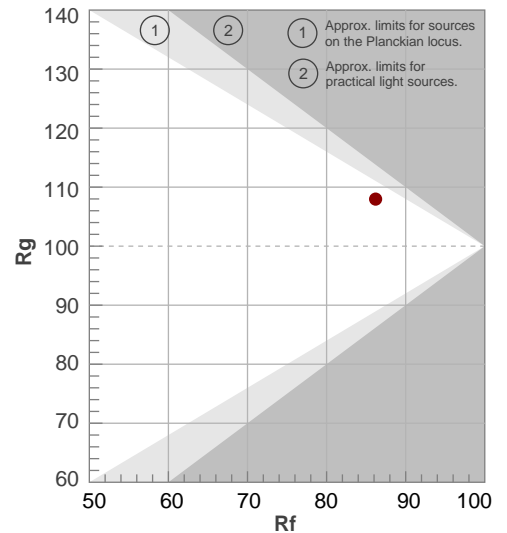
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	$\Delta uv$
3258 K	86,3	76,2	86,2	108,0	87,3	76	0,425	0,409	0,0038

# TM30 DETAILS

**Rf 86,2**  
Fidelity index Rf

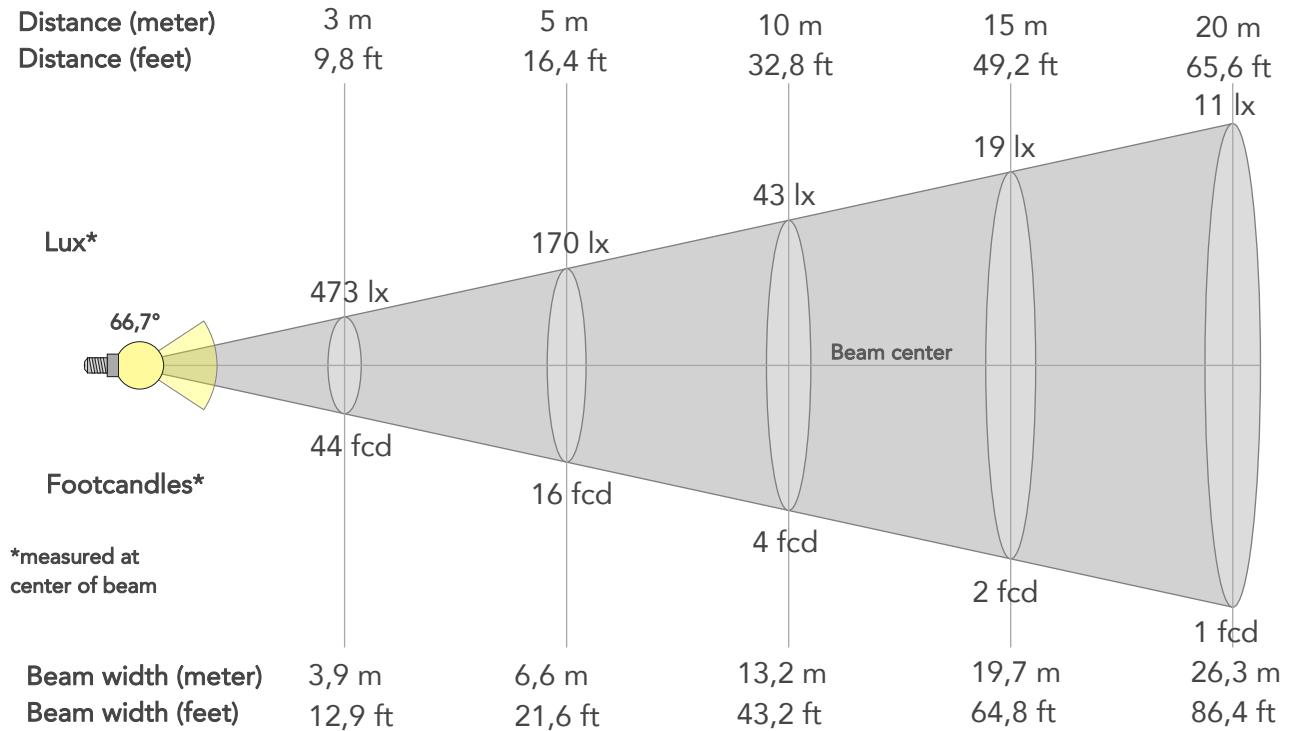
**Rg 108,0**  
Gammut index

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	91	2%	-3%
2	94	0%	-2%
3	88	0%	5%
4	85	3%	9%
5	85	7%	9%
6	81	12%	3%
7	84	9%	-5%
8	86	3%	-9%
9	91	-2%	-6%
10	87	-7%	4%
11	78	-3%	15%
12	84	5%	9%
13	88	7%	4%
14	85	11%	5%
15	86	9%	-2%
16	83	8%	-9%



## BEAM DETAILS

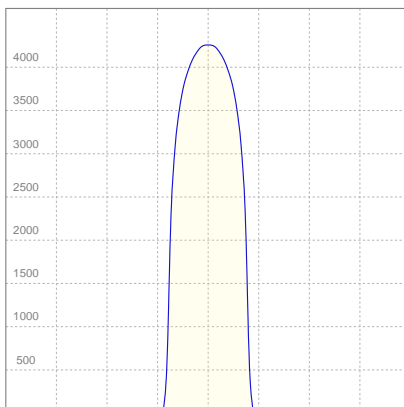
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
66,7°	75,1°	79,4°	100,0%	100,0%



### BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	4255lx	1064lx	473lx	266lx	170lx	76lx	43lx	19lx	11lx	7lx	5lx	3lx	2lx
Footcand.	395fcd	99fcd	44fcd	25fcd	16fcd	7fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	3,9m	5,3m	6,6m	9,9m	13,2m	19,7m	26,3m	32,9m	39,5m	52,7m	65,8m
Beam wid.	4,3ft	8,7ft	12,9ft	17,2ft	21,6ft	32,4ft	43,2ft	64,8ft	86,4ft	108ft	129,6ft	172,7ft	215,9ft

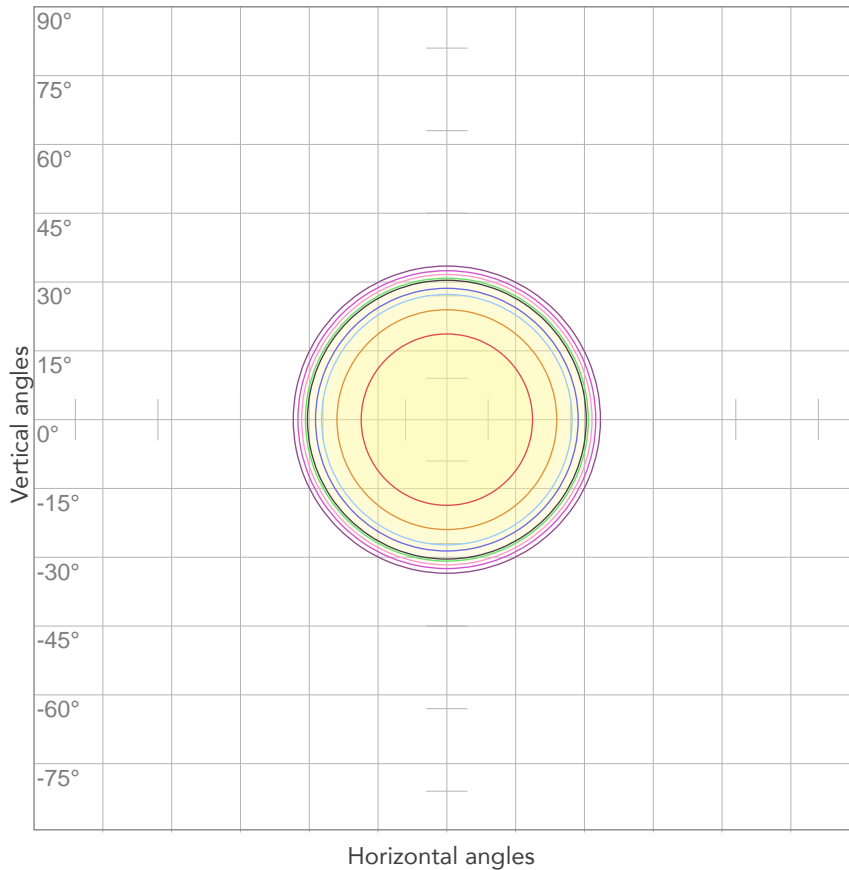
### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,594A	122,9W	33lm/W

## ISO CANDELA DIAGRAM



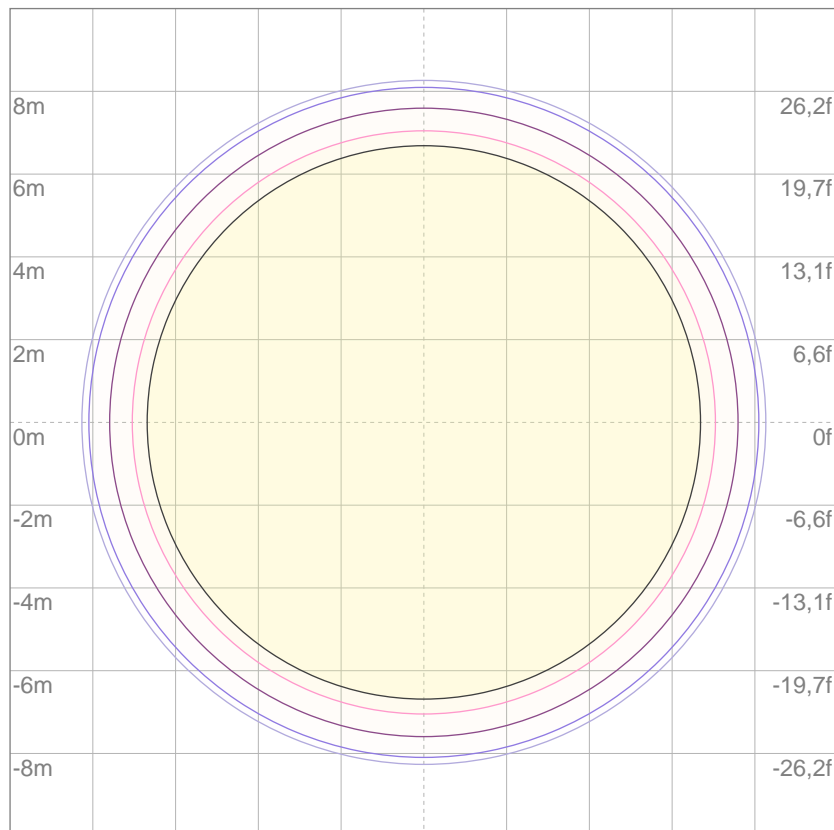
10%	425 cd
20%	851 cd
30%	1276 cd
40%	1702 cd
50%	2127 cd
60%	2553 cd
70%	2978 cd
80%	3404 cd

### Conditions:

Number of c-planes: 2

Candela at center: 4255 cd

## ISO LUX DIAGRAM



3%	1,28 lx
5%	2,13 lx
10%	4,25 lx
30%	12,8 lx
50%	21,3 lx

### Conditions:

Number of c-planes: 2

Lux at center: 42,5 lx

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



Total lumen output:

4476 lm

Peak candela output:

4797 cd

Light quality:

CRI: 86,1

Color temperature:

4050 K

PRODUCT NAME:

ECLFS

MEASURAMENT CONDITIONS:

Beam angle:

PRL70

Target:

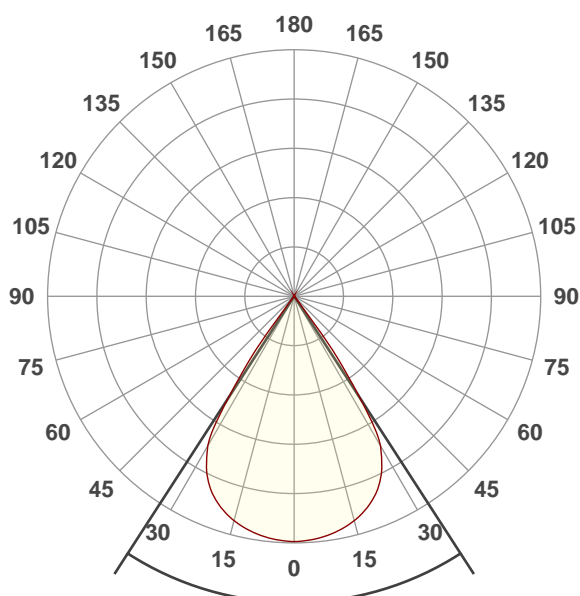
4000K

Operator:

Paolo Carvone

Date and time:

09/07/2021 12:18:57

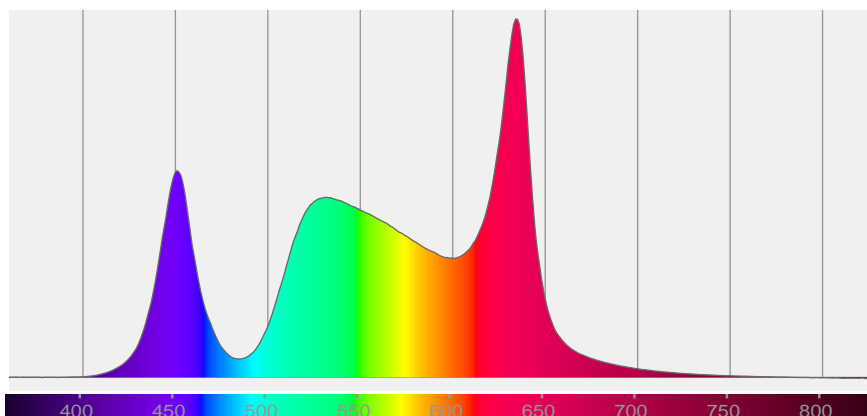


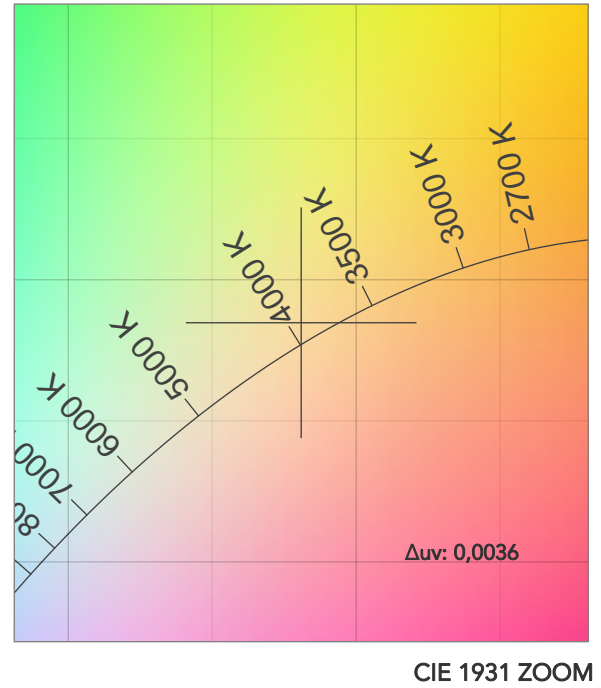
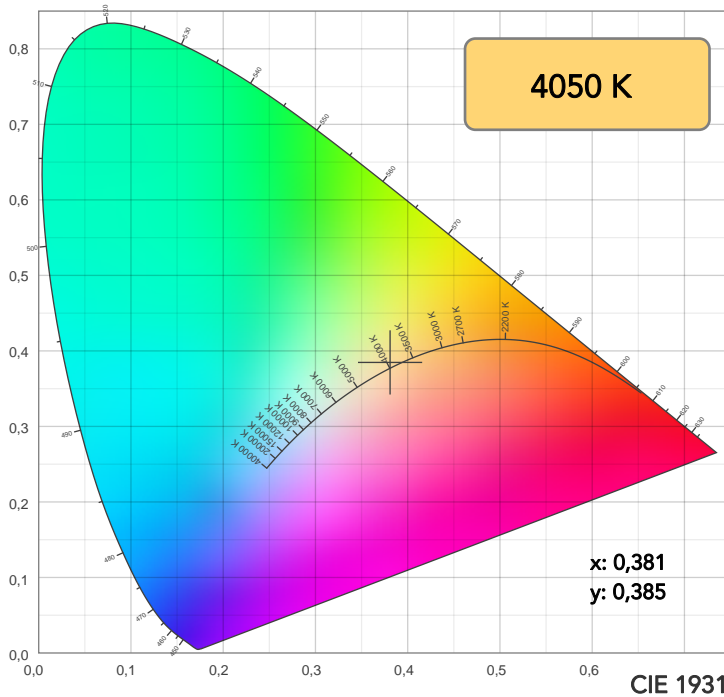
Beam angle 50%: 65,8°

Field angle 10%: 75,6°

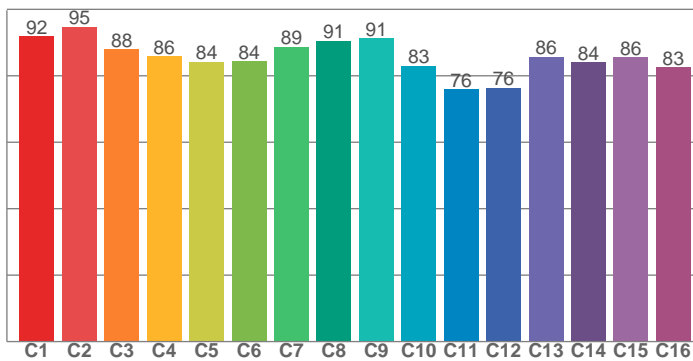
Cut off angle 2.5%: 77,6°

Spectra

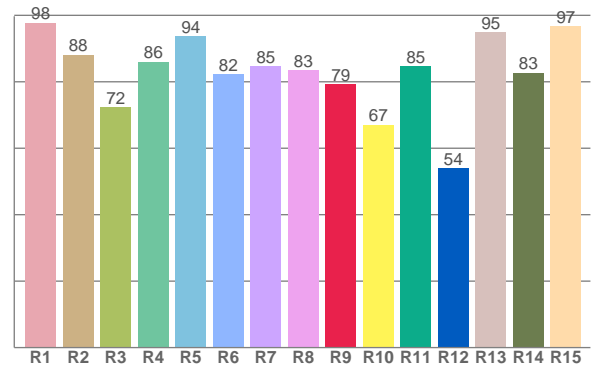




TM30: 85,9



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
97,8	88,2	72,4	86,1	93,7	82,2	84,6	83,5	79,2	67,0	84,8	53,9	95,0	82,7	96,8

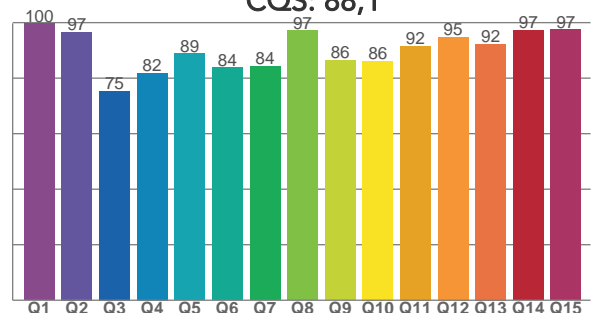
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91,9	94,8	88,0	85,8	84,1	84,3	88,8	90,5	91,2	82,9	75,9	76,4	85,8	84,1	85,5	82,5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
99,7	96,5	75,4	81,9	88,9	83,8	84,3	97,2	86,5	86,1	91,6	94,9	92,2	97,3	97,4

CQS: 88,1



## COLOR PARAMETERS

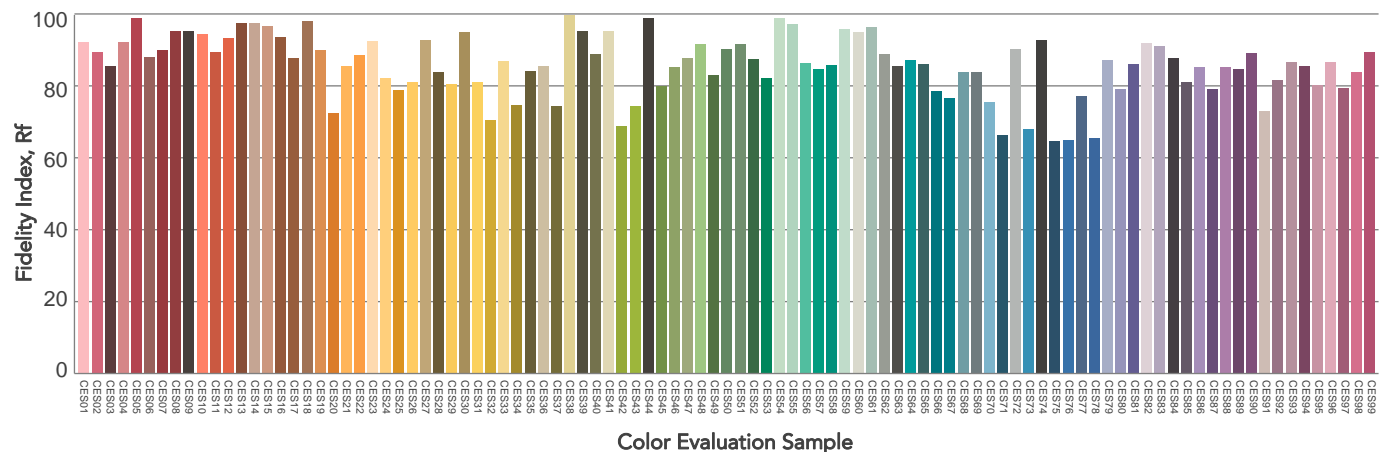
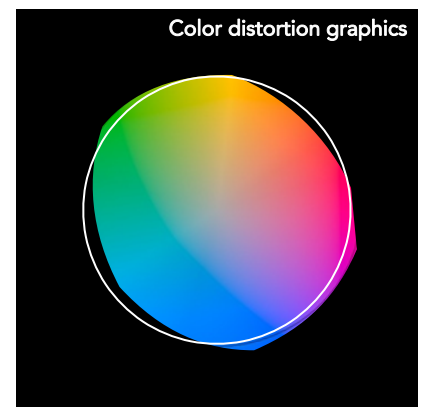
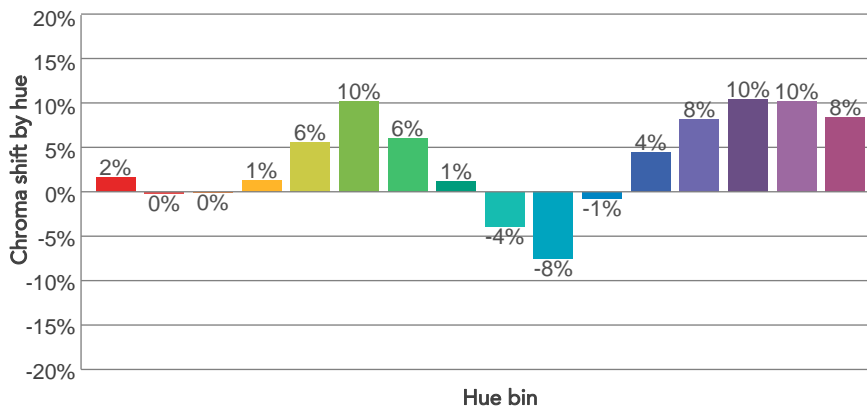
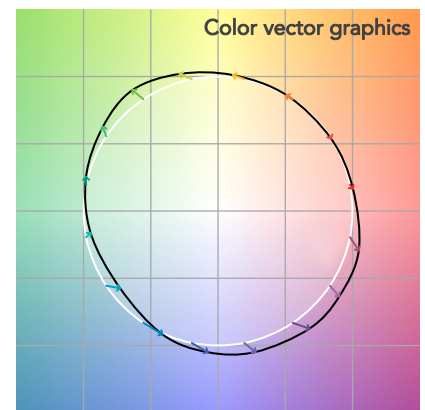
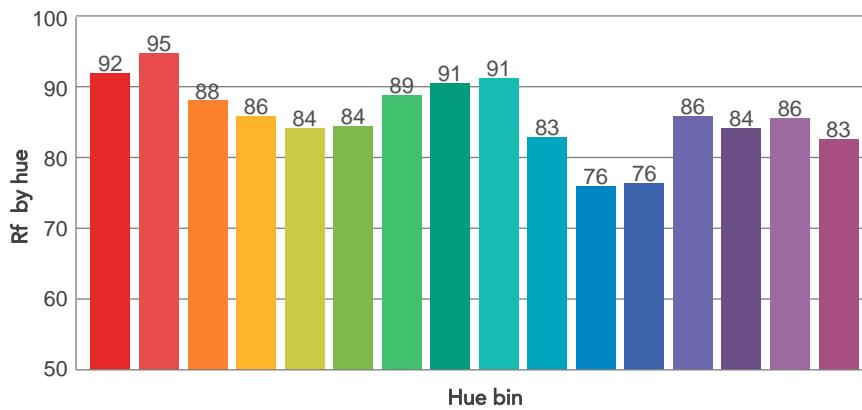
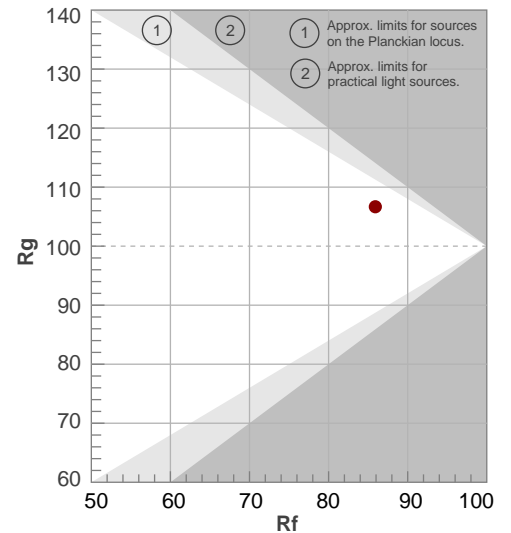
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
4050 K	86,1	79,2	85,9	106,7	88,1	79	0,381	0,385	0,0036

# TM30 DETAILS

**Rf 85,9**  
Fidelity index Rf

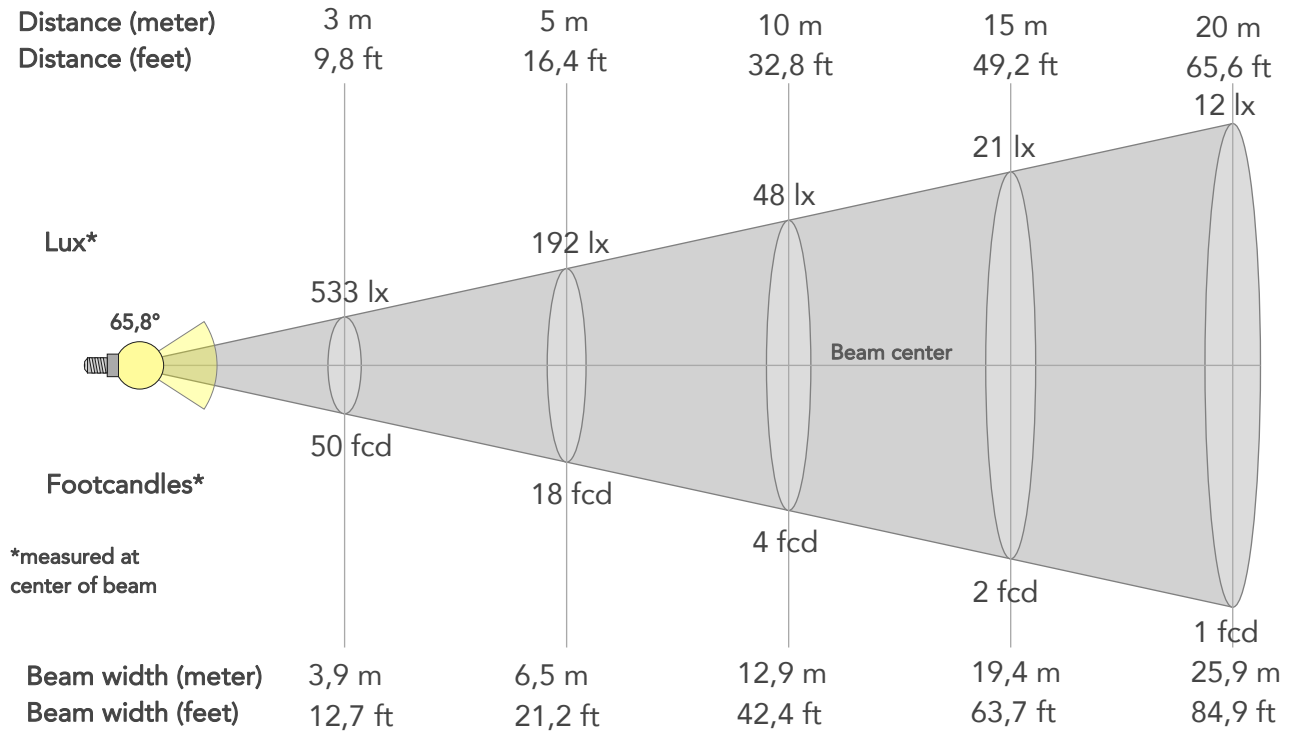
**Rg 106,7**  
Gammut index

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	92	2%	-3%
2	95	0%	-2%
3	88	0%	6%
4	86	1%	9%
5	84	6%	8%
6	84	10%	3%
7	89	6%	-4%
8	91	1%	-6%
9	91	-4%	-3%
10	83	-8%	7%
11	76	-1%	16%
12	76	4%	13%
13	86	8%	7%
14	84	10%	8%
15	86	10%	-3%
16	83	8%	-8%



## BEAM DETAILS

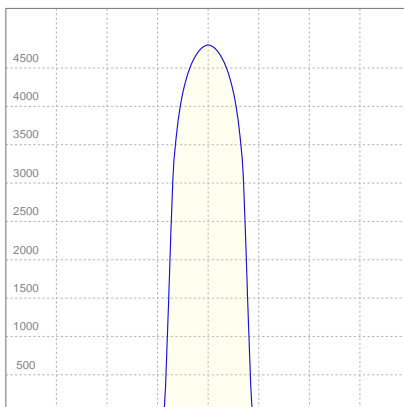
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
65,8°	75,6°	77,6°	100,0%	100,0%



### BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	4797lx	1199lx	533lx	300lx	192lx	85lx	48lx	21lx	12lx	8lx	5lx	3lx	2lx
Footcand.	446fcd	111fcd	50fcd	28fcd	18fcd	8fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	3,9m	5,2m	6,5m	9,7m	12,9m	19,4m	25,9m	32,4m	38,8m	51,8m	64,7m
Beam wid.	4,3ft	8,5ft	12,7ft	17ft	21,2ft	31,8ft	42,4ft	63,7ft	84,9ft	106,1ft	127,3ft	169,8ft	212,2ft

### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,674A	141W	32lm/W



## ISO CANDELA DIAGRAM



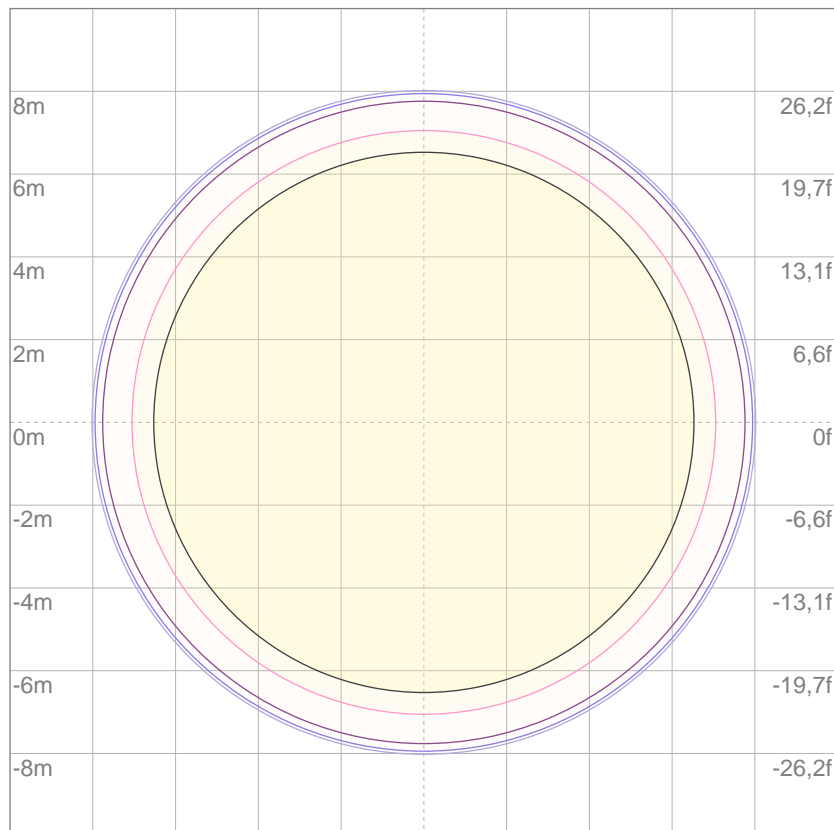
10%	480 cd
20%	959 cd
30%	1439 cd
40%	1919 cd
50%	2398 cd
60%	2878 cd
70%	3358 cd
80%	3838 cd

### Conditions:

Number of c-planes: 2

Candela at center: 4797 cd

## ISO LUX DIAGRAM



3%	1,44 lx
5%	2,40 lx
10%	4,80 lx
30%	14,4 lx
50%	24,0 lx

### Conditions:

Number of c-planes: 2

Lux at center: 48,0 lx

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



Total lumen output:

4511 lm

Peak candela output:

4830 cd

Light quality:

CRI: 85,1

Color temperature:

5650 K

PRODUCT NAME:

ECLFS

MEASURAMENT CONDITIONS:

Beam angle:

PRL70

Target:

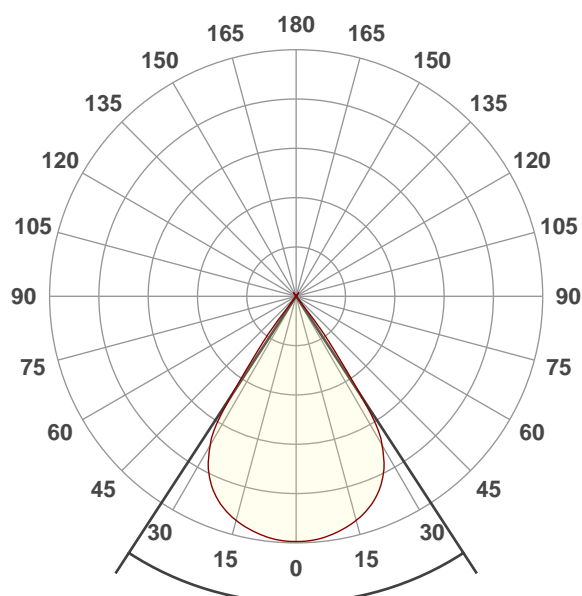
5600K

Operator:

Paolo Carvone

Date and time:

09/07/2021 12:33:09

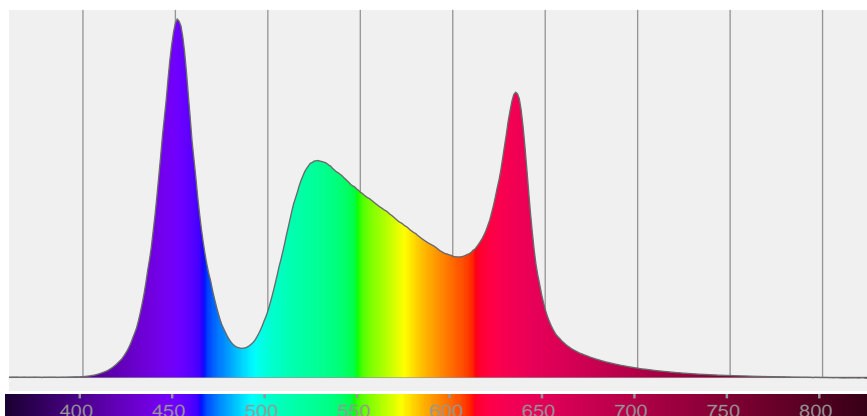


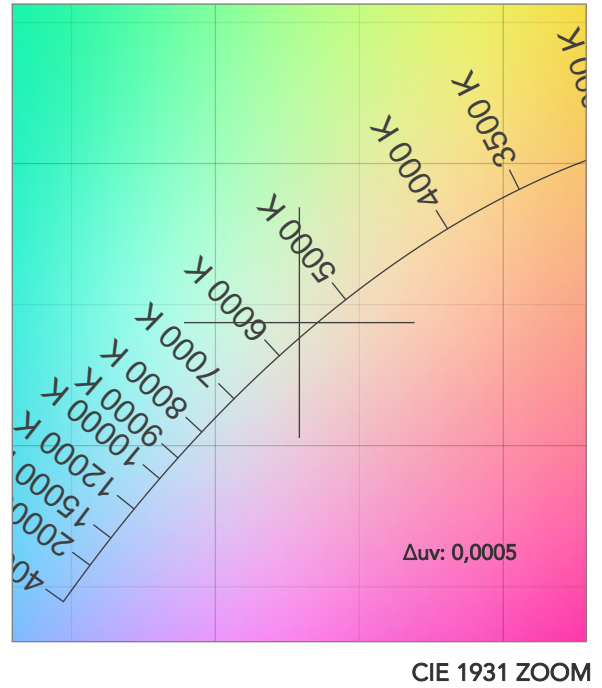
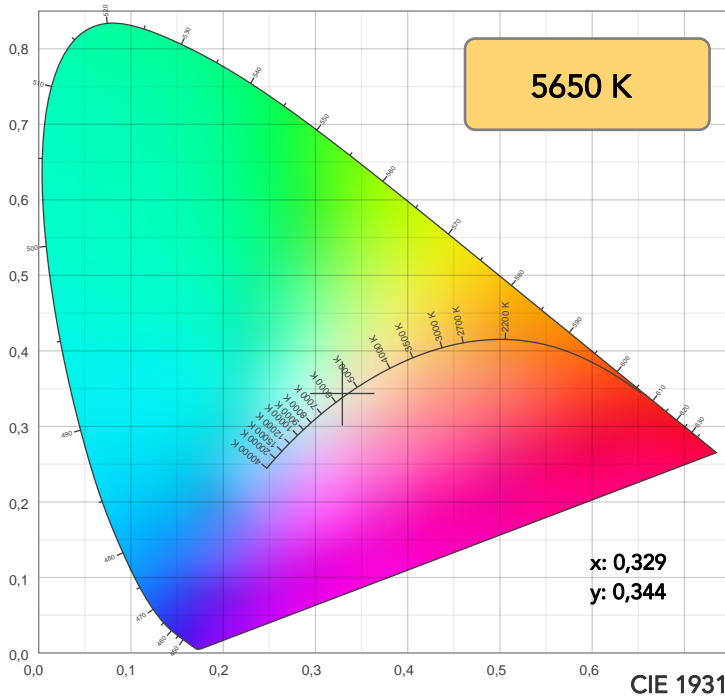
Beam angle 50%: 66,2°

Field angle 10%: 75,9°

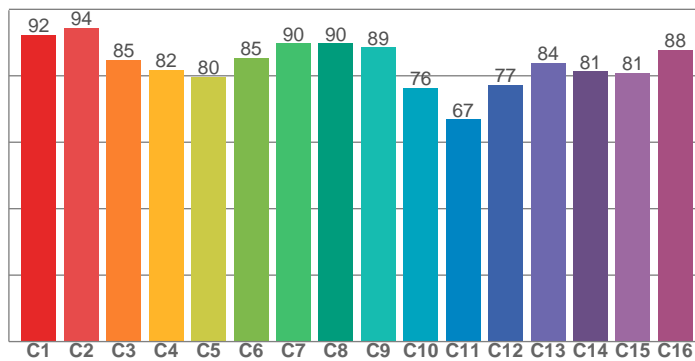
Cut off angle 2.5%: 78,4°

Spectra

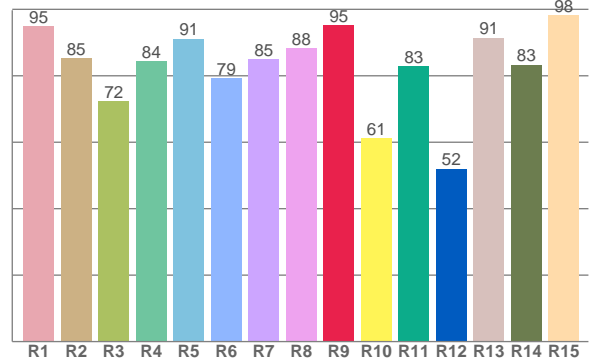




TM30: 83,6



CRI: 85,1 (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
94,9	85,4	72,3	84,4	91,1	79,3	84,9	88,3	95,2	61,3	82,9	52,0	91,4	83,3	98,2

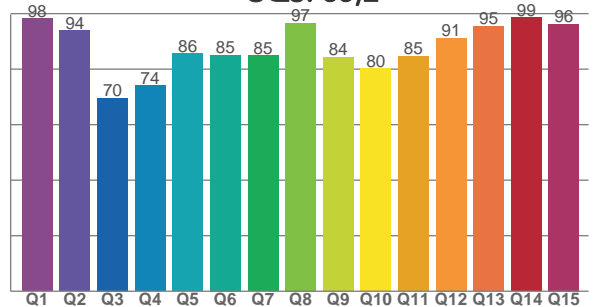
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
92,2	94,4	84,9	81,8	79,7	85,4	89,8	89,8	88,5	76,4	66,9	77,3	83,9	81,3	80,8	87,7

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
98,3	93,9	69,6	74,1	85,6	85,2	84,9	96,7	84,4	80,3	84,6	91,3	95,5	98,6	96,2

CQS: 85,2



## COLOR PARAMETERS

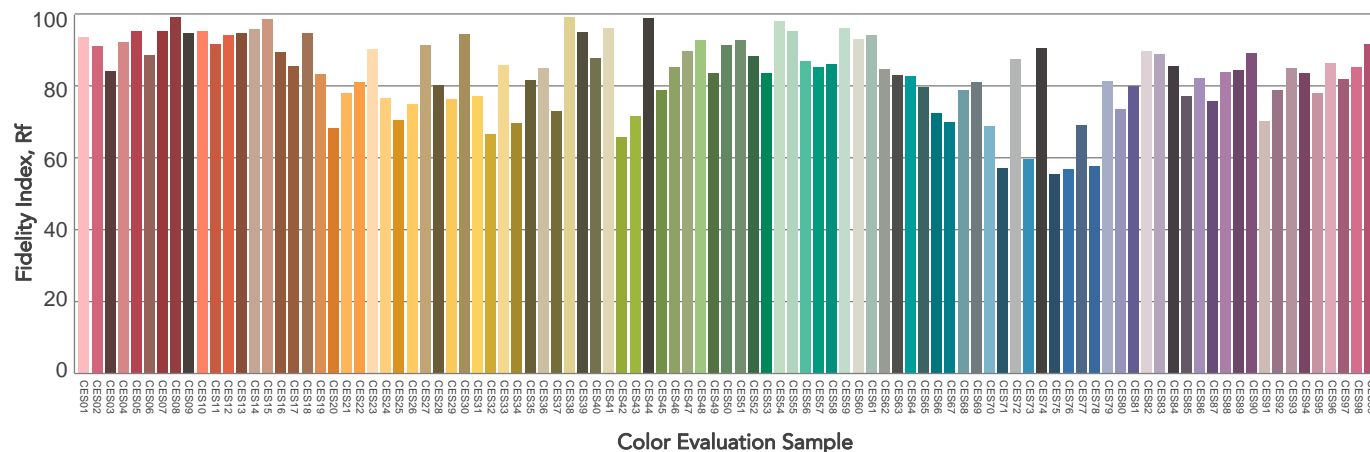
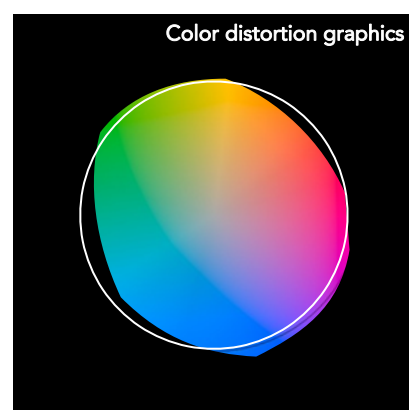
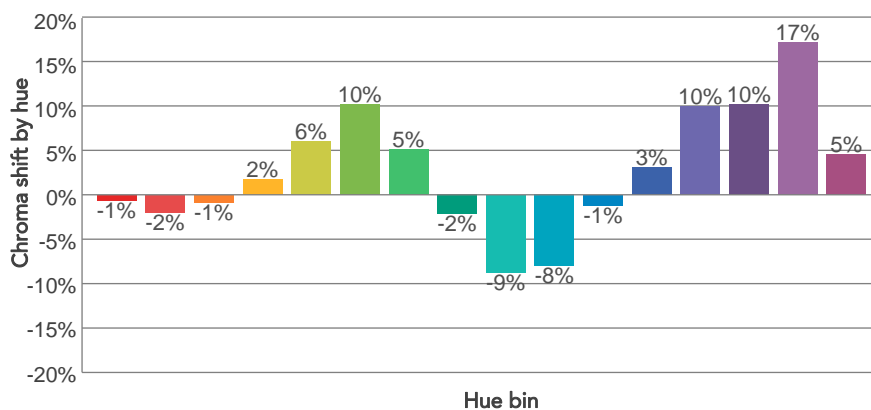
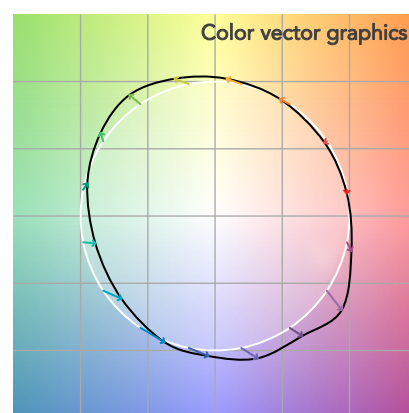
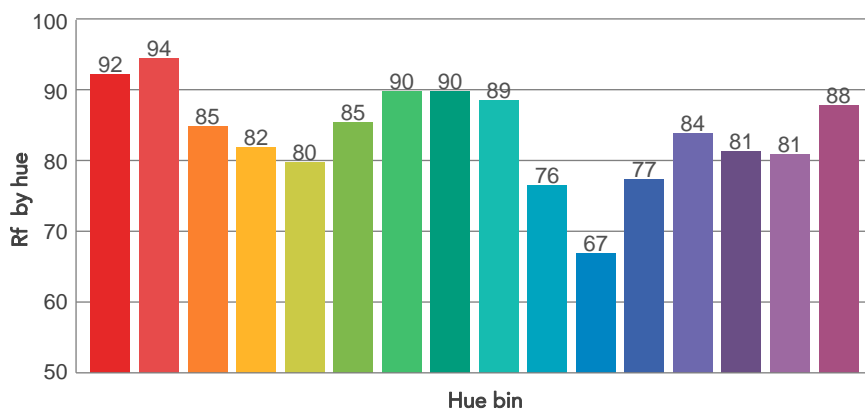
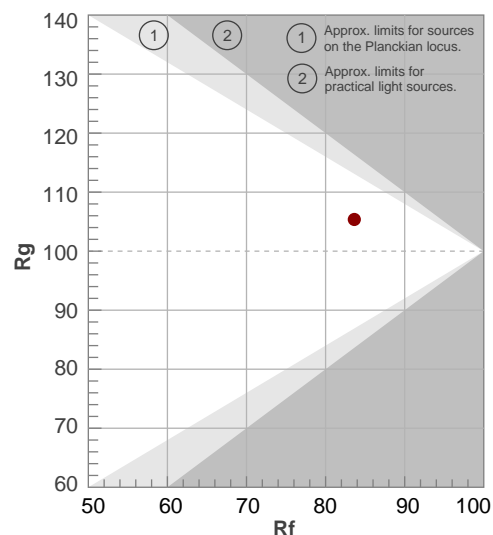
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5650 K	85,1	95,2	83,6	105,4	85,2	81	0,329	0,344	0,0005

# TM30 DETAILS

**Rf 83,6**  
Fidelity index Rf

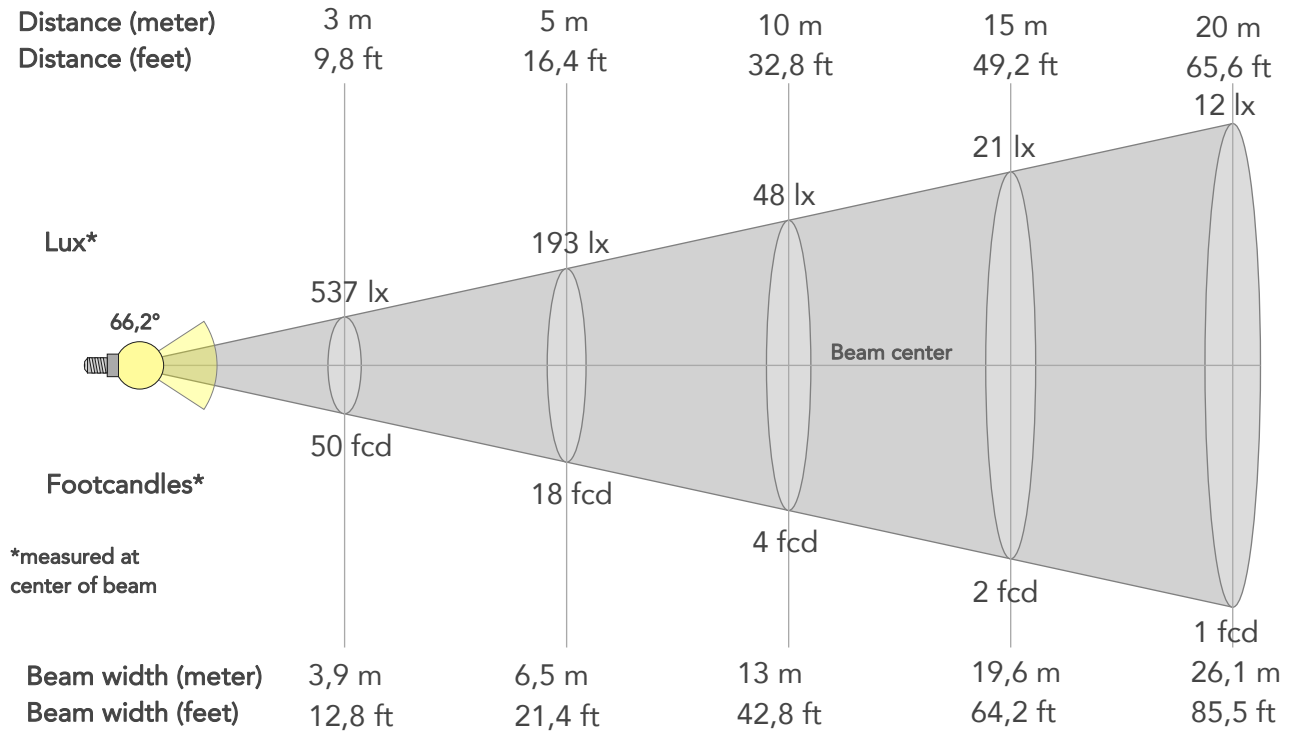
**Rg 105,4**  
Gammut index

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	92	-1%	-3%
2	94	-2%	0%
3	85	-1%	8%
4	82	2%	11%
5	80	6%	10%
6	85	10%	3%
7	90	5%	-4%
8	90	-2%	-5%
9	89	-9%	3%
10	76	-8%	12%
11	67	-1%	21%
12	77	3%	15%
13	84	10%	10%
14	81	10%	4%
15	81	17%	-6%
16	88	5%	-6%



## BEAM DETAILS

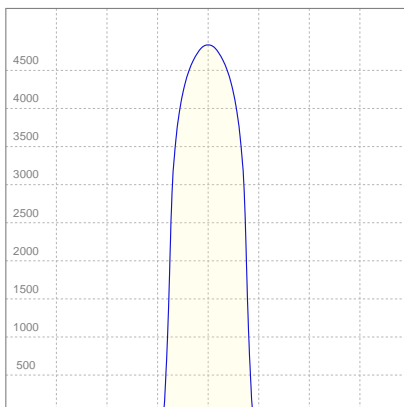
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
66,2°	75,9°	78,4°	100,0%	100,0%



### BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	4830lx	1208lx	537lx	302lx	193lx	86lx	48lx	21lx	12lx	8lx	5lx	3lx	2lx
Footcand.	449fcd	112fcd	50fcd	28fcd	18fcd	8fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	3,9m	5,2m	6,5m	9,8m	13m	19,6m	26,1m	32,6m	39,1m	52,2m	65,2m
Beam wid.	4,3ft	8,6ft	12,8ft	17,1ft	21,4ft	32,1ft	42,8ft	64,2ft	85,5ft	106,9ft	128,3ft	171,1ft	213,8ft

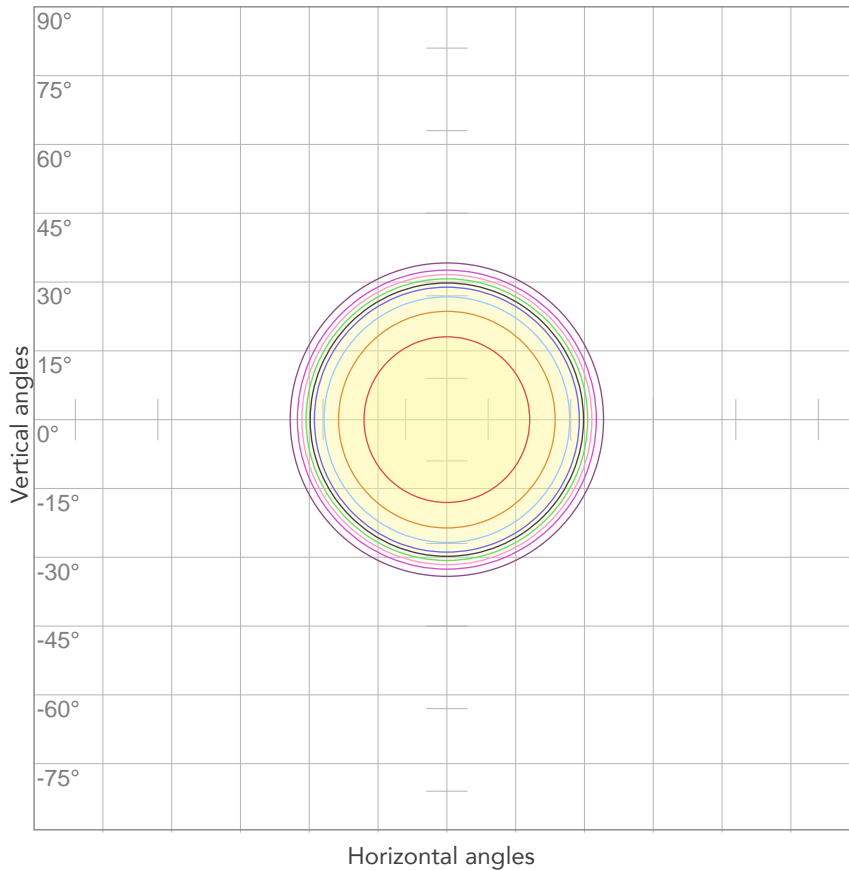
### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,702A	147,6W	31lm/W

## ISO CANDELA DIAGRAM



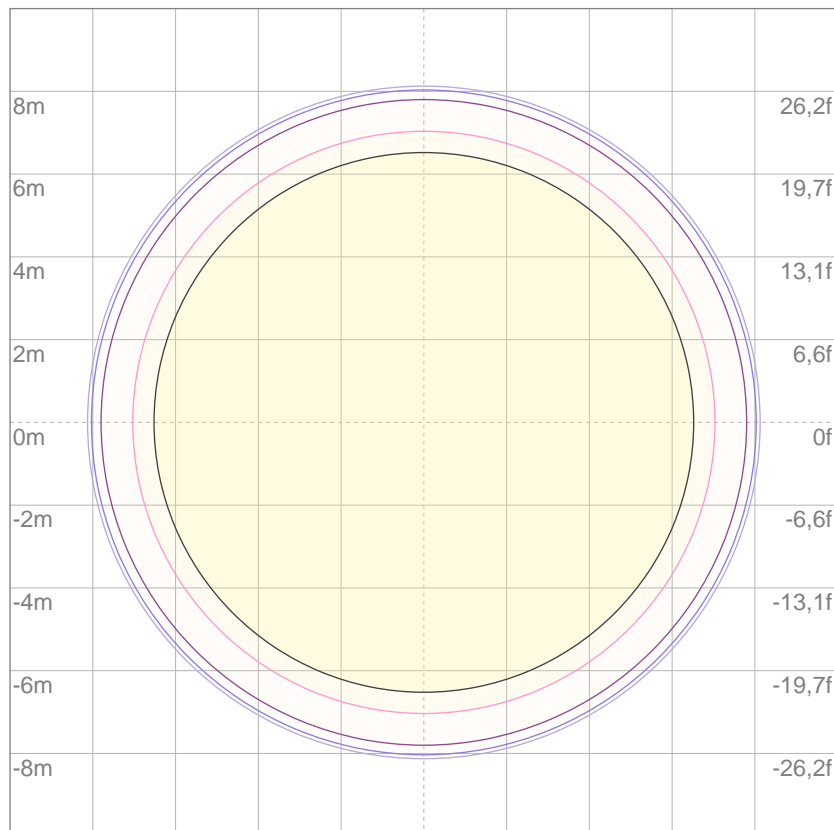
10%	483 cd
20%	966 cd
30%	1449 cd
40%	1932 cd
50%	2415 cd
60%	2898 cd
70%	3381 cd
80%	3864 cd

### Conditions:

Number of c-planes: 2

Candela at center: 4830 cd

## ISO LUX DIAGRAM



3%	1,45 lx
5%	2,42 lx
10%	4,83 lx
30%	14,5 lx
50%	24,2 lx

### Conditions:

Number of c-planes: 2

Lux at center: 48,3 lx

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



Total lumen output:

4417 lm

Peak candela output:

4736 cd

Light quality:

CRI: 84,8

Color temperature:

5961 K

PRODUCT NAME:

ECLFS

MEASURAMENT CONDITIONS:

Beam angle:

PRL70

Target:

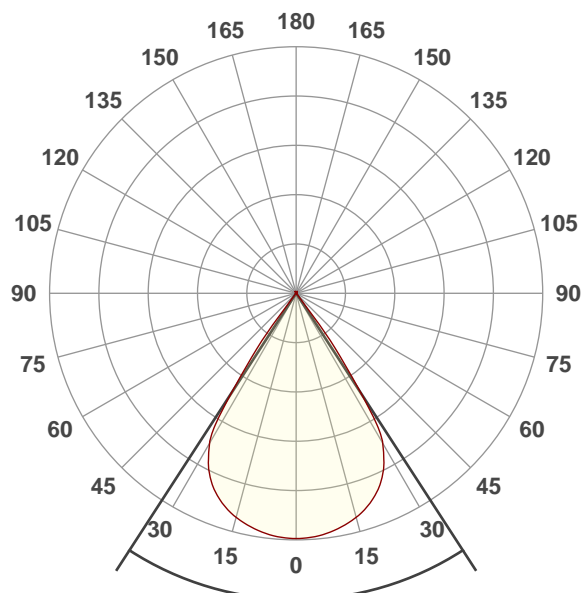
6000K

Operator:

Paolo Carvone

Date and time:

09/07/2021 12:37:14

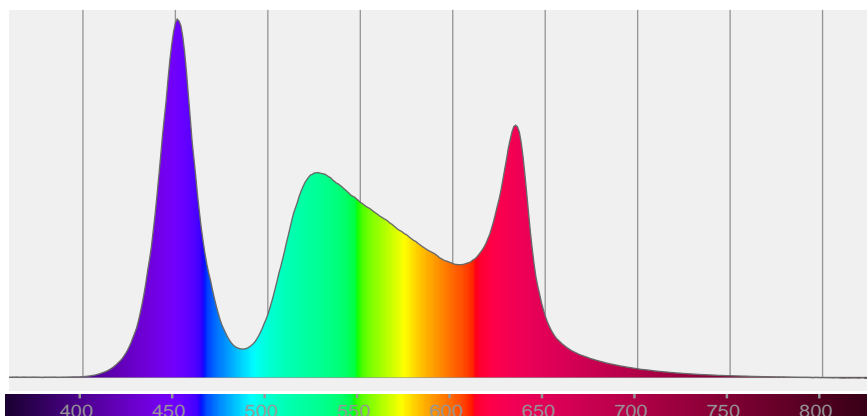


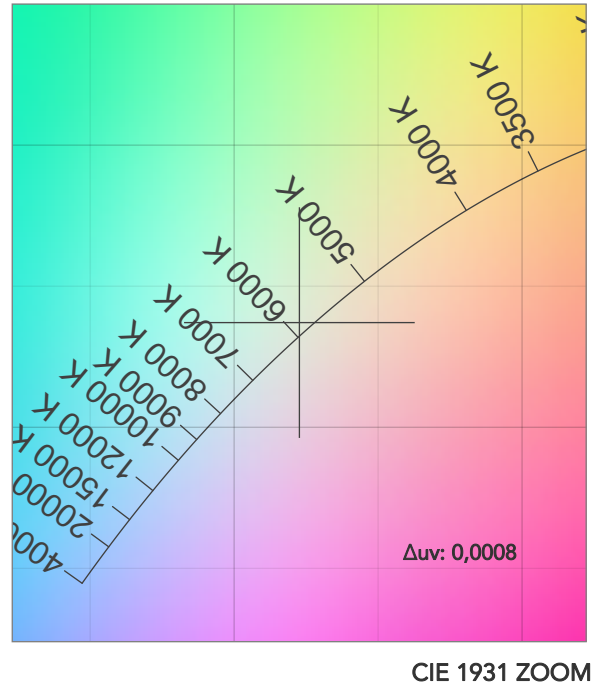
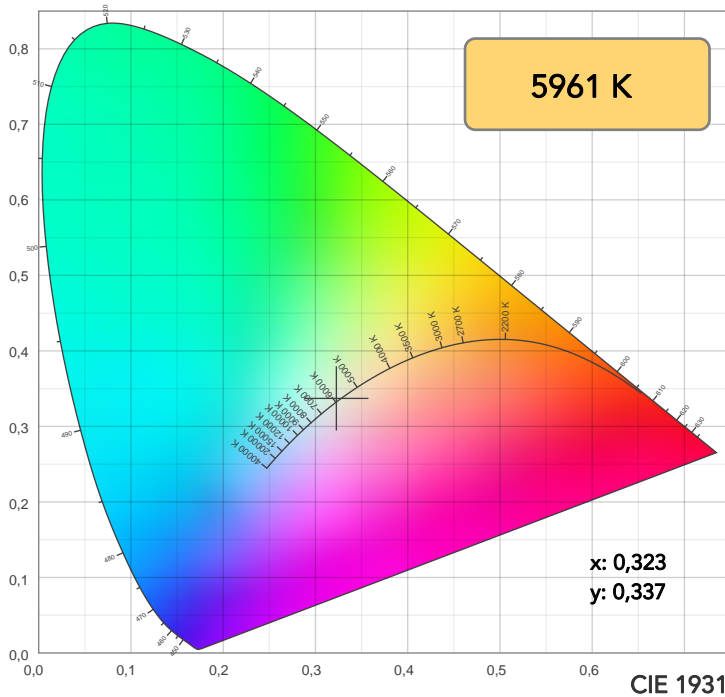
Beam angle 50%: 65,9°

Field angle 10%: 75,7°

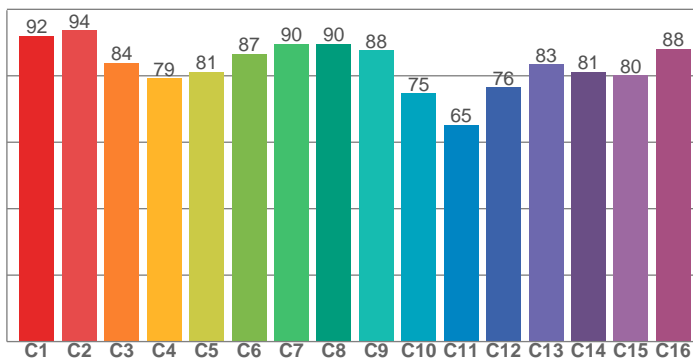
Cut off angle 2.5%: 77,9°

Spectra

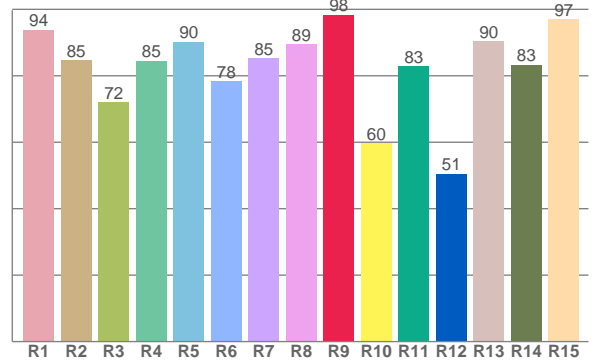




TM30: 83,1



CRI: 84,8 (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
93,8	84,7	72,1	84,6	90,2	78,4	85,2	89,4	98,4	59,7	82,9	50,5	90,5	83,3	97,0

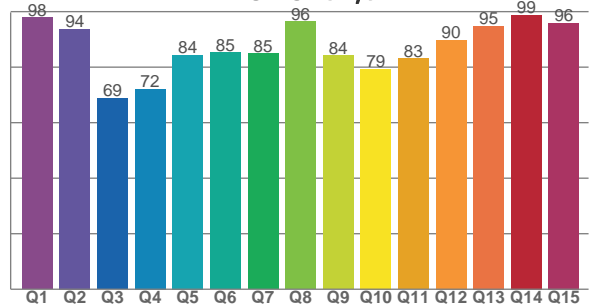
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
92,0	93,6	83,9	79,2	81,1	86,5	89,7	89,6	87,6	74,7	65,3	76,5	83,4	81,2	80,2	88,1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
97,8	93,8	68,8	72,1	84,3	85,3	84,9	96,4	84,2	79,4	83,1	89,8	94,8	98,7	95,9

CQS: 84,5



## 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 deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	$\Delta uv$
5961 K	84,8	98,4	83,1	104,7	84,5	81	0,323	0,337	0,0008

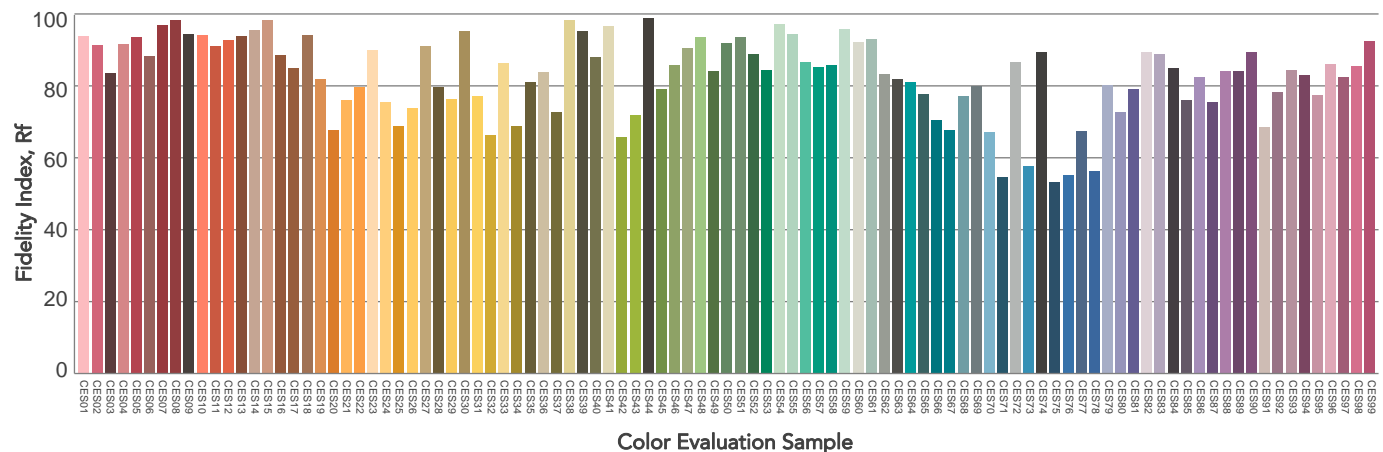
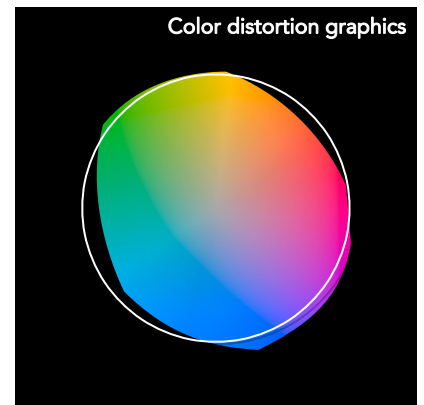
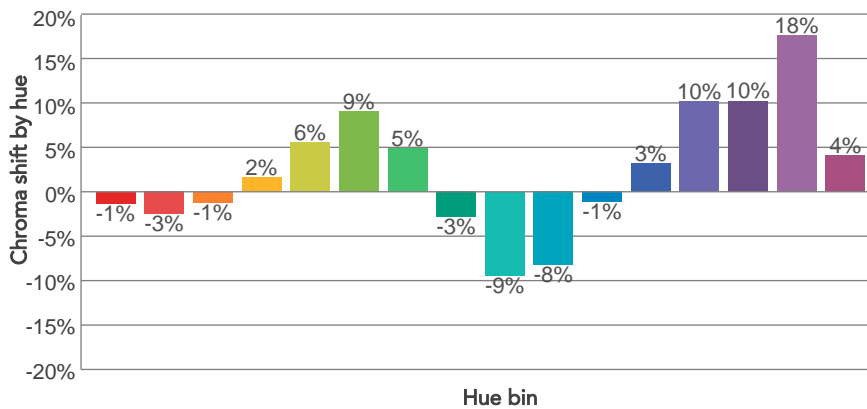
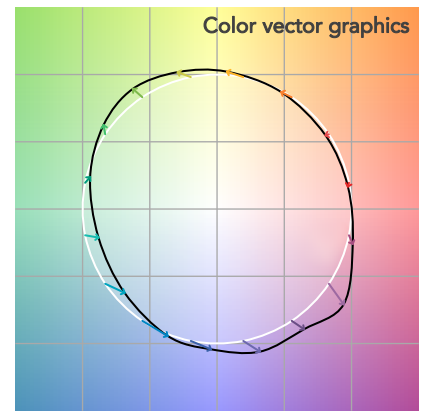
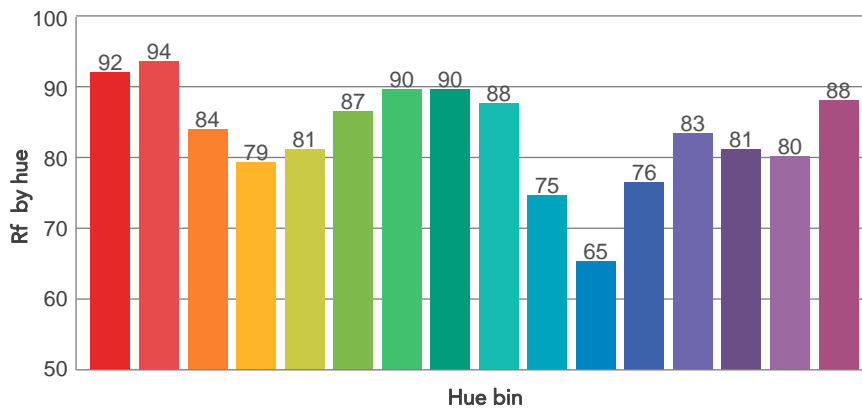
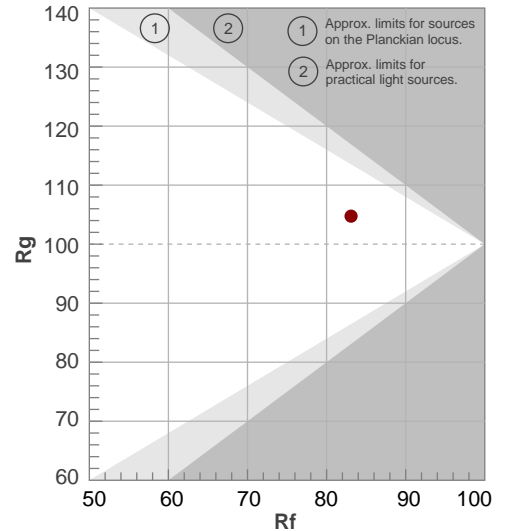


# TM30 DETAILS

**Rf 83,1**  
Fidelity index Rf

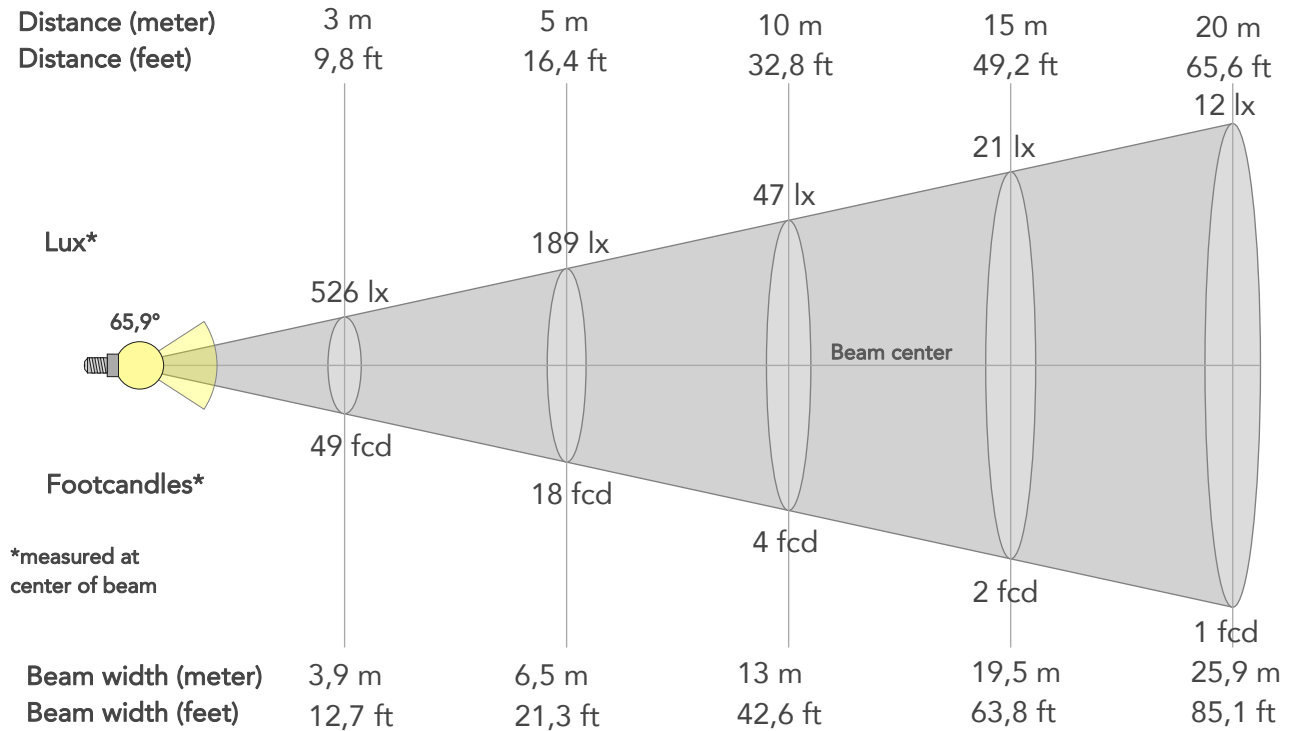
**Rg 104,7**  
Gammut index

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	92	-1%	-3%
2	94	-3%	1%
3	84	-1%	9%
4	79	2%	13%
5	81	6%	9%
6	87	9%	2%
7	90	5%	-5%
8	90	-3%	-5%
9	88	-9%	4%
10	75	-8%	14%
11	65	-1%	22%
12	76	3%	16%
13	83	10%	11%
14	81	10%	4%
15	80	18%	-7%
16	88	4%	-6%



## BEAM DETAILS

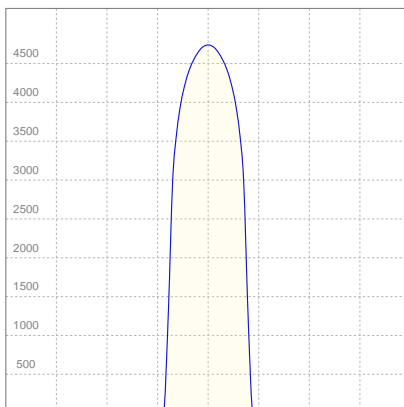
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
65,9°	75,7°	77,9°	100,0%	100,0%



### BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	4736lx	1184lx	526lx	296lx	189lx	84lx	47lx	21lx	12lx	8lx	5lx	3lx	2lx
Footcand.	440fcd	110fcd	49fcd	27fcd	18fcd	8fcd	4fcd	2fcd	1fcd	1fcd	0fcd	0fcd	0fcd
Beam wid.	1,3m	2,6m	3,9m	5,2m	6,5m	9,7m	13m	19,5m	25,9m	32,4m	38,9m	51,9m	64,9m
Beam wid.	4,3ft	8,6ft	12,7ft	17ft	21,3ft	31,9ft	42,6ft	63,8ft	85,1ft	106,4ft	127,7ft	170,2ft	212,8ft

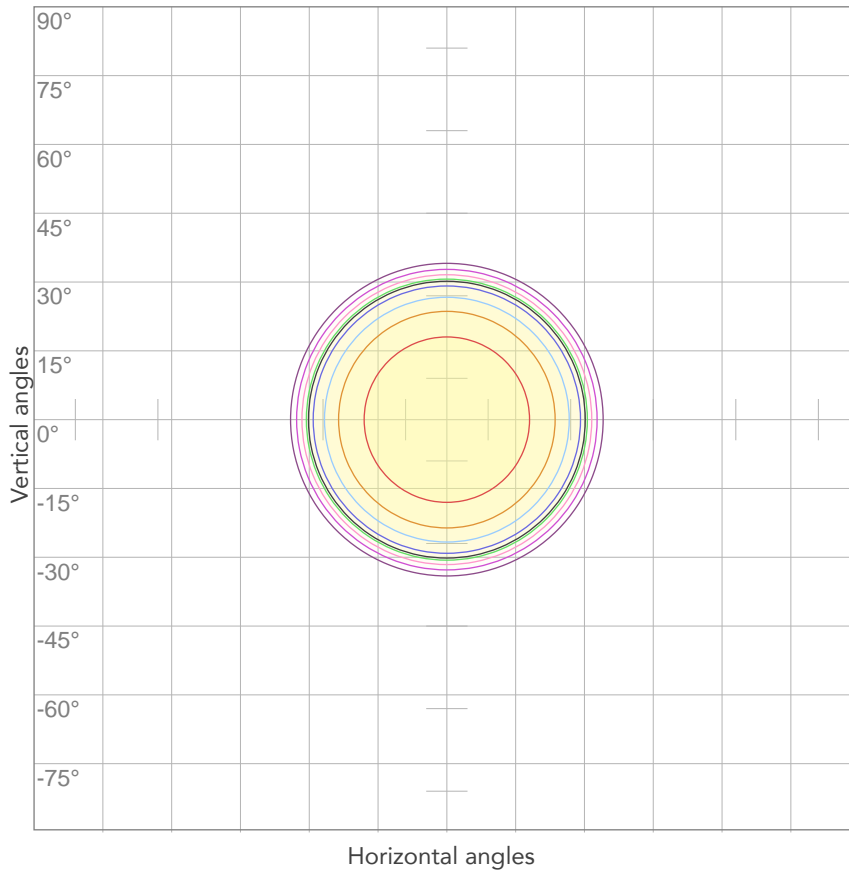
### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
225V	0,690A	145W	30lm/W

## ISO CANDELA DIAGRAM



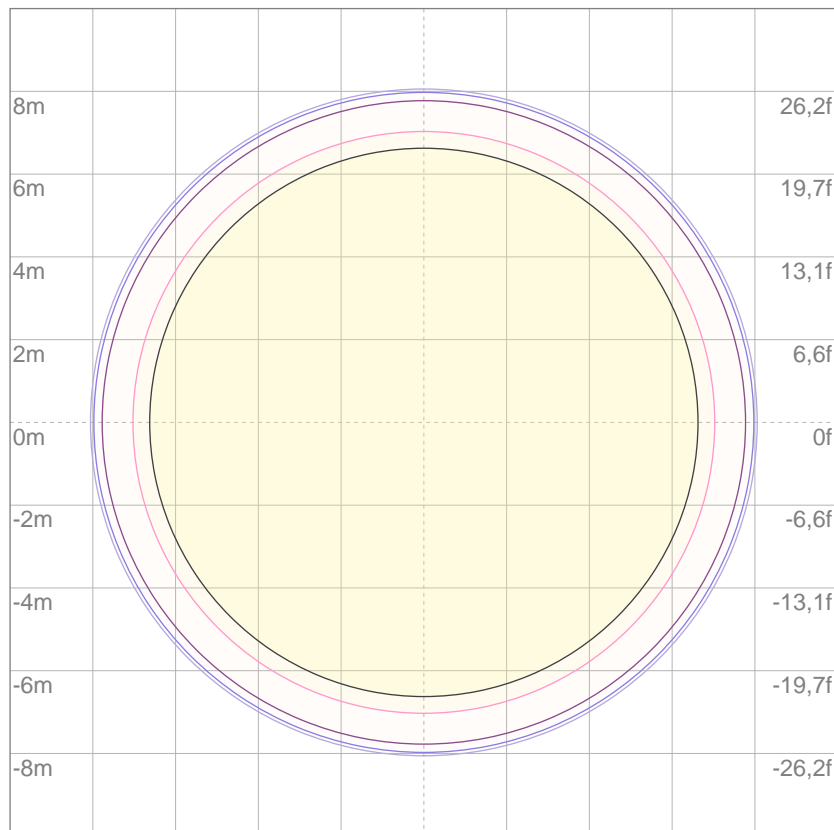
10%	474 cd
20%	947 cd
30%	1421 cd
40%	1894 cd
50%	2368 cd
60%	2841 cd
70%	3315 cd
80%	3788 cd

### Conditions:

Number of c-planes: 2

Candela at center: 4736 cd

## ISO LUX DIAGRAM



3%	1,42 lx
5%	2,37 lx
10%	4,74 lx
30%	14,2 lx
50%	23,7 lx

### Conditions:

Number of c-planes: 2

Lux at center: 47,4 lx

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