



Photometric Test Report



MINIECLFRDY

LED Fresnel with HB White source
to replace a 300 W Lamp

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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:

2851 lm

Peak candela output:

2813 cd

Light quality:

CRI: 81,4

Color temperature:

5039 K

PRODUCT NAME:

MINIECLFRDY

MEASURAMENT CONDITIONS:

Beam angle:

Max Zoom

Target:

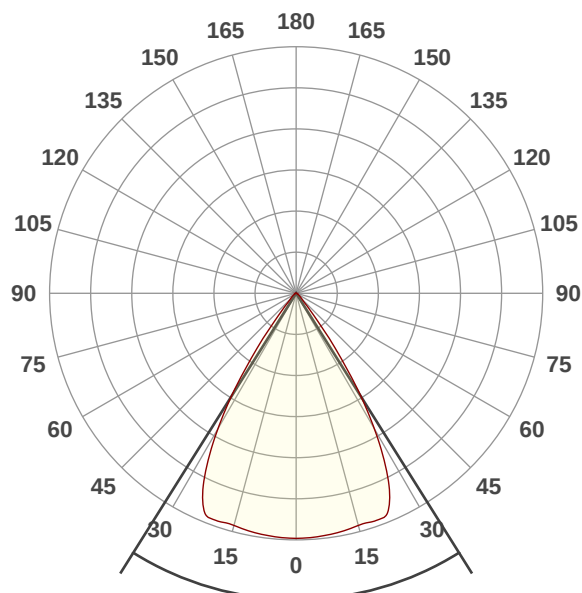
5000K

Operator:

Paolo Carvone

Date and time:

26/02/2020 10:32:15

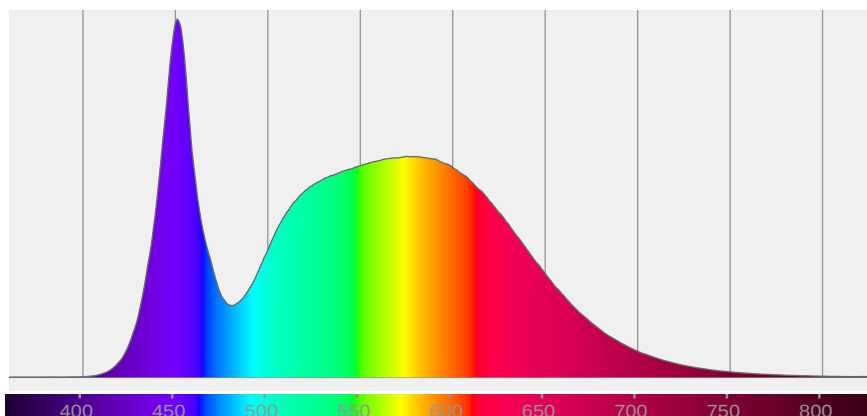


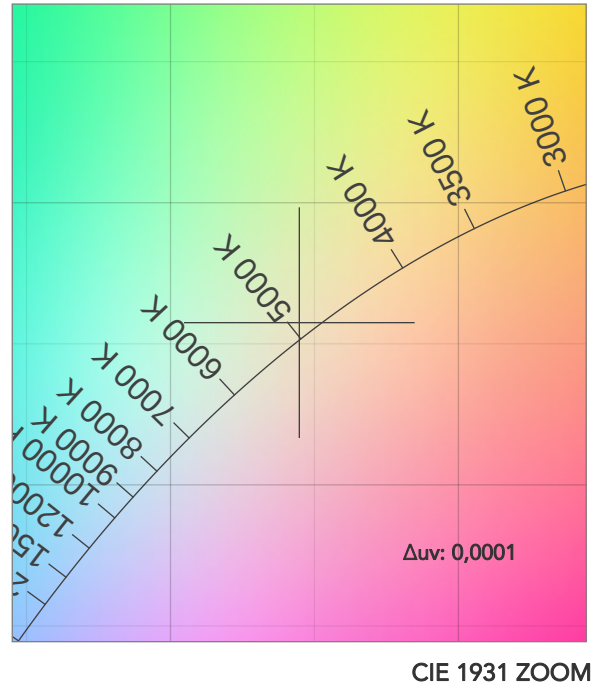
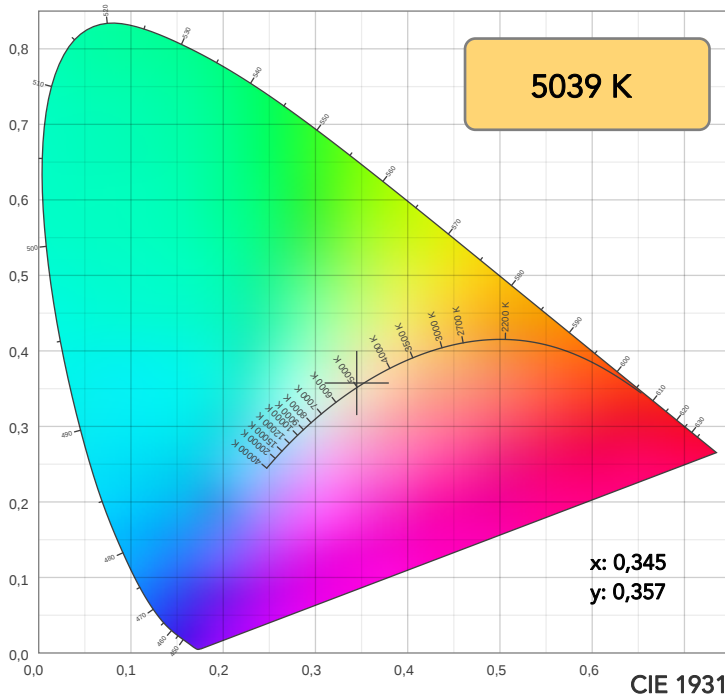
Beam angle 50%: 64,2°

Field angle 10%: 78,7°

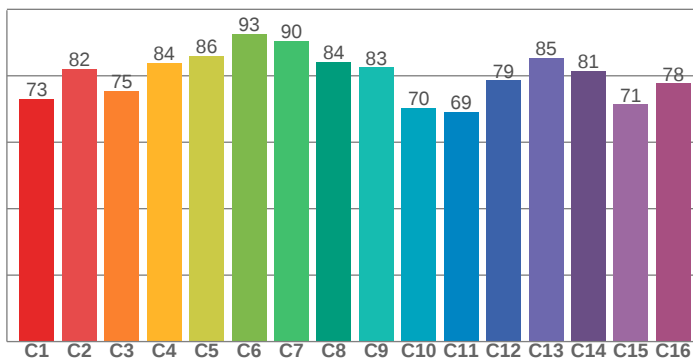
Cut off angle 2.5%: 97,6°

Spectra

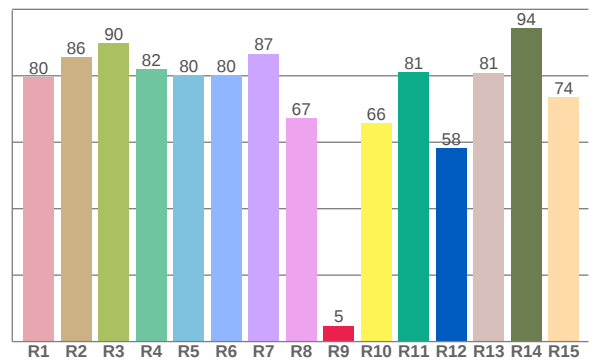




TM30: 80,5



CRI: 81,4 (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
79,6	85,6	89,8	82,0	80,1	80,1	86,6	67,1	4,7	65,7	81,1	58,1	80,9	94,4	73,6

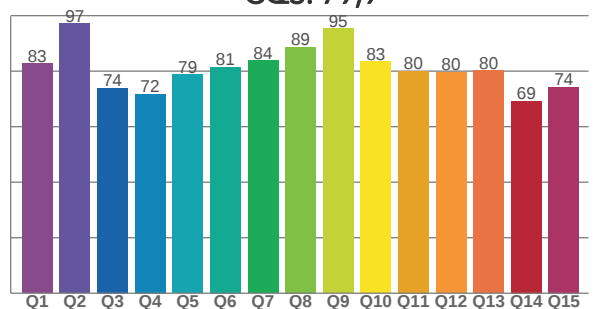
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
73,1	82,0	75,5	83,8	86,0	92,5	90,4	84,2	82,5	70,3	69,1	78,6	85,4	81,4	71,4	77,7

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82,7	97,1	73,9	71,7	78,8	81,5	83,8	88,7	95,4	83,4	80,0	79,6	80,2	69,3	74,3

CQS: 79,9



COLOR PARAMETERS

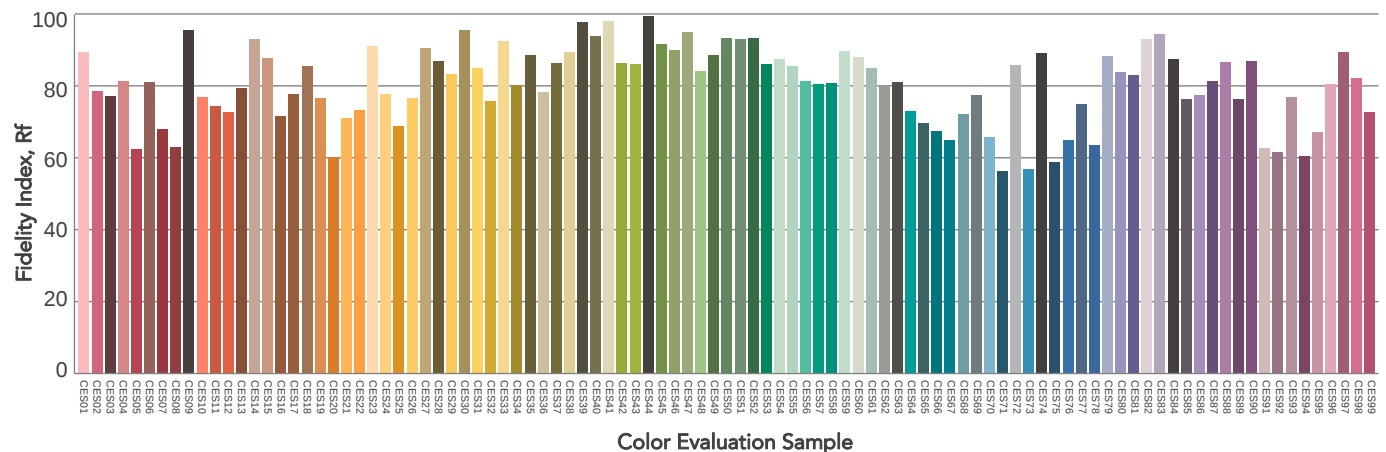
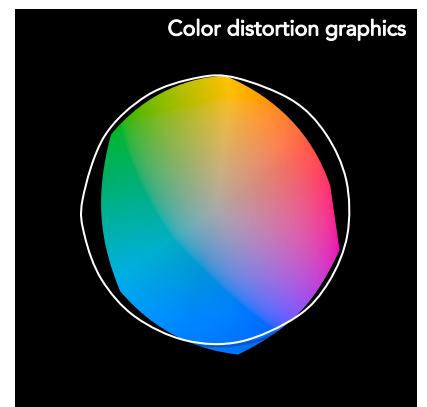
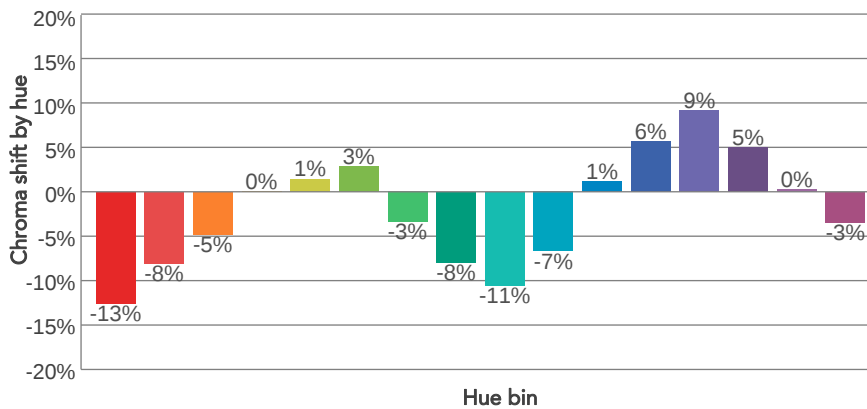
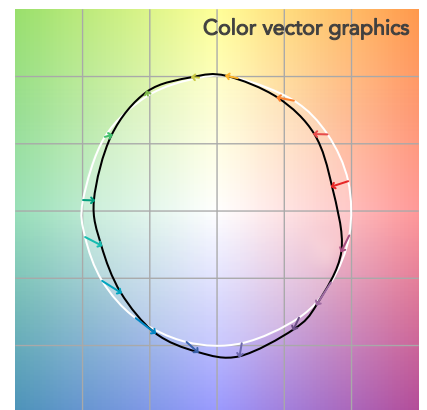
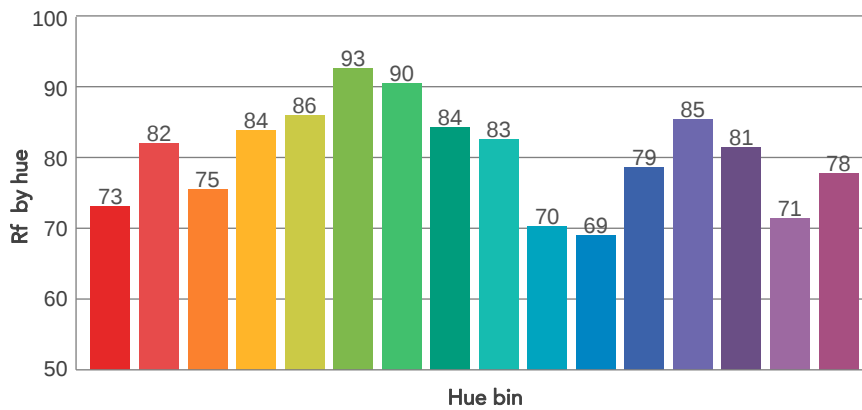
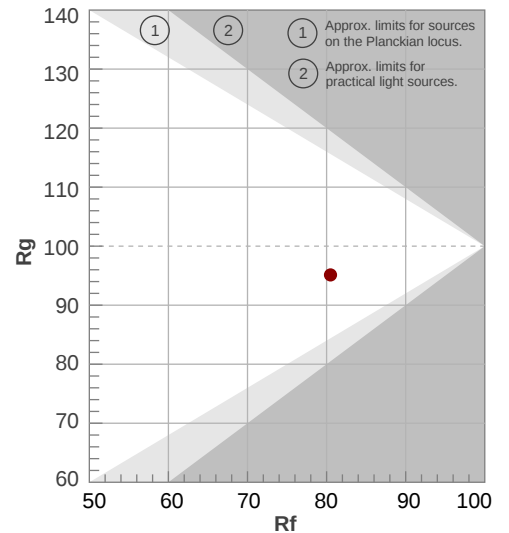
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5039 K	81,4	4,7	80,5	95,1	79,9	67	0,345	0,357	0,0001

TM30 DETAILS

Rf 80,5
Fidelity index Rf

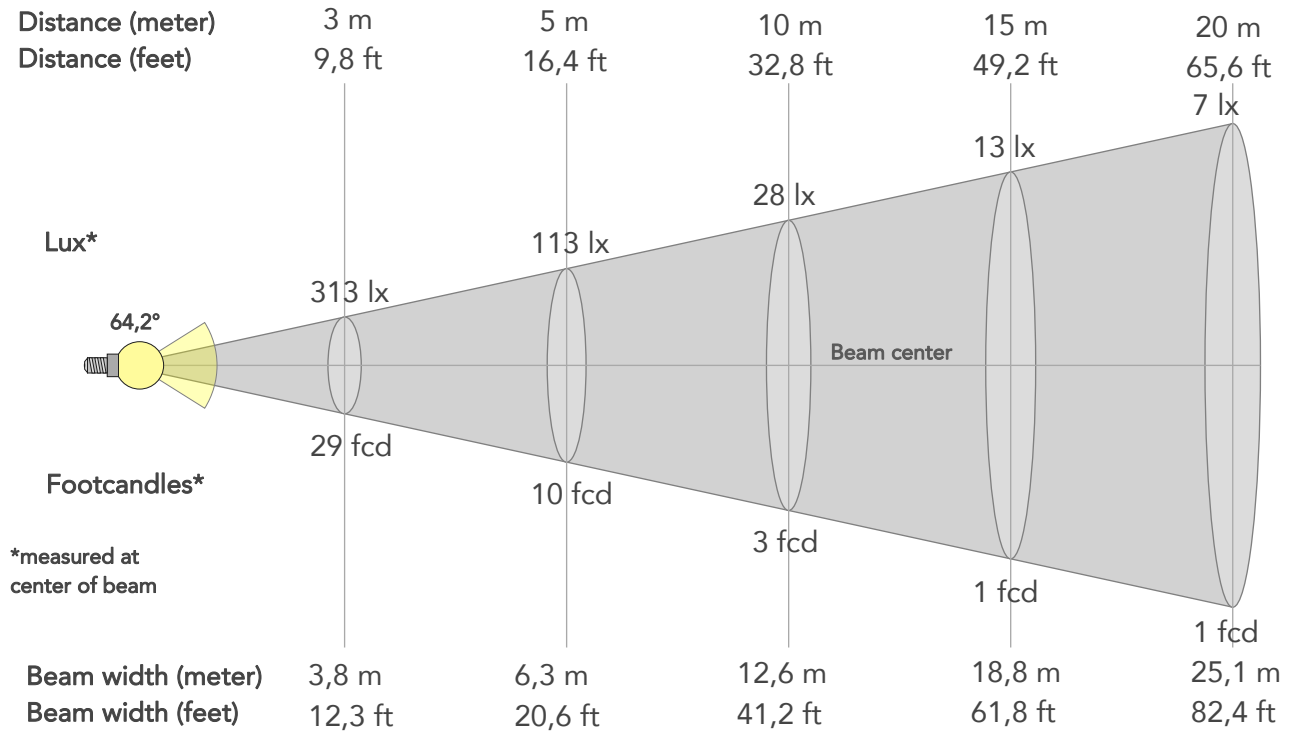
Rg 95,1
Gammut index

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	73	-13%	-1%
2	82	-8%	6%
3	75	-5%	11%
4	84	0%	9%
5	86	1%	5%
6	93	3%	-1%
7	90	-3%	-4%
8	84	-8%	-1%
9	83	-11%	8%
10	70	-7%	15%
11	69	1%	18%
12	79	6%	9%
13	85	9%	-4%
14	81	5%	-8%
15	71	0%	-19%
16	78	-3%	-13%



BEAM DETAILS

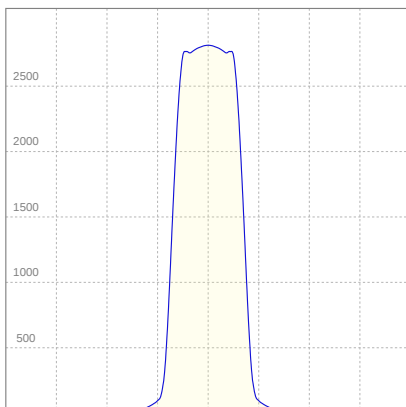
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
64,2°	78,7°	97,6°	99,6%	97,1%



BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	2813lx	703lx	313lx	176lx	113lx	50lx	28lx	13lx	7lx	5lx	3lx	2lx	1lx
Footcand.	261fcd	65fcd	29fcd	16fcd	10fcd	5fcd	3fcd	1fcd	1fcd	0fcd	0fcd	0fcd	0fcd
Beam wid.	1,3m	2,5m	3,8m	5m	6,3m	9,4m	12,6m	18,8m	25,1m	31,4m	37,7m	50,2m	62,8m
Beam wid.	4,1ft	8,3ft	12,3ft	16,4ft	20,6ft	30,9ft	41,2ft	61,8ft	82,4ft	103ft	123,5ft	164,7ft	205,9ft

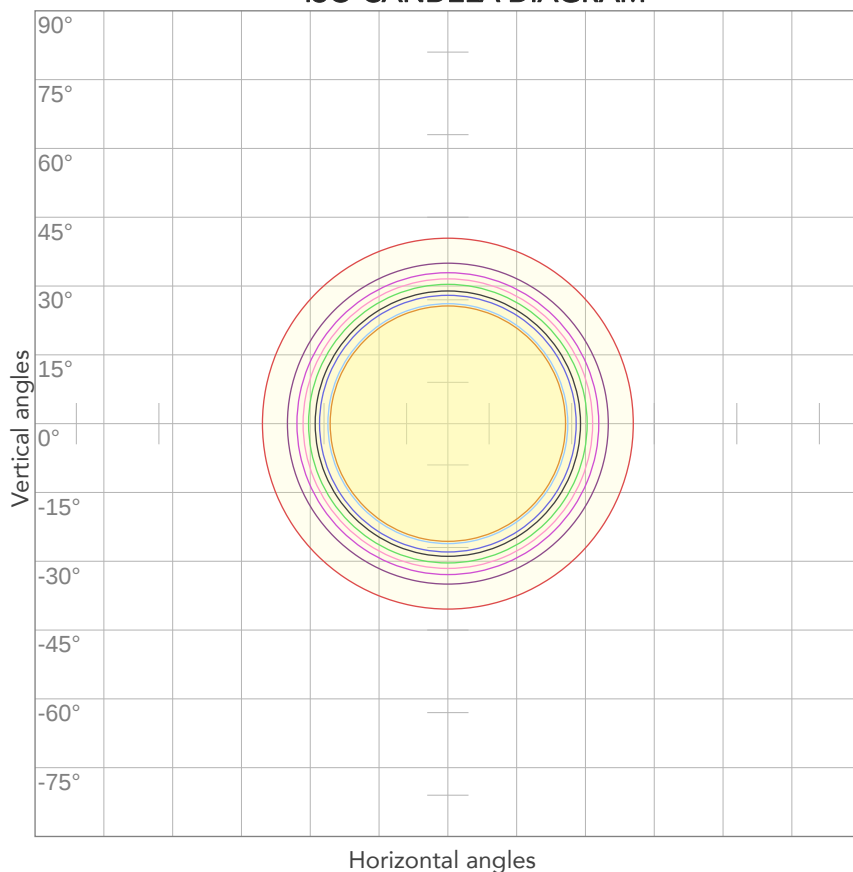
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
223V	0,160A	34,4W	83lm/W

ISO CANDELA DIAGRAM



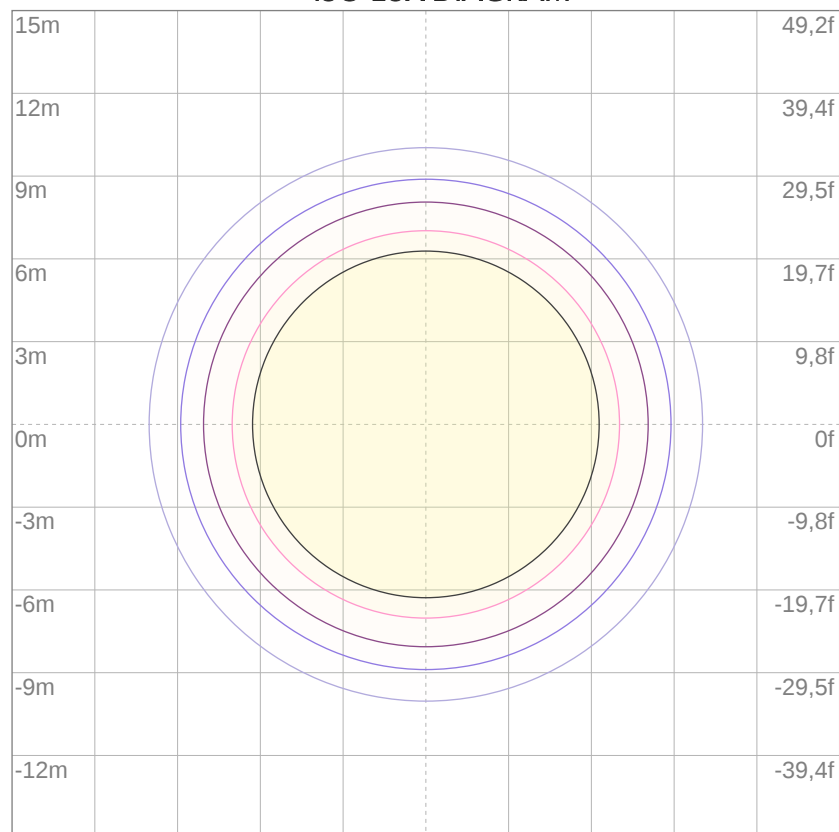
10%	281 cd
20%	563 cd
30%	844 cd
40%	1125 cd
50%	1406 cd
60%	1688 cd
70%	1969 cd
80%	2250 cd

Conditions:

Number of c-planes: 2

Candela at center: 2813 cd

ISO LUX DIAGRAM



3%	0,844 lx
5%	1,41 lx
10%	2,81 lx
30%	8,44 lx
50%	14,1 lx

Conditions:

Number of c-planes: 2

Lux at center: 28,1 lx

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



Total lumen output:

1168 lm

Peak candela output:

8024 cd

Light quality:

CRI: 81,5

Color temperature:

5062 K

PRODUCT NAME:

MINIECLFRDY

MEASURAMENT CONDITIONS:

Beam angle:

Min Zoom

Target:

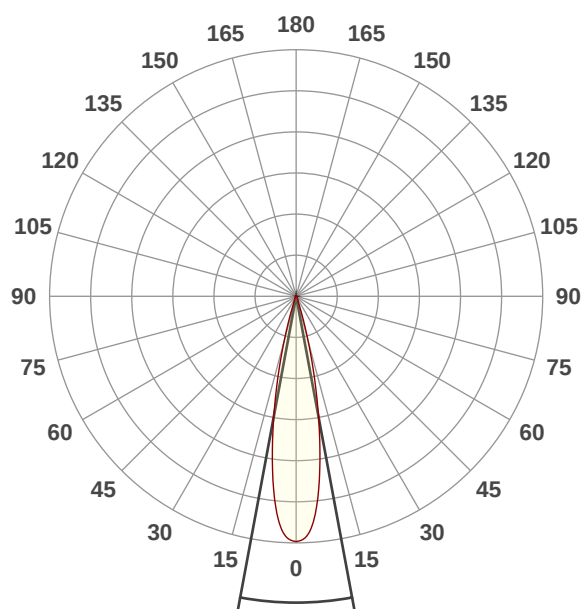
5000K

Operator:

Paolo Carvone

Date and time:

26/02/2020 10:30:13

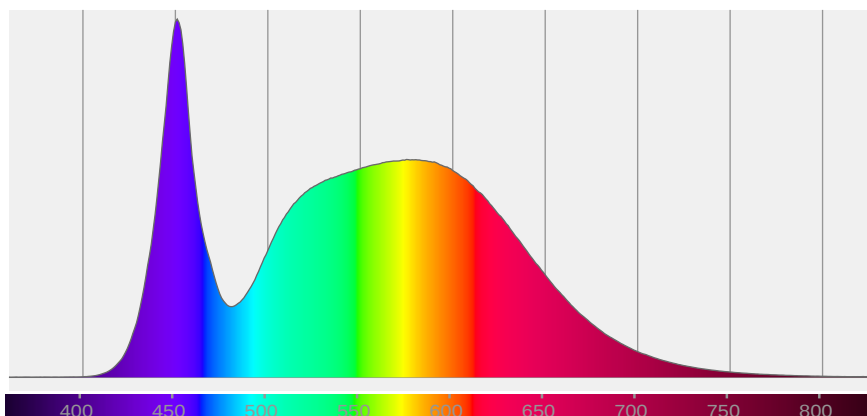


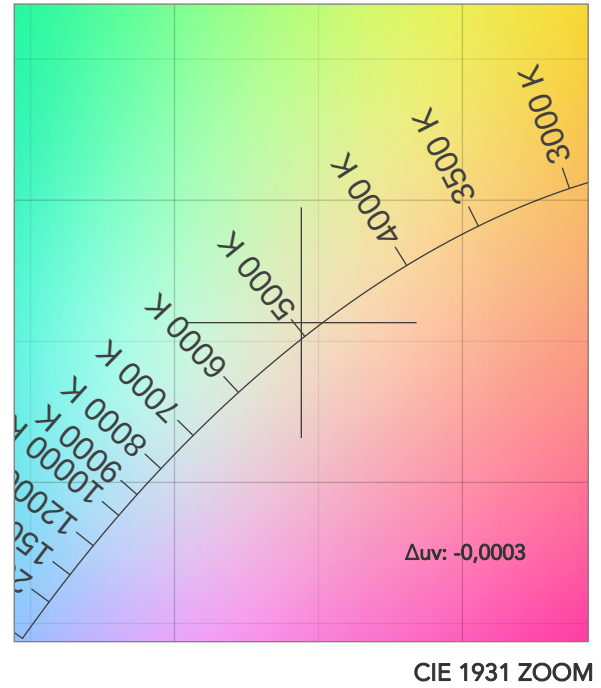
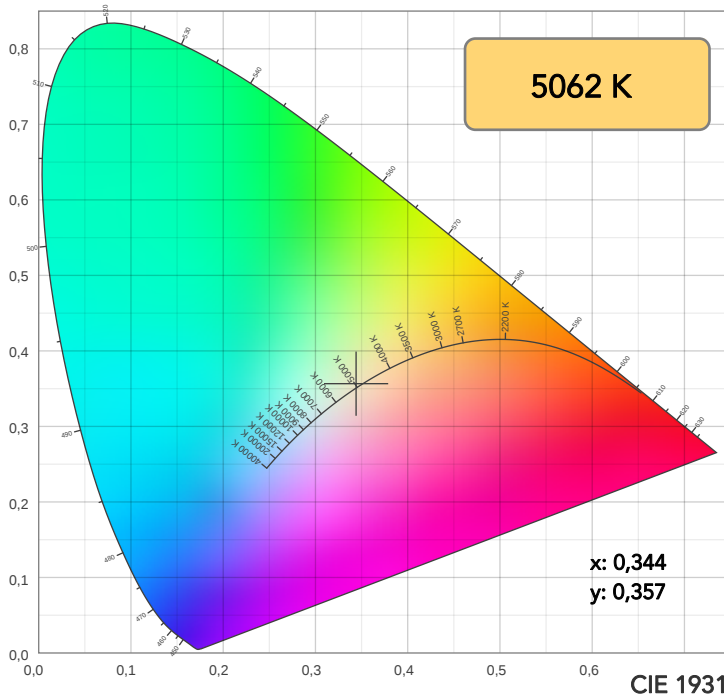
Beam angle 50%: 21°

Field angle 10%: 33,9°

Cut off angle 2.5%: 42,3°

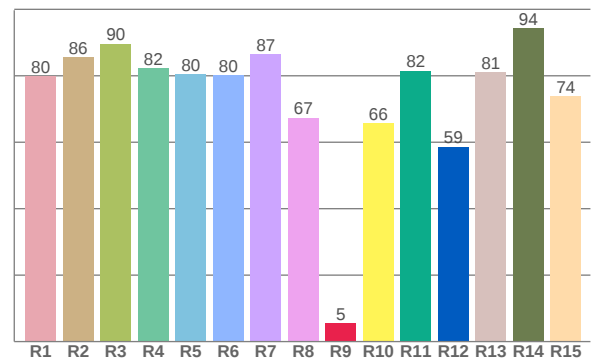
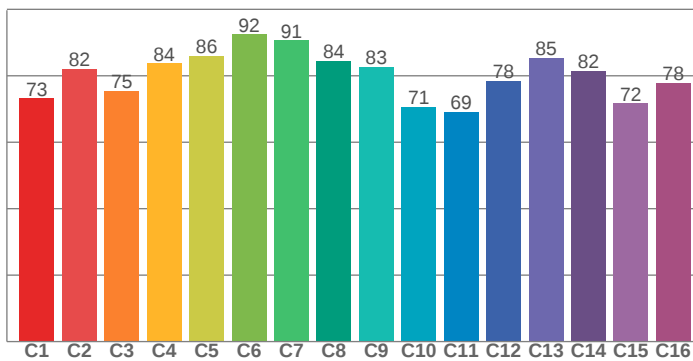
Spectra





TM30: 80,6

CRI: 81,5 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
79,8	85,6	89,6	82,3	80,4	80,2	86,5	67,4	5,4	65,8	81,5	58,7	81,1	94,3	73,9

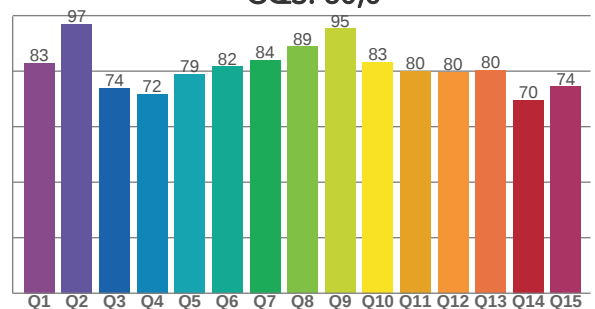
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
73,3	82,1	75,4	83,7	85,9	92,4	90,6	84,4	82,8	70,6	69,1	78,4	85,4	81,5	71,6	77,9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82,9	97,0	73,9	71,8	79,0	81,7	84,0	88,8	95,3	83,3	80,0	79,6	80,3	69,5	74,4

CQS: 80,0



COLOR PARAMETERS

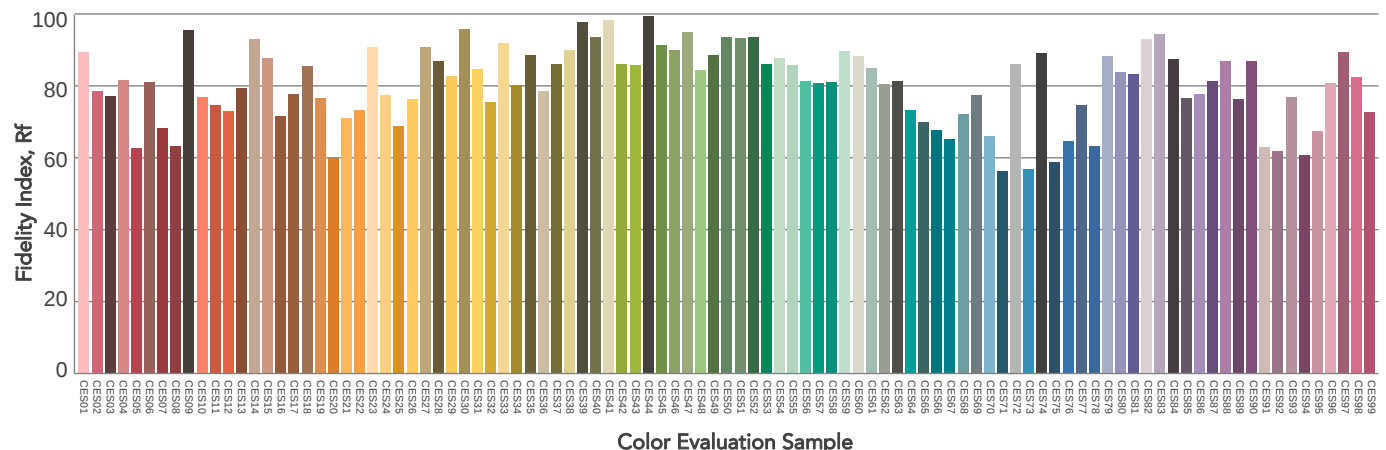
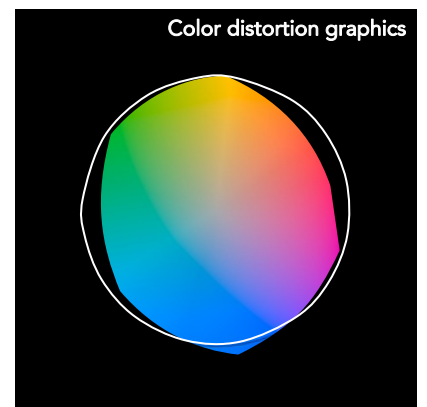
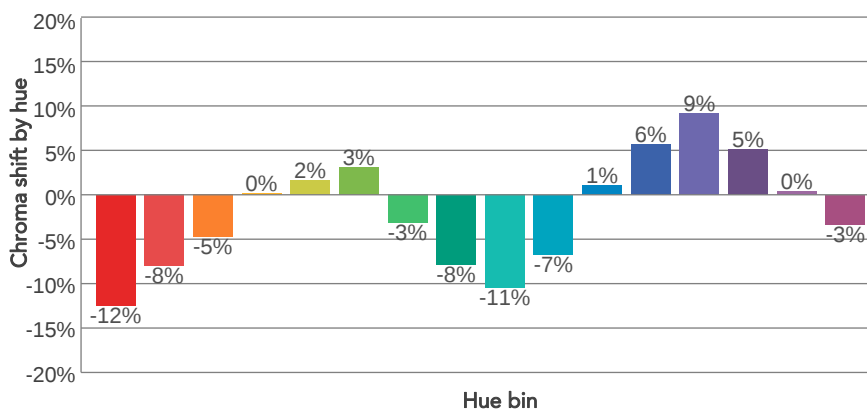
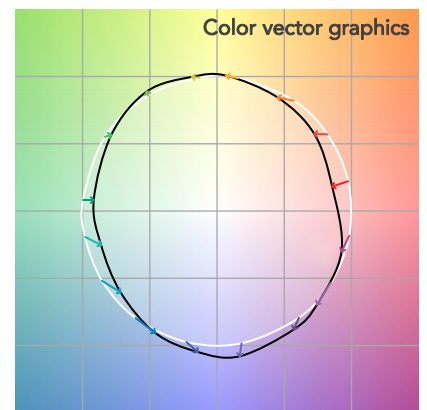
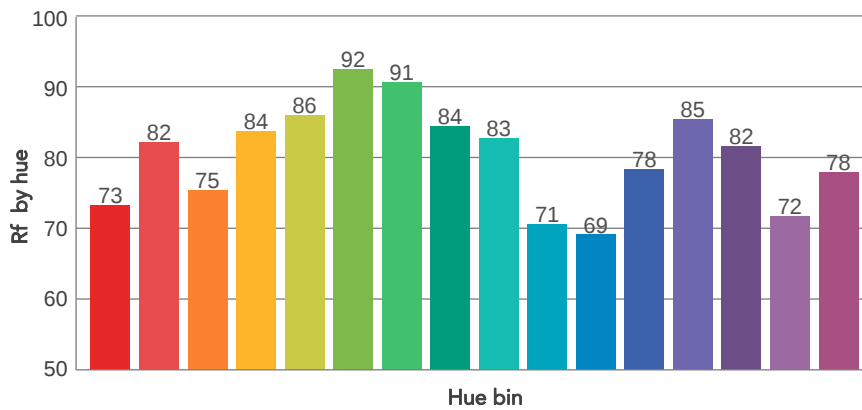
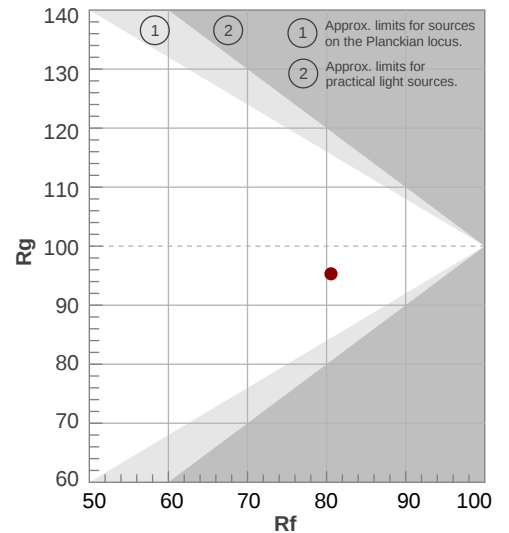
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	Δuv
5062 K	81,5	5,4	80,6	95,3	80,0	68	0,344	0,357	-0,0003

TM30 DETAILS

Rf 80,6
Fidelity index Rf

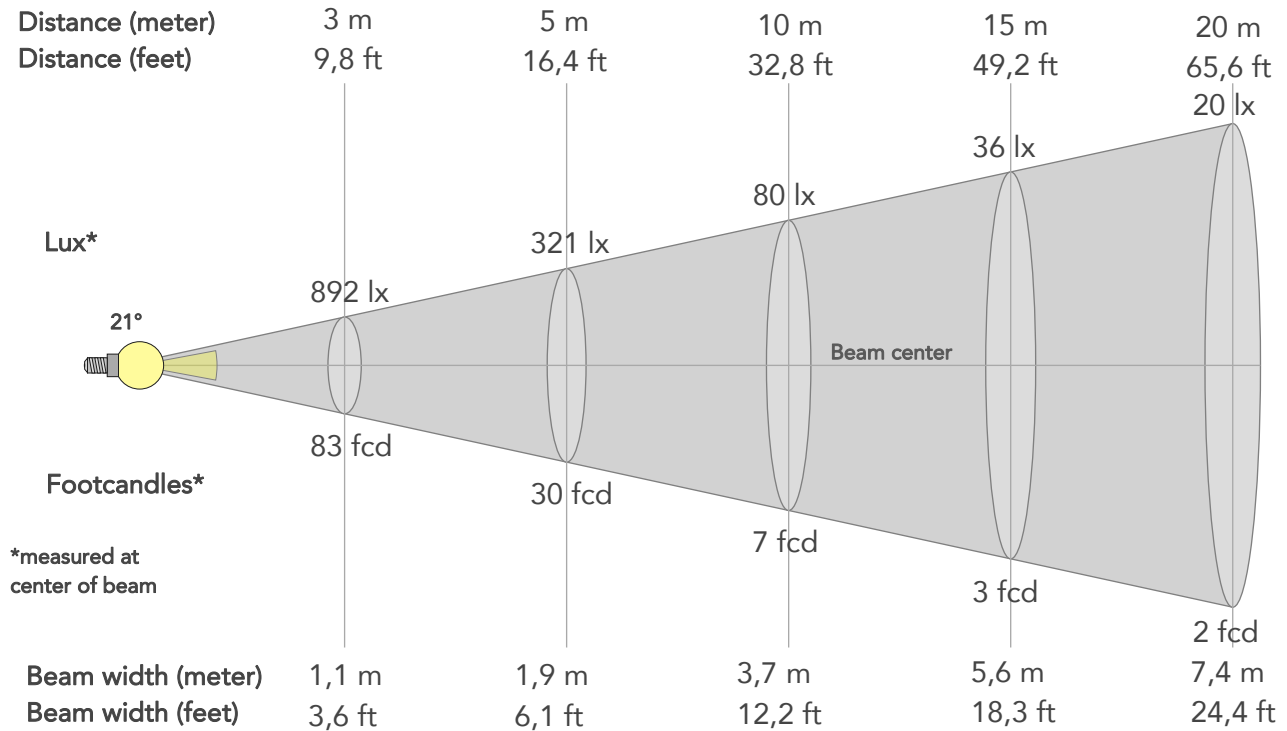
Rg 95,3
Gammut index

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	73	-12%	-2%
2	82	-8%	6%
3	75	-5%	11%
4	84	0%	9%
5	86	2%	5%
6	92	3%	-1%
7	91	-3%	-4%
8	84	-8%	-1%
9	83	-11%	8%
10	71	-7%	15%
11	69	1%	18%
12	78	6%	10%
13	85	9%	-3%
14	82	5%	-8%
15	72	0%	-19%
16	78	-3%	-13%



BEAM DETAILS

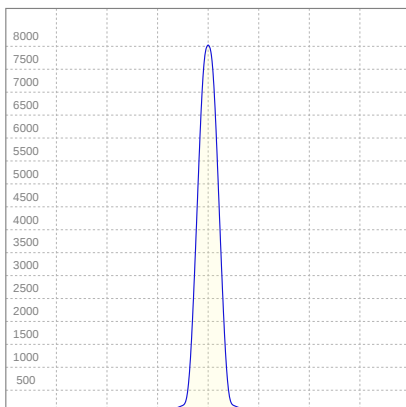
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
21°	33,9°	42,3°	99,7%	98,6%



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	8024lx	2006lx	892lx	501lx	321lx	143lx	80lx	36lx	20lx	13lx	9lx	5lx	3lx
Footcand.	745fcd	186fcd	83fcd	47fcd	30fcd	13fcd	7fcd	3fcd	2fcd	1fcd	1fcd	0fcd	0fcd
Beam wid.	0,4m	0,7m	1,1m	1,5m	1,9m	2,8m	3,7m	5,6m	7,4m	9,3m	11,1m	14,9m	18,6m
Beam wid.	1,2ft	2,5ft	3,6ft	4,9ft	6,1ft	9,1ft	12,2ft	18,3ft	24,4ft	30,5ft	36,6ft	48,7ft	60,9ft

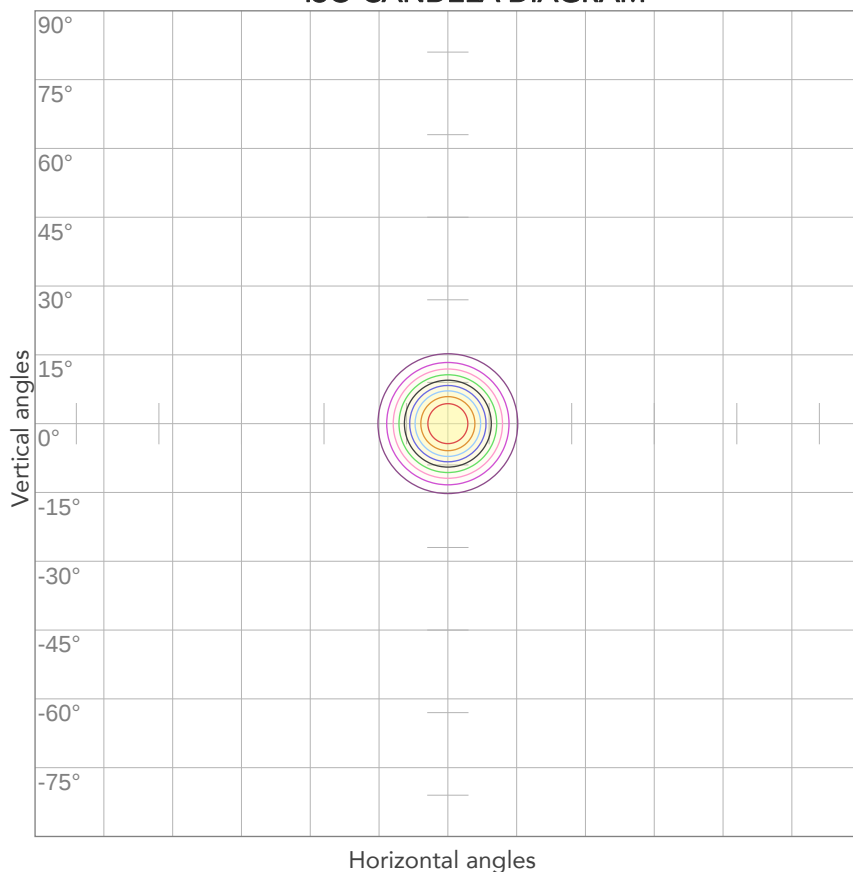
LINEAR DISTRIBUTION DIAGRAM



ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
224V	0,159A	34,6W	34lm/W

ISO CANDELA DIAGRAM



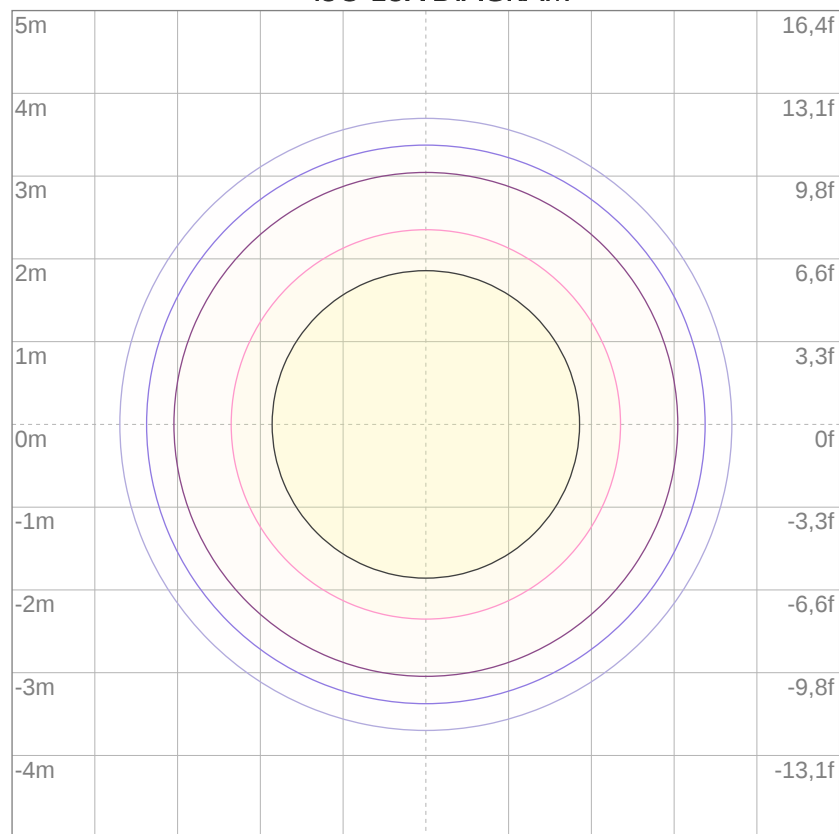
10%	802 cd
20%	1605 cd
30%	2407 cd
40%	3209 cd
50%	4012 cd
60%	4814 cd
70%	5617 cd
80%	6419 cd

Conditions:

Number of c-planes: 2

Candela at center: 8024 cd

ISO LUX DIAGRAM



3%	2,41 lx
5%	4,01 lx
10%	8,02 lx
30%	24,1 lx
50%	40,1 lx

Conditions:

Number of c-planes: 2

Lux at center: 80,2 lx

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