

Test report

Laboratory and Equipment

Test lab
Spectrometer Manufacturer and Model
Measurement date

Viso LabSpion - serial: 0099553838 sensor serial: 3130191315 - T
LabSpion - Type C, horizontal
30-6-2026

Measurement Conditions

Tested c-planes
Tested gamma resolution
Input Power

72 planes - 5,00°
3,75°
32,11 W

Tested Light Source

Luminaire
Basic Luminous Shape
Item No.
Manufacturer
Description
Dimensions, luminous surface
Dimensions, light source housing

816155 - 6000K - 2606
PANEL
816155 - 6000K - 2606
Dutchfulfillment
BACK-LIT LED PANEEL | PONTUS | 120x15 | 30W | CCT-SWITC
H/D = 0, W = 10, L = 115,5, Shape = PANEL
H/D = 1, W = 14,5, L = 119,5

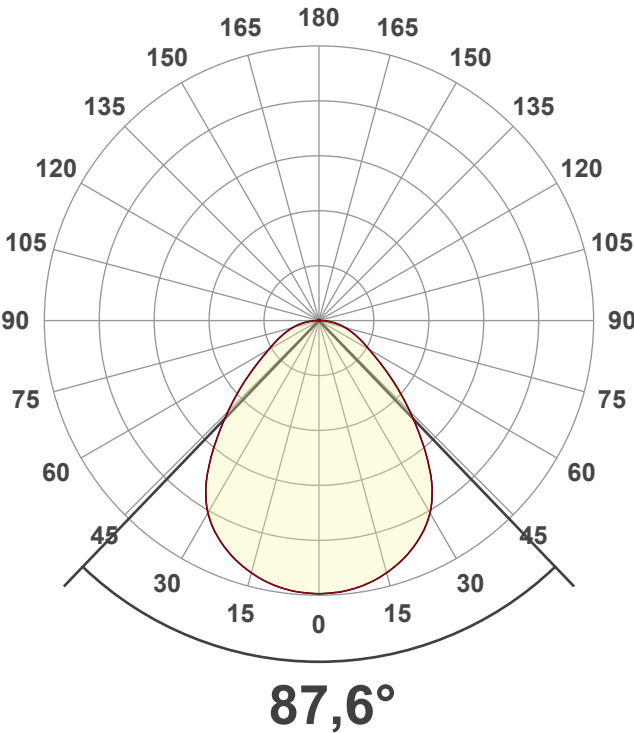
Main Light Measurement Results

Output - Total Lumen (Up% / Down%)
Efficiency
Peak Intensity
Correlated Color Temperature, CCT
Color Rendering Index

3794 lm - 0,7923%% / 99,21%%
118,2 lm/W
1759 cd
6302 K
CRI 82,1 TM30Rf 83,3 TM30 Rg 93,9

Polar light distribution diagram

Unit: 0-100% of peak intensity



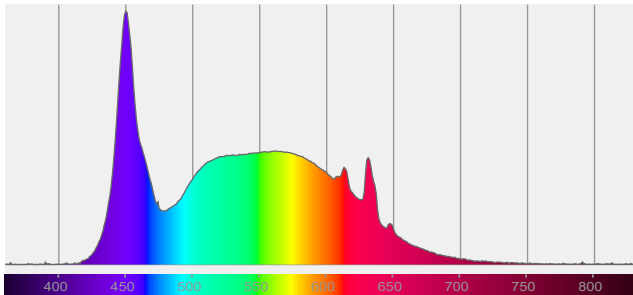
— C0 - C180
— C90 - C270

$\eta = 100\%$

Product photo



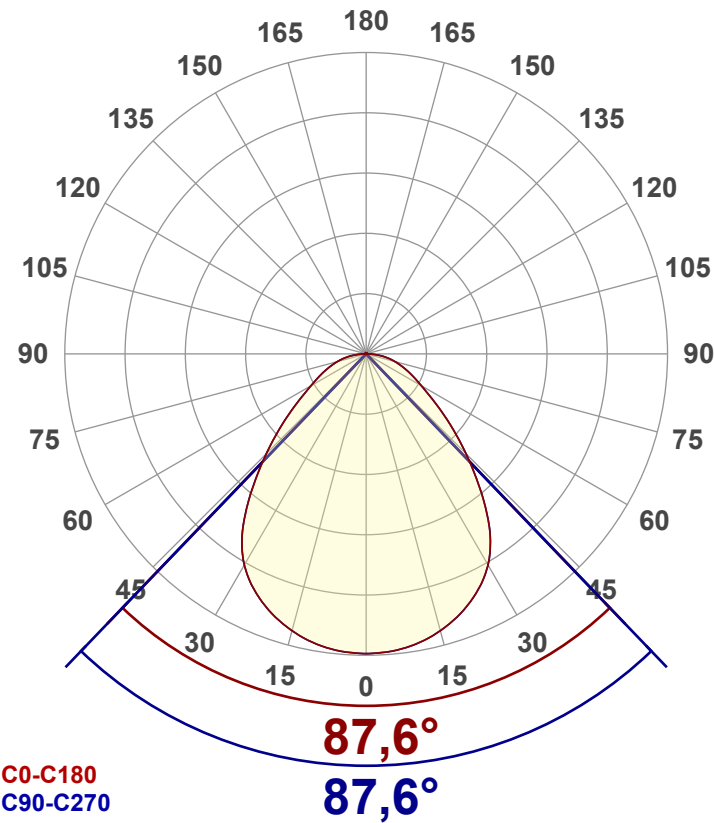
Spectral power distribution



Test report

Luminous Intensity diagram

Unit: 0-100% of peak intensity



Main Values

Output (total Lumen)	3794 lm
Lumen Up% / Down%	0,7923% / 99,21%
Peak Intensity	1759 cd
Beam Angle (50%-FWHM)	87,6°

EU Ecodesign parameters

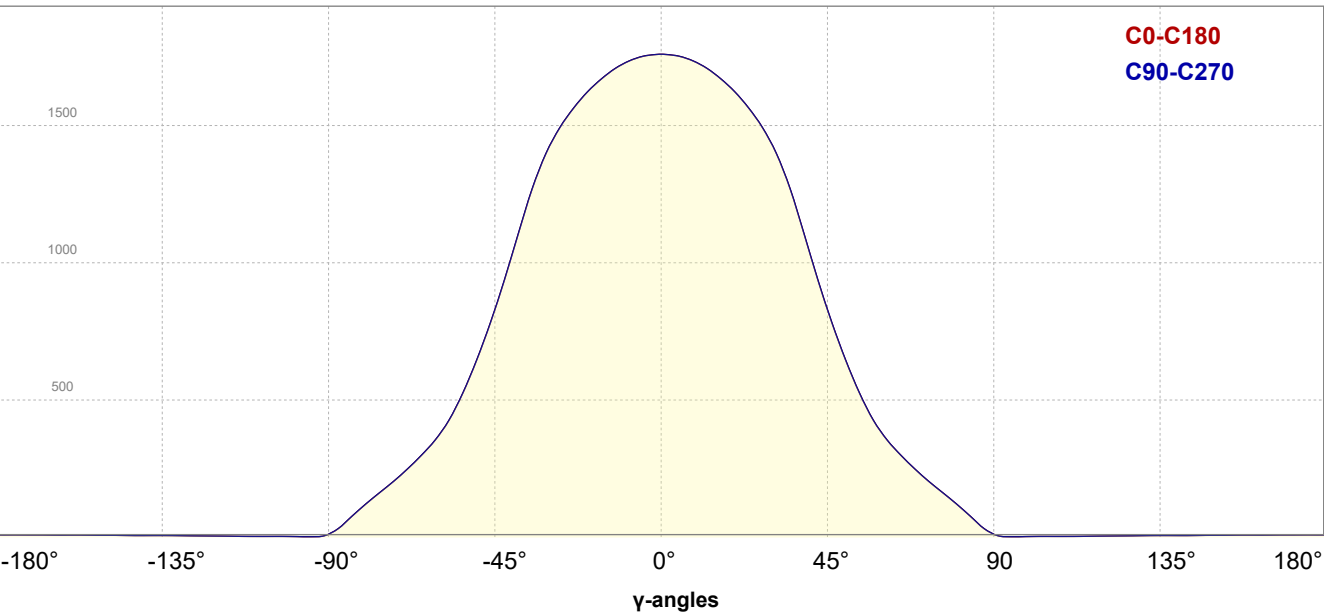
Directionality (DLS or NDLS)	DLS
Ecodesign Useful Luminous Flux	2478 lm
Ecodesign Energy Class	F

Intensity Ratio

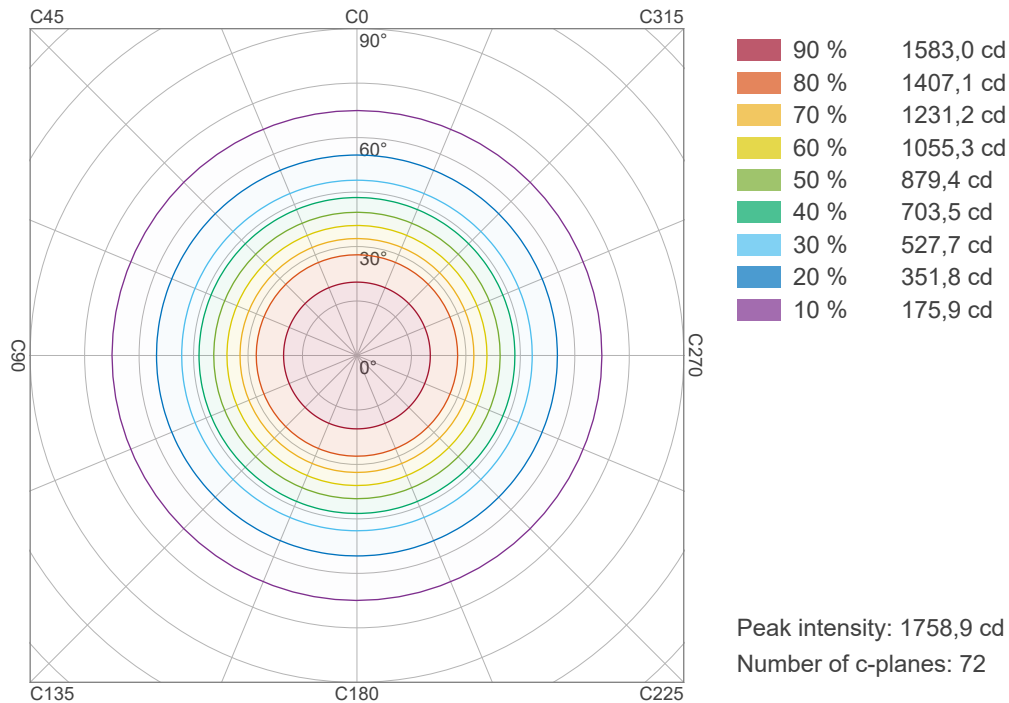
In 120° cone	84,76%
In 90° cone	65,31%

Linear distribution diagram

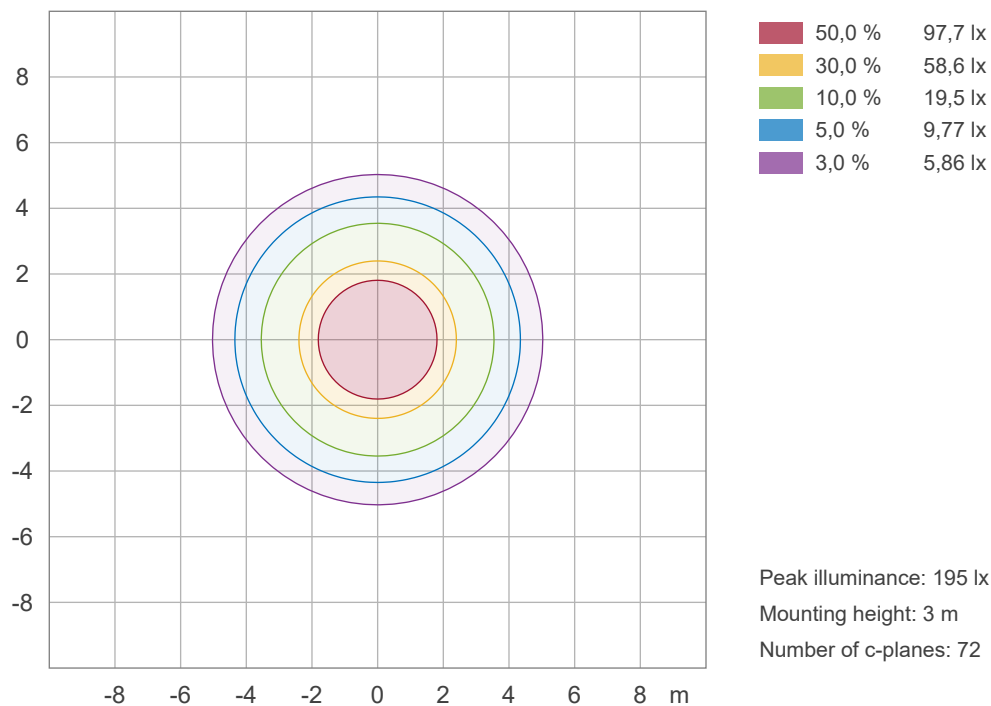
Intensity [cd]



Iso-intensity Diagram (Iso-candela)



Iso-illuminance Diagram (Iso-lux)



Test report

Color details

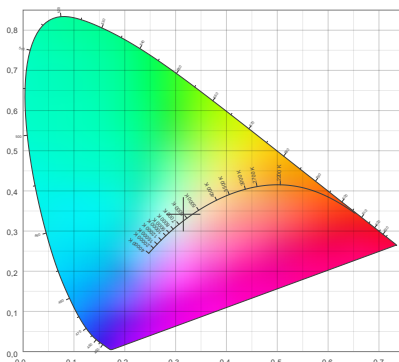
Correlated Color Temperature, Target
Correlated Color Temperature, Measured
Color Rendering Index
Color Rendering Index, R9 (red)
Color Rendering TM30-18

CCT = 6302 K
CCT = 6302 K
CRI 82,1
R9 = 1,8
Rf 83,3
Rg 93,9

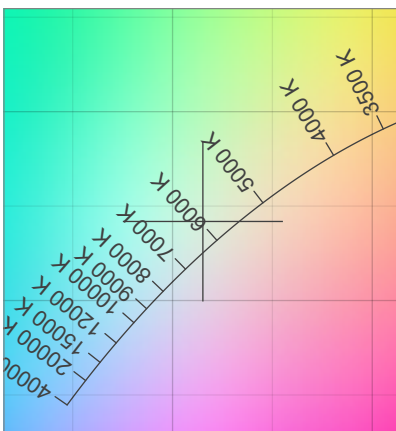
MacAdam Steps
Color deviation from BBL
Color coordinates CIE 1931
Color coordinate CIEs 1960
Color coordinate CIEs 1976
Color Quality Scale

SDCM = NaN
Duv = 0,0085
(x;y) = (0,3152;0,3419)
(u;v) = (0,1948;0,3169)
(u';v') = (0,1948;0,4754)
CQS = 81,5

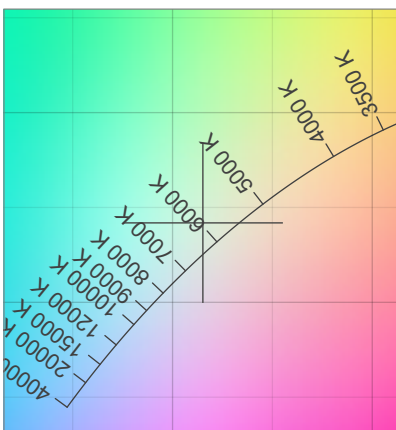
CIE 1931 Chromaticity diagram



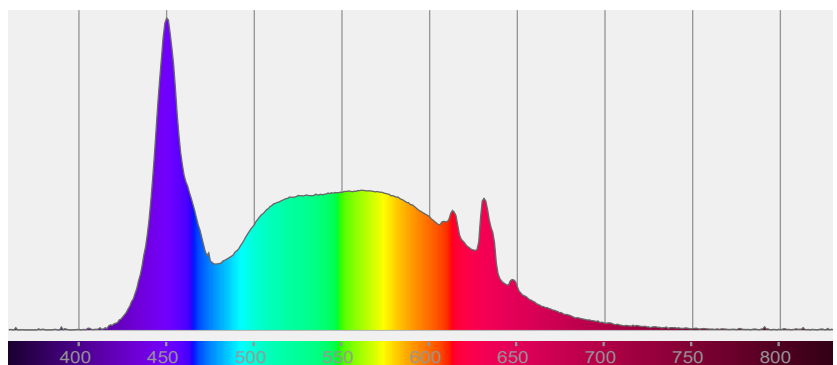
CIE 1931 Chromaticity - zoomed



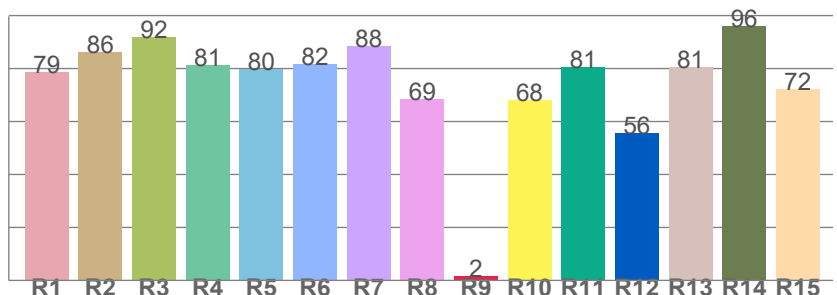
CIE 1931 Chromaticity - SDCM



Spectral power distribution



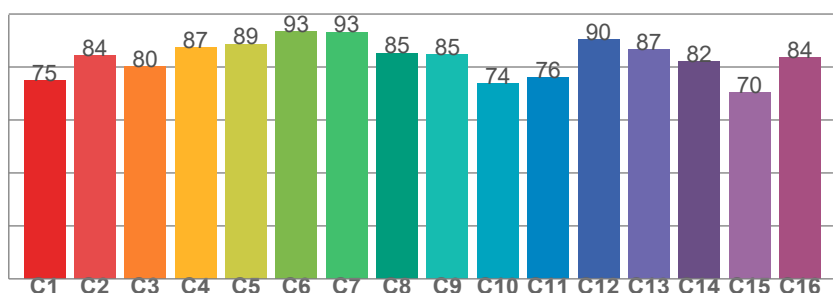
Color Rendering Index per reference color (CIE 1995)



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
78,8	86,3	91,9	81,3	79,8	81,5	88,4	68,5	1,8	68,2	80,6	55,5	80,7	95,9	72,4

TM30-18 Rf-values per hue bin



TM30-18 Rf-values per hue bin

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
74,9	84,4	80,3	87,3	88,7	93,4	93,2	85,3	84,9	73,8	76,1	90,5	86,6	82,0	70,3	83,5

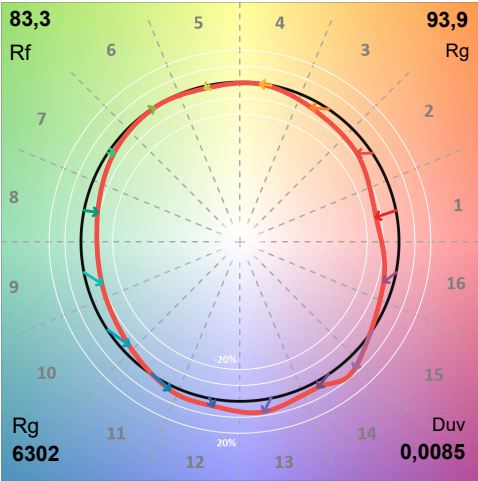
Test report

Light measurement results

Print date 30-06-2026

Color details - ANSI/IES TM-30-18 Color Rendition Report

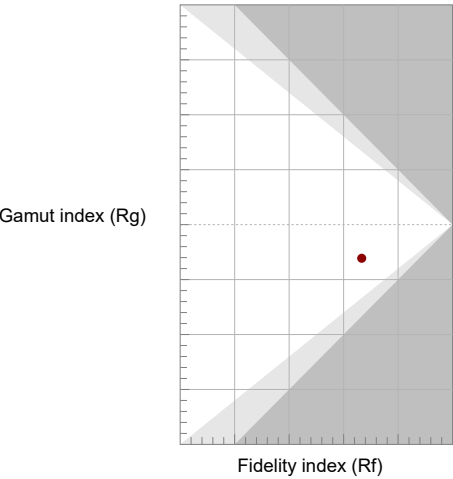
Color Vector Graphic



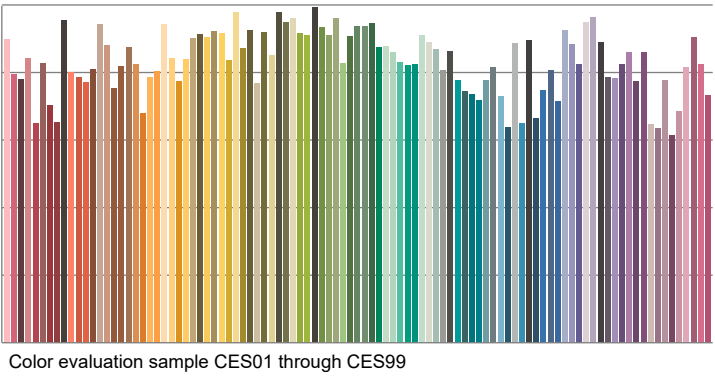
Color Distortion Graphic



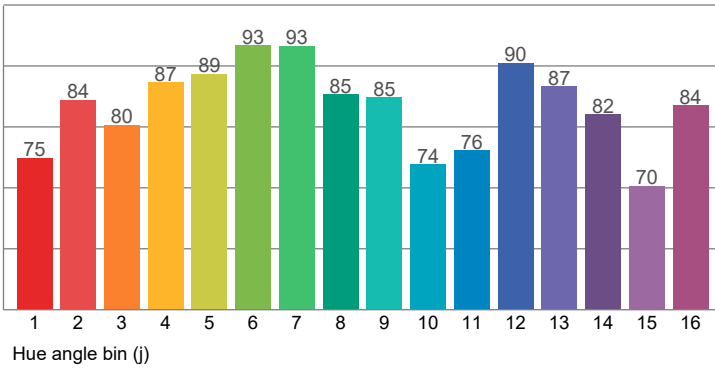
Gamut Index vs. Fidelity Index



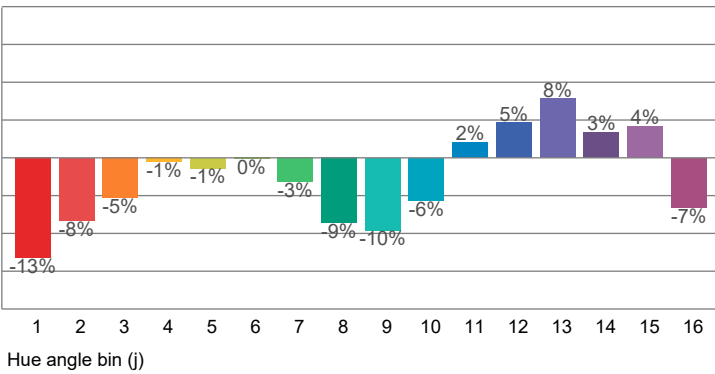
Color Rendition by Color Evaluation Sample (CES)



Local Color Fidelity (per hue bin)



Local Chroma Shift (per hue bin)



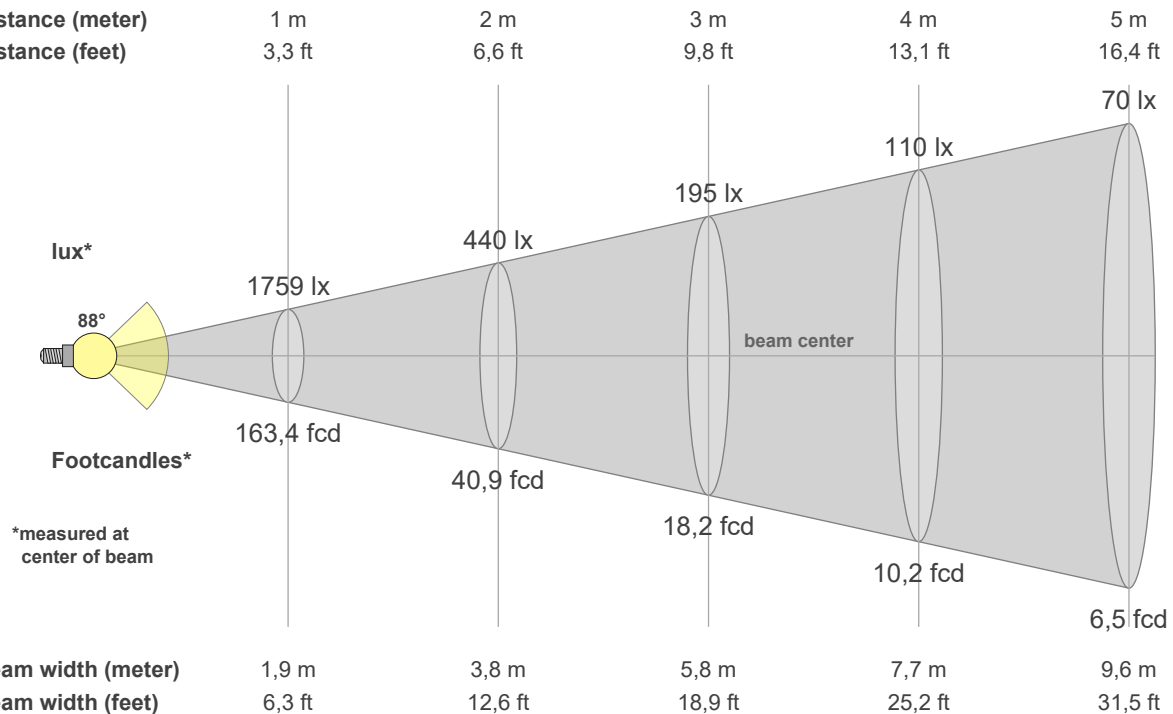
CIE x 0,3152
CIE y 0,3152
CIE u' 0,1948
CIE v' 0,4754

CIE 13.3-1995

Ra 82,1
R9 1,8

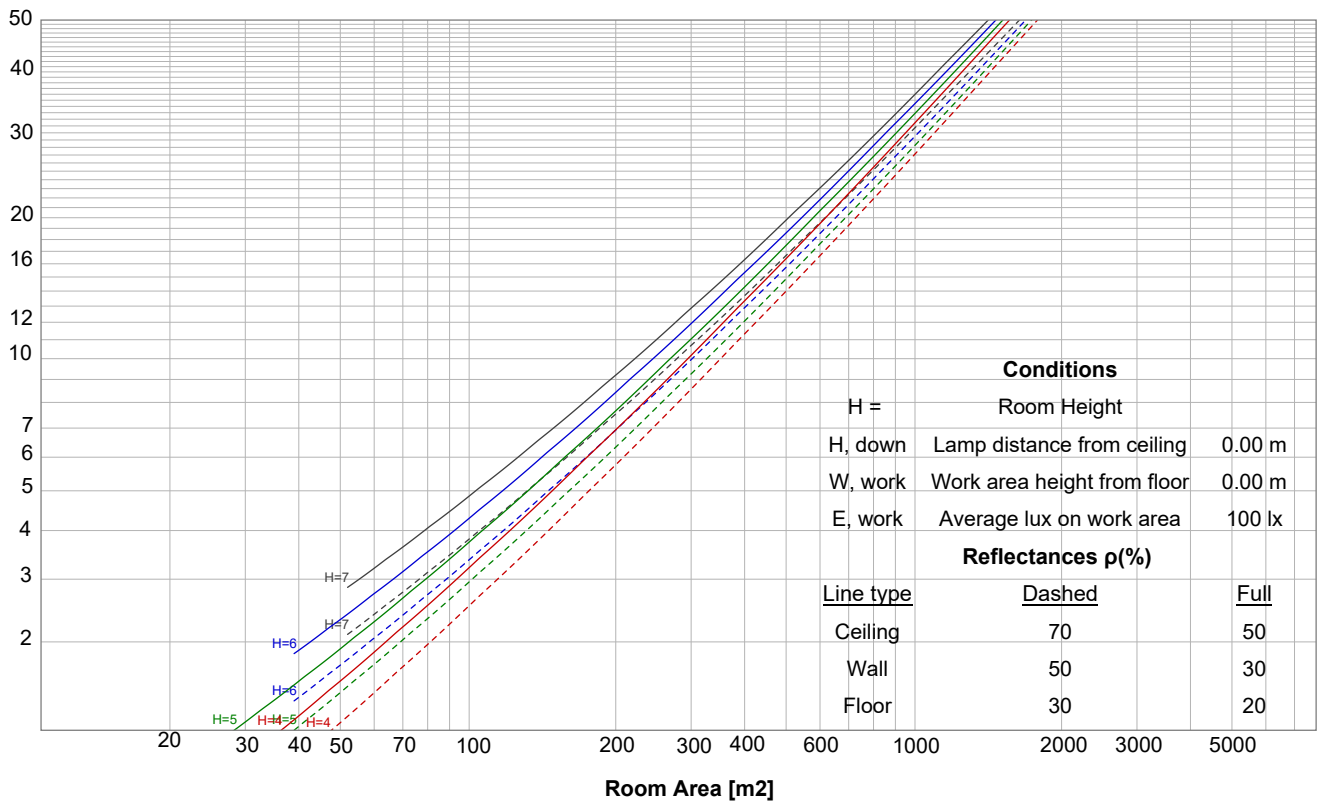
Test report

Beam details



Luminaire budgetary diagram

LAMPS (number of lamps)



Test report

Intensity details

Beam intensities from 1 – 20 m

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	m
3,3	6,6	9,8	13,1	16,4	19,7	23	26,2	29,5	32,8	36,1	39,4	42,7	45,9	49,2	52,5	55,8	59,1	62,3	65,6	ft
1759	440	195	110	70	49	36	27	22	18	15	12	10	9	8	7	6	5	5	4	lux
163,4	40,9	18,2	10,2	6,5	4,5	3,3	2,6	2	1,6	1,4	1,1	1	0,8	0,7	0,6	0,6	0,5	0,5	0,4	fc

Intensities in 0° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
1759	1752	1725	1682	1622	1538	1427	1265	1045	831	643	490	376	297	232	175	120	60	13	2	cd
100%	100%	98%	96%	92%	87%	81%	72%	59%	47%	37%	28%	21%	17%	13%	10%	7%	3%	1%	0%	of 0°val

Intensities in 90° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
1759	1752	1725	1682	1622	1538	1427	1265	1045	831	643	490	376	297	232	175	120	60	13	2	cd
100%	100%	98%	96%	92%	87%	81%	72%	59%	47%	37%	28%	21%	17%	13%	10%	7%	3%	1%	0%	of 0°val

Intensities in 180° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
1759	1752	1725	1682	1622	1538	1427	1265	1045	831	643	490	376	297	232	175	120	60	13	2	cd
100%	100%	98%	96%	92%	87%	81%	72%	59%	47%	37%	28%	21%	17%	13%	10%	7%	3%	1%	0%	of 0°val

Intensities in 270° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
1759	1752	1725	1682	1622	1538	1427	1265	1045	831	643	490	376	297	232	175	120	60	13	2	cd
100%	100%	98%	96%	92%	87%	81%	72%	59%	47%	37%	28%	21%	17%	13%	10%	7%	3%	1%	0%	of 0°val

Test report

UGR Table

Corrected, comprehensive UGR table according to 117-1995, S/H ratio=0.25

Reflectances											
	ρ Ceiling	70	70	50	50	30	70	70	50	50	30
	ρ Walls	50	30	50	30	30	50	30	50	30	30
	ρ Floor	20	20	20	20	20	20	20	20	20	20
Room size		Viewed Crosswise					Viewed Endwise				
H = mounting height above eye level		(Viewing direction orthogonal to lamp length axis)					(Viewing direction parallel to lamp length axis)				
X	Y										
2H	2H	18,9	20,0	19,2	20,3	20,5	18,9	20,0	19,2	20,3	20,5
	3H	20,0	21,1	20,4	21,3	21,6	20,0	21,1	20,4	21,3	21,6
	4H	20,5	21,6	20,9	21,9	22,1	20,5	21,6	20,9	21,9	22,1
	6H	21,1	22,0	21,4	22,3	22,7	21,1	22,0	21,4	22,3	22,7
	8H	21,3	22,2	21,7	22,5	22,9	21,3	22,2	21,7	22,5	22,9
	12H	21,4	22,3	21,8	22,7	23,1	21,4	22,3	21,8	22,7	23,1
4H	2H	19,3	20,4	19,7	20,6	20,9	19,3	20,4	19,7	20,6	20,9
	3H	20,7	21,6	21,1	21,9	22,4	20,7	21,6	21,1	21,9	22,4
	4H	21,3	22,2	21,8	22,6	23,1	21,3	22,2	21,8	22,6	23,1
	6H	22,0	22,8	22,5	23,2	23,5	22,0	22,8	22,5	23,2	23,5
	8H	22,3	23,0	22,8	23,4	23,8	22,3	23,0	22,8	23,4	23,8
	12H	22,5	23,1	23,0	23,5	24,0	22,5	23,1	23,0	23,5	24,0
8H	4H	21,6	22,4	22,2	22,7	23,1	21,6	22,4	22,2	22,7	23,1
	6H	22,5	23,0	23,0	23,5	24,1	22,5	23,0	23,0	23,5	24,1
	8H	22,9	23,4	23,4	23,9	24,6	22,9	23,4	23,4	23,9	24,6
	12H	23,2	23,6	23,8	24,1	24,8	23,2	23,6	23,8	24,1	24,8
12H	4H	21,7	22,2	22,2	22,7	23,2	21,7	22,2	22,2	22,7	23,2
	6H	22,6	23,1	23,1	23,6	24,3	22,6	23,1	23,1	23,6	24,3
	8H	23,0	23,4	23,6	23,9	24,6	23,0	23,4	23,6	23,9	24,6
Variations with the observer position for the luminaire spacings, S:											
S = 1.0H		0,1 / -0,2					0,1 / -0,2				
S = 1.5H		0,3 / -0,4					0,3 / -0,4				
S = 2.0H		0,7 / -0,6					0,7 / -0,6				

Coefficients of utilization

Ceiling reflectance	80				70				50			30			10			0
Wall reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Floor reflectance	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
RCR		(Room Cavity Ratio)				Room values are expressed as percentage of Lumen delivered to the task surface												
0	118,9	118,9	118,9	118,9	116,0	116,0	116,0	116,0	110,7	110,7	110,7	105,8	105,8	105,8	101,3	101,3	101,3	99,2
1	109,7	105,4	101,5	98,0	106,9	103,0	99,5	96,4	98,7	95,8	93,2	94,7	92,4	90,2	91,0	89,1	87,4	85,3
2	100,9	93,5	87,3	82,2	98,3	91,6	85,9	81,1	88,0	83,2	79,1	84,6	80,7	77,3	81,6	78,3	75,4	73,4
3	93,0	83,4	76,0	70,1	90,5	81,8	75,0	69,5	78,8	73,0	68,2	76,0	71,1	66,9	73,4	69,3	65,7	63,6
4	85,9	75,0	66,9	60,8	83,6	73,6	66,1	60,4	71,1	64,6	59,5	68,7	63,1	58,6	66,5	61,8	57,8	55,7
5	79,6	67,8	59,5	53,4	77,5	66,6	58,9	53,1	64,5	57,7	52,5	62,5	56,6	51,9	60,7	55,5	51,3	49,3
6	74,0	61,6	53,4	47,4	72,1	60,7	52,9	47,2	58,9	51,9	46,7	57,2	51,0	46,3	55,6	50,1	45,9	43,9
7	69,0	56,4	48,2	42,5	67,3	55,5	47,8	42,3	54,0	47,0	42,0	52,5	46,3	41,6	51,2	45,6	41,3	39,4
8	64,5	51,8	43,8	38,4	62,9	51,1	43,5	38,2	49,8	42,9	38,0	48,5	42,3	37,7	47,3	41,7	37,5	35,7
9	60,4	47,8	40,1	34,9	59,0	47,2	39,8	34,8	46,1	39,3	34,6	45,0	38,8	34,4	43,9	38,3	34,2	32,4
10	56,8	44,3	36,9	31,9	55,6	43,8	36,6	31,8	42,8	36,2	31,6	41,8	35,8	31,5	40,9	35,4	31,3	29,7

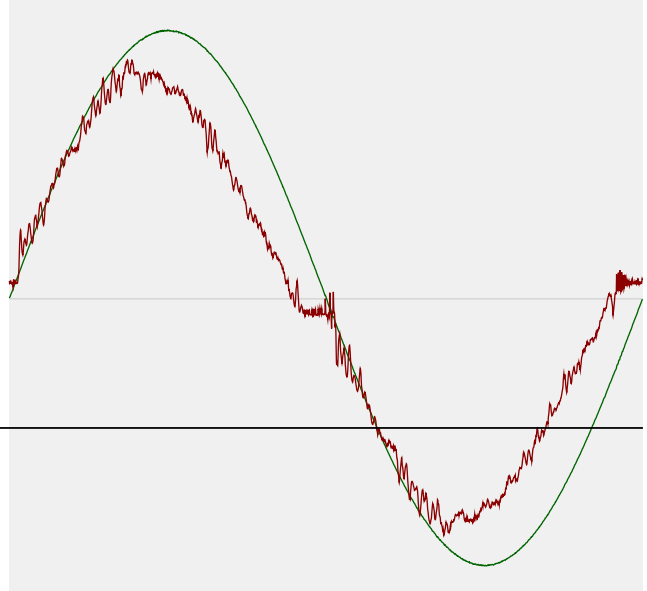
Test report

Power details

Input power

Frequency of input power	50,0 Hz
Power feed to light source	32,11 W
RMS Input voltage feed V,RMS	230,2 V
RMS Input current feed I,RMS	0,14 A
Volt-Amp or apparent power = V,RMS*I,RMS	33,2 VA
Displacement factor of AC power feed	0,97
Power factor of AC current feed	0,97
Total harmonic distortion of the current	10,74%
Total harmonic distortion of the voltage	0,0575%

Input power curve



Efficiency

Radiated power efficiency 36,3

Lumen efficiency 118,2 lm/W

Stabilization details

Warmup Conditions

Stable period	15 min
Stable change max	2%
Minimum time	15 min

Color Temperature Change

CCT start	6300 K
CCT shift	2 K
CCT end	6302 K

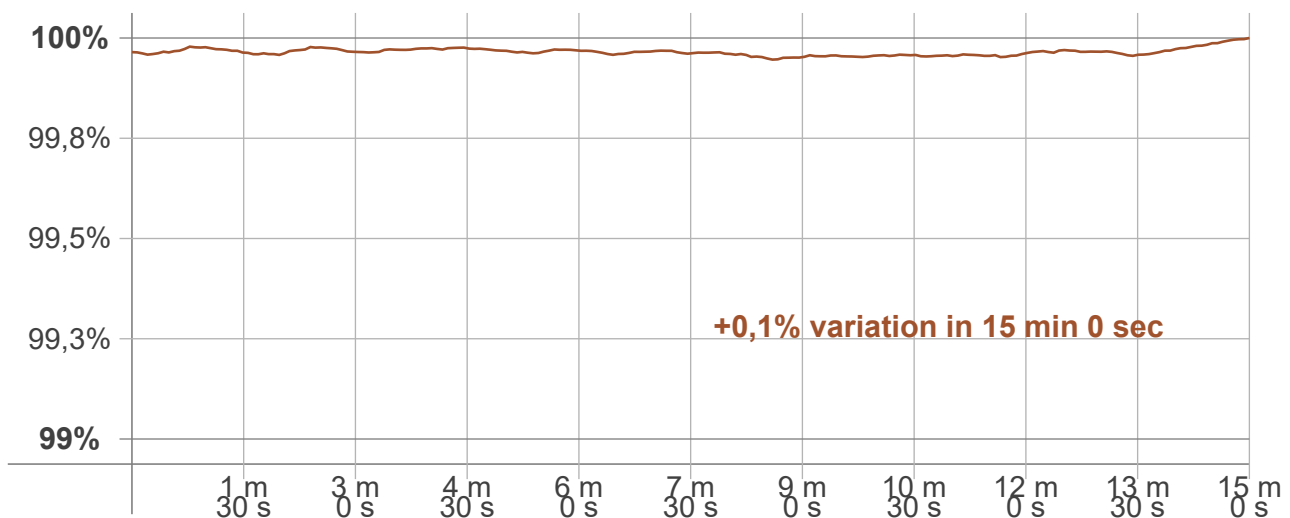
Warmup Result

Total warmup time	Lamp stabilized in
Warmup variation	-0,1055%

Output Change

Output start	3794 lm
Output change	-0,1571 lm
Output end	3794 lm

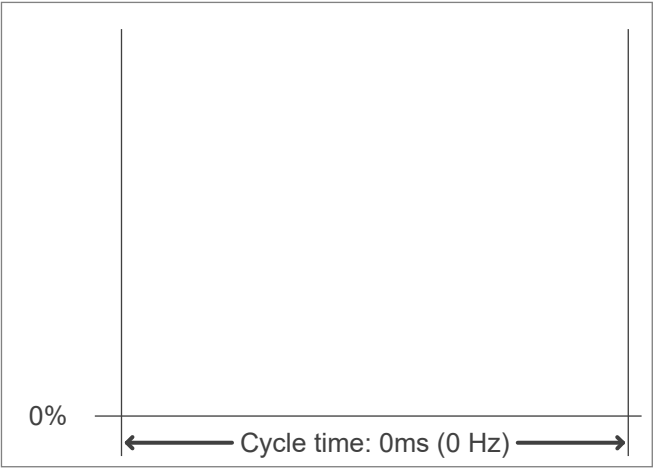
Stabilization Curve



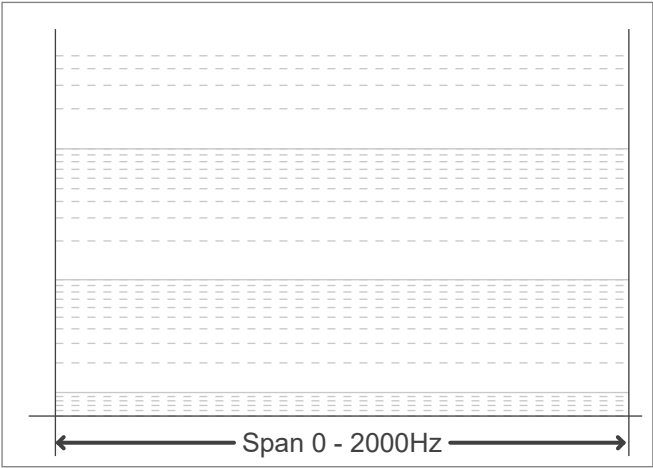
Flicker TLA details

Flicker Meter Type	Viso Systems LabFlicker	Measurement time	
Frequency of input power	50,0 Hz	PstLM	180 sec.
Flicker/TLA sample rate	NaN samples/s	All other indices	1,5 sec,
Flicker indices according to Illuminating Engineering Society (IES)		Flicker indices according to California Energy Commission (CEC) 2016b	
Flicker frequency	NaN Hz	JA8/10 40 Hz	NaN %
Percent Flicker	NaN %	JA8/10 90 Hz	NaN %
Flicker index	NaN	JA8/10 200 Hz	NaN %
		JA8/10 400 Hz	NaN %
		JA8/10 1000 Hz	NaN %
TLA indices (re IEC TR 61547-1, IEC 61000-3-3 and IEC 61000-4-15)		Flicker indices according to Lighting Research Center (2015)	
PstLM value (F < 80 Hz)	NaN	Perception metric, Assist Mp	NaN
SVM value (80 < F < 2000 Hz)	NaN		

Flicker frame (frame of one flicker period in time domain)



Flicker FFT (flicker curve in frequency domain)



IEEE 1789 Frequency/modulation plot

