

# Test report

Print date 1/22/2026  
Light measurement results



## Laboratory and Equipment

Test lab  
Spectrometer Manufacturer and Model  
Measurement date  
Operator

Viso LabSpion - serial: 1996407700 sensor serial: 1118720440 - Test lab  
LabSpion – Type C, horizontal  
5/7/2025  
MW

## Measurement Conditions

Tested c-planes  
Tested gamma resolution  
Input Power

16 planes – 22.5°  
5°  
17.7 W

## Tested Light Source

Luminaire  
Basic Luminous Shape  
Item No.  
Manufacturer  
Description

Neon360  
PANEL  
NL3605.5VWE (V+W)  
GenLEDBrands  
1m length of NL3605.5VWE

## Main Light Measurement Results

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

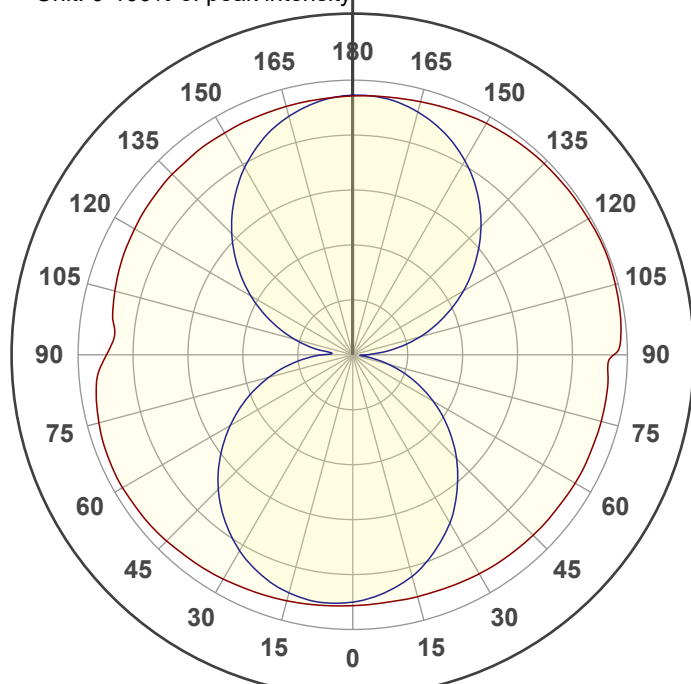
1294 lm – 50.29% / 49.71%  
73 lm/W  
141 cd  
3949 K  
CRI 94.0  
586 nm  
458 nm

Lumen per length  
Watt per length

1294.19 lm/m      394.47 lm/ft  
17.71 W/m      5.40 W/ft

## Polar light distribution diagram

Unit: 0-100% of peak intensity



360°

— C0 - C180  
— C90 - C270

$\eta = 100.0\%$

73 lm/W

3949 K

## Product photo



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## Color Parameters

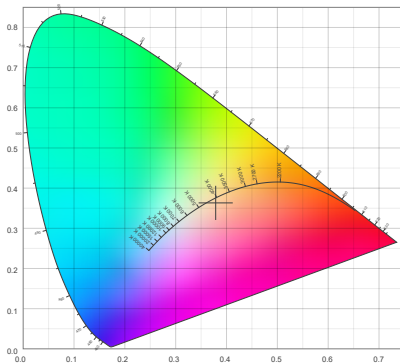
Correlated Color Temperature, Target  
Correlated Color Temperature, Measured  
Color Rendering Index  
Color Rendering Index, R9 (red)  
Color Rendering TM30-18

CCT = 3949 K  
CCT = 3949 K  
CRI 94.0  
R9 = 95.8  
Rf 88.5  
Rg 97.4

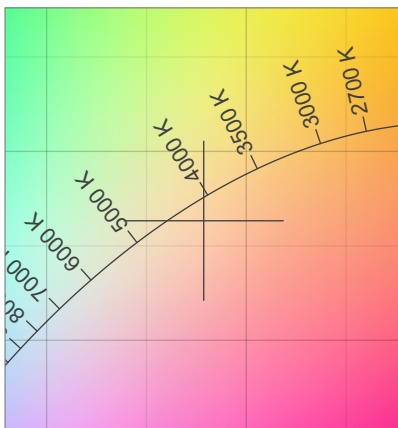
MacAdam Steps  
Color deviation from BBL  
Color coordinates CIE 1931  
Color coordinate CIEs 1960  
Color coordinate CIEs 1976  
Color Quality Scale

SDCM = n/a  
Duv = -0.0059  
(x;y) = (0.379;0.363)  
(u;v) = (0.229;0.330)  
(u';v') = (0.229;0.495)  
CQS = 92.3

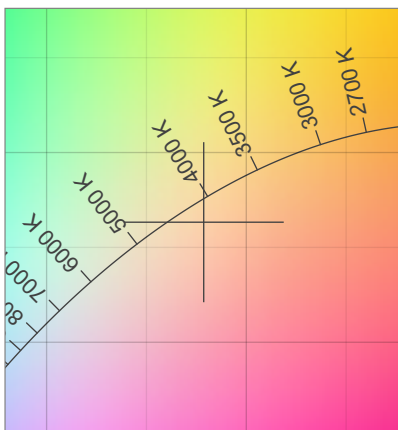
## CIE 1931 Chromaticity diagram



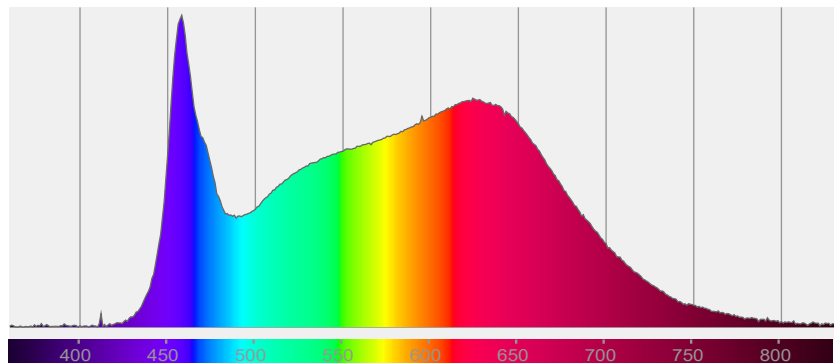
## CIE 1931 Chromaticity - zoomed



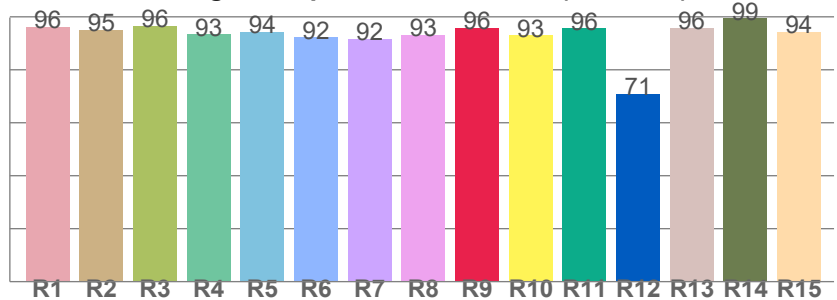
## CIE 1931 Chromaticity - SDCM



## Spectral power distribution



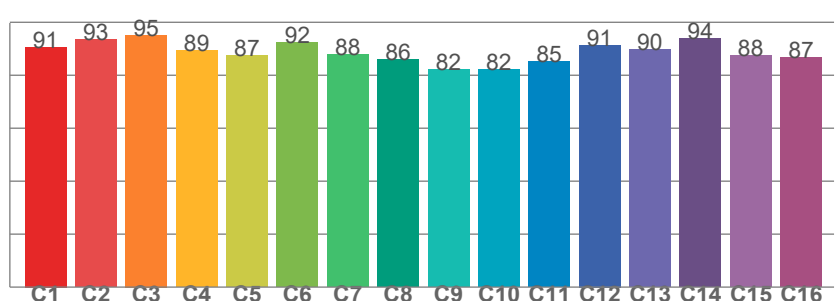
## Color Rendering Index per reference color (CIE 1995)



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
96.1	95.1	96.5	93.3	94.3	92.2	91.7	93.3	95.8	92.9	95.6	71.0	95.7	99.4	94.3

## 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
90.7	93.5	95.2	89.4	87.3	92.2	87.8	85.9	82.2	82.1	85.3	91.4	89.8	94.0	87.6	86.6

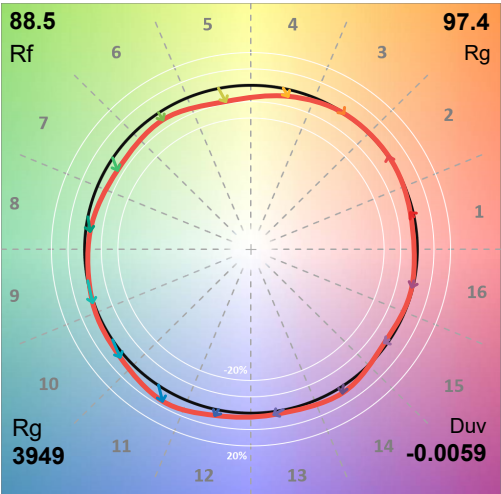
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## Color details - ANSI/IES TM-30-18 Color Rendition Report

Color Vector Graphic



Color Distortion Graphic



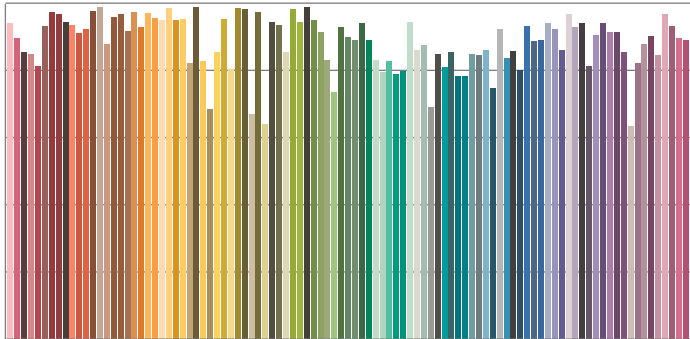
CIE x 0.379  
CIE y 0.379  
CIE u' 0.229  
CIE v' 0.495

**CIE 13.3-1995**

Ra 94.0

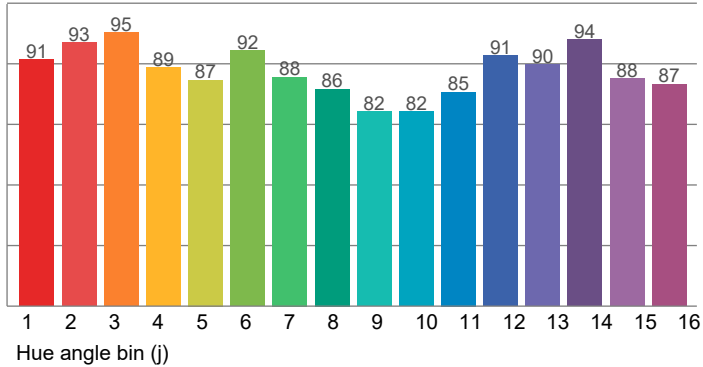
R9 95.8

Color Rendition by Color Evaluation Sample (CES)

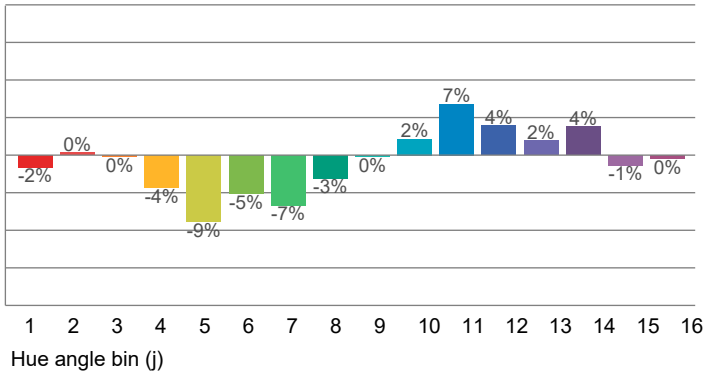


Color evaluation sample CES01 through CES99

Local Color Fidelity (per hue bin)



Local Chroma Shift (per hue bin)

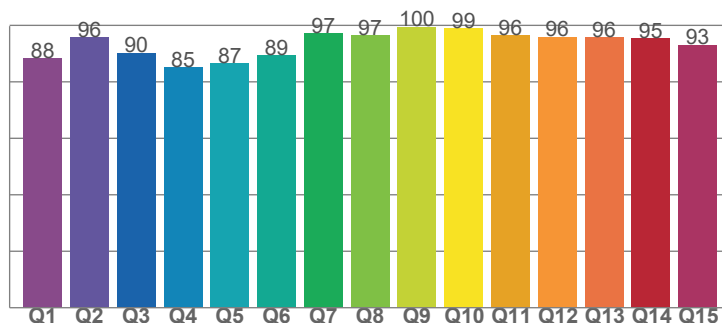


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Color Rendering Index (CQS)



Q1	88.32	Q9	99.50
Q2	95.83	Q10	98.85
Q3	90.28	Q11	96.45
Q4	85.26	Q12	95.94
Q5	86.54	Q13	95.68
Q6	89.49	Q14	95.28
Q7	97.31	Q15	93.07
Q8	96.54	<b>CQS</b>	<b>92.27</b>

Hue Bin	Rf	Shifts (%)	
		Chroma	Hue
1	91	-2%	3%
2	93	0%	1%
3	95	0%	-1%
4	89	-4%	-4%
5	87	-9%	-3%
6	92	-5%	0%
7	88	-7%	5%
8	86	-3%	8%
9	82	0%	14%
10	82	2%	11%
11	85	7%	7%
12	91	4%	-1%
13	90	2%	-6%
14	94	4%	-3%
15	88	-1%	-3%
16	87	0%	-4%

**Rg 97.4**

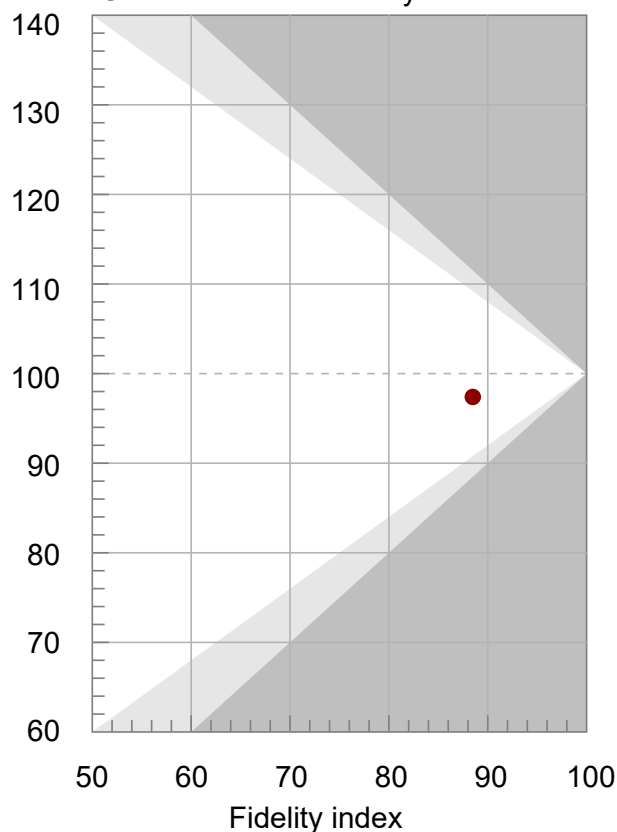
Gamut Index Rf

Gamut index

**Rf 88.5**

Fidelity Index Rf

Gamut Index vs. Fidelity



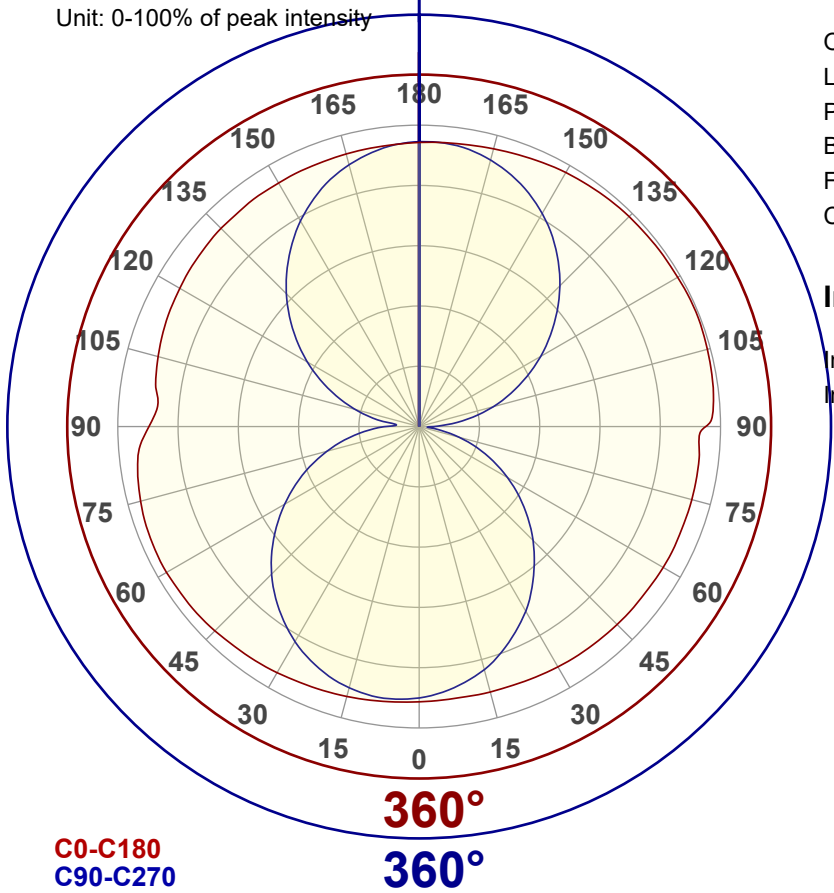
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## Luminous Intensity diagram

Unit: 0-100% of peak intensity



## Main Values

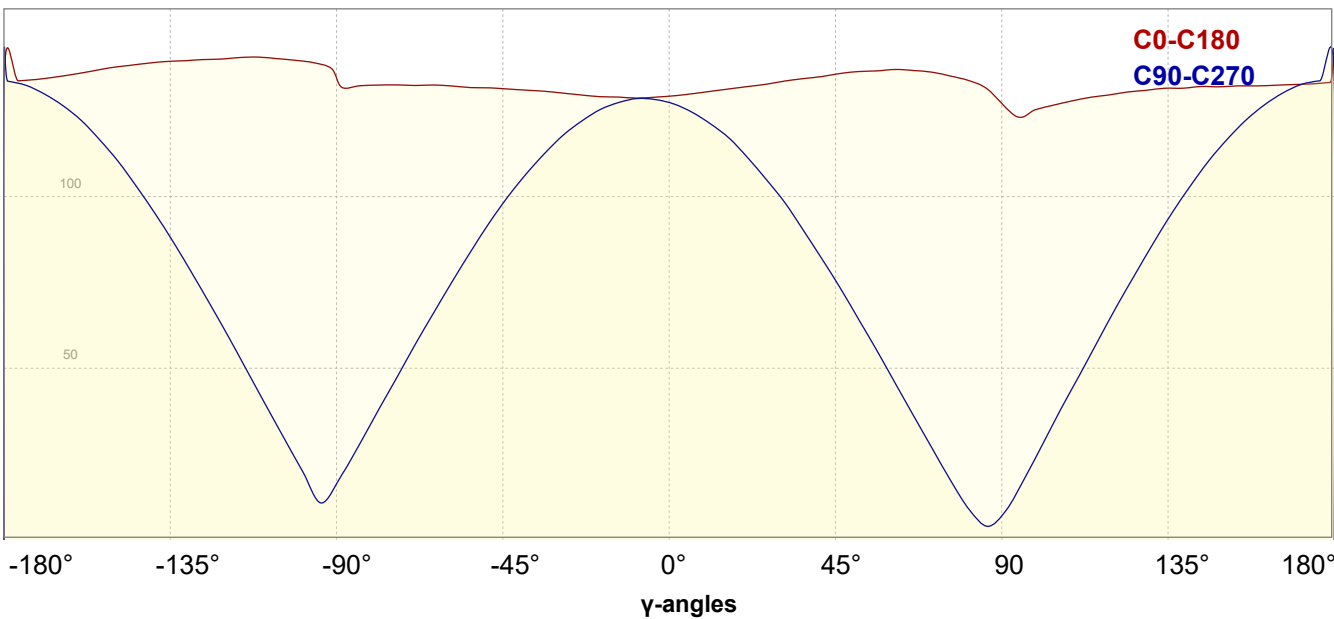
Output (total Lumen)	1294 lm
Lumen Up% / Down%	50.29% / 49.71%
Peak Intensity	141 cd
Beam Angle (50%-FWHM)	360.00°
Field Angle (10%-FWHM)	360.00°
Cutoff Angle (2.5%-FWHM)	{c_ANG/0.00}°

## Intensity Ratios

In 120° cone	1294.2
In 90° cone	394.5

## Linear distribution diagram

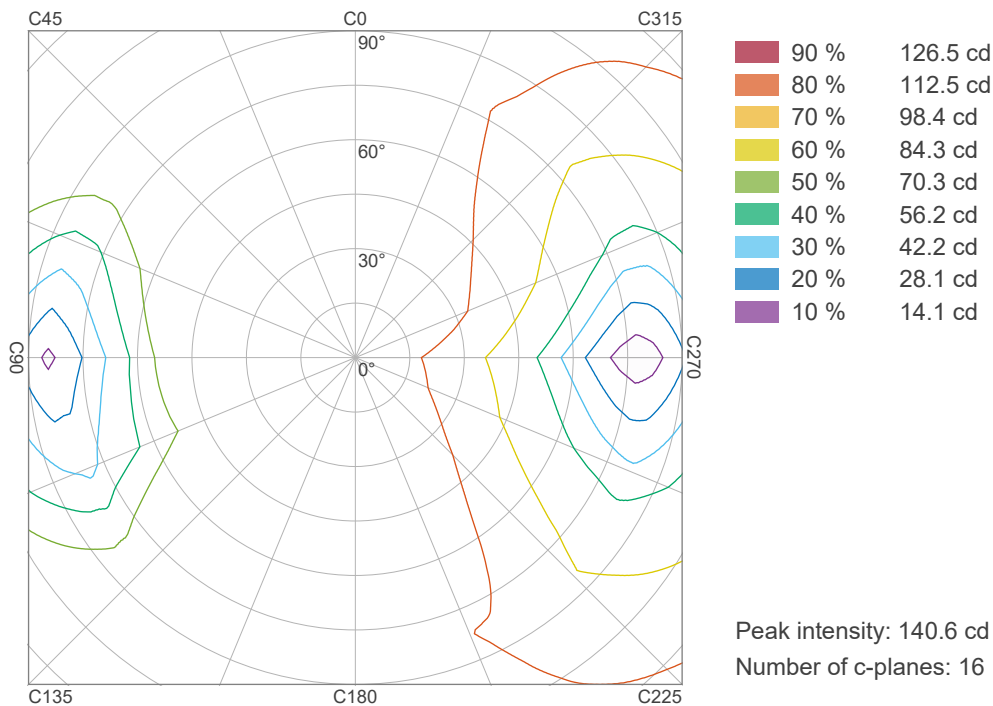
Intensity [cd]



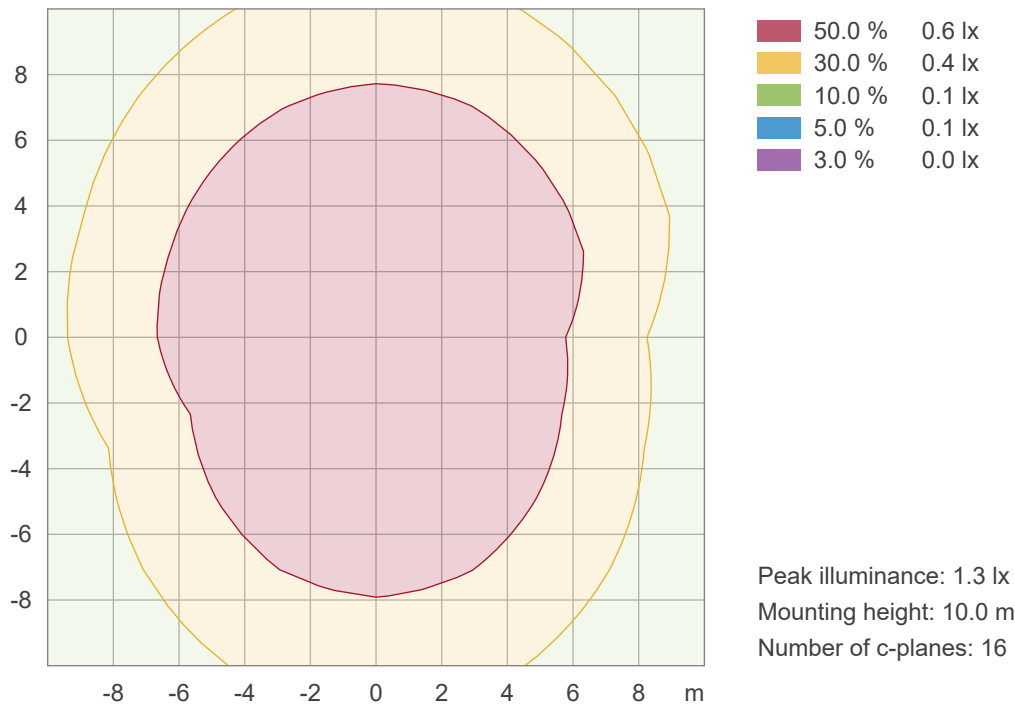
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## Iso-intensity Diagram (Iso-candela)



## Iso-illuminance Diagram (Iso-lux)

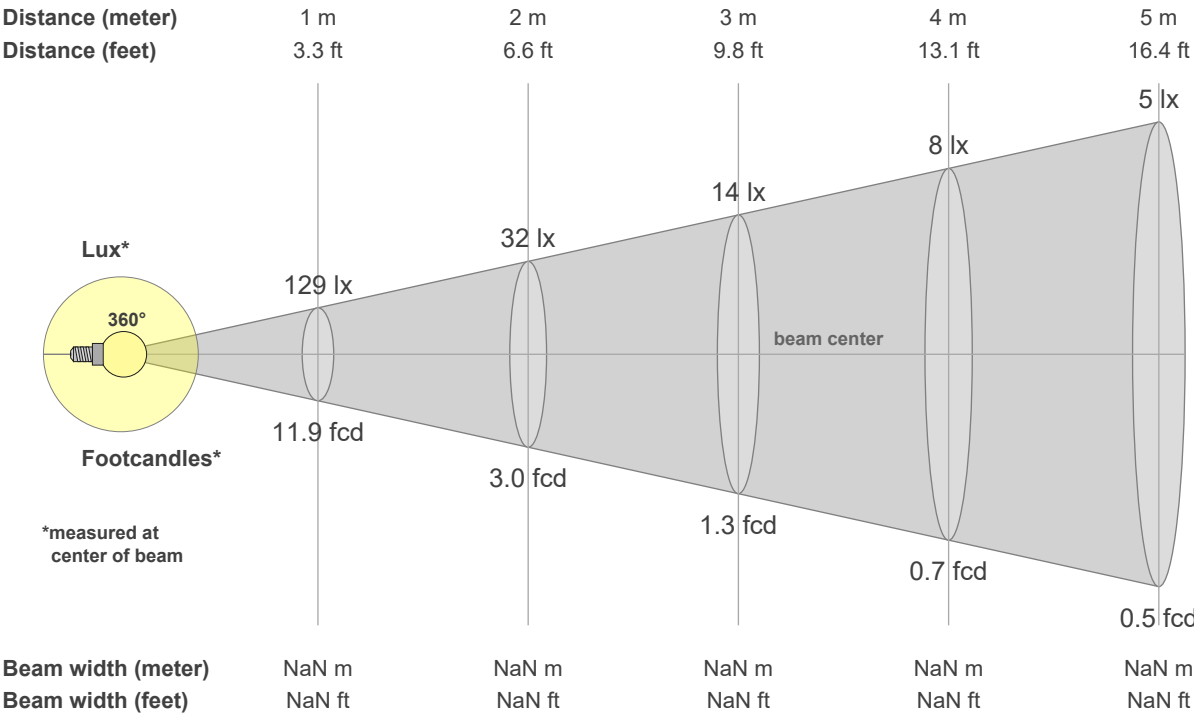


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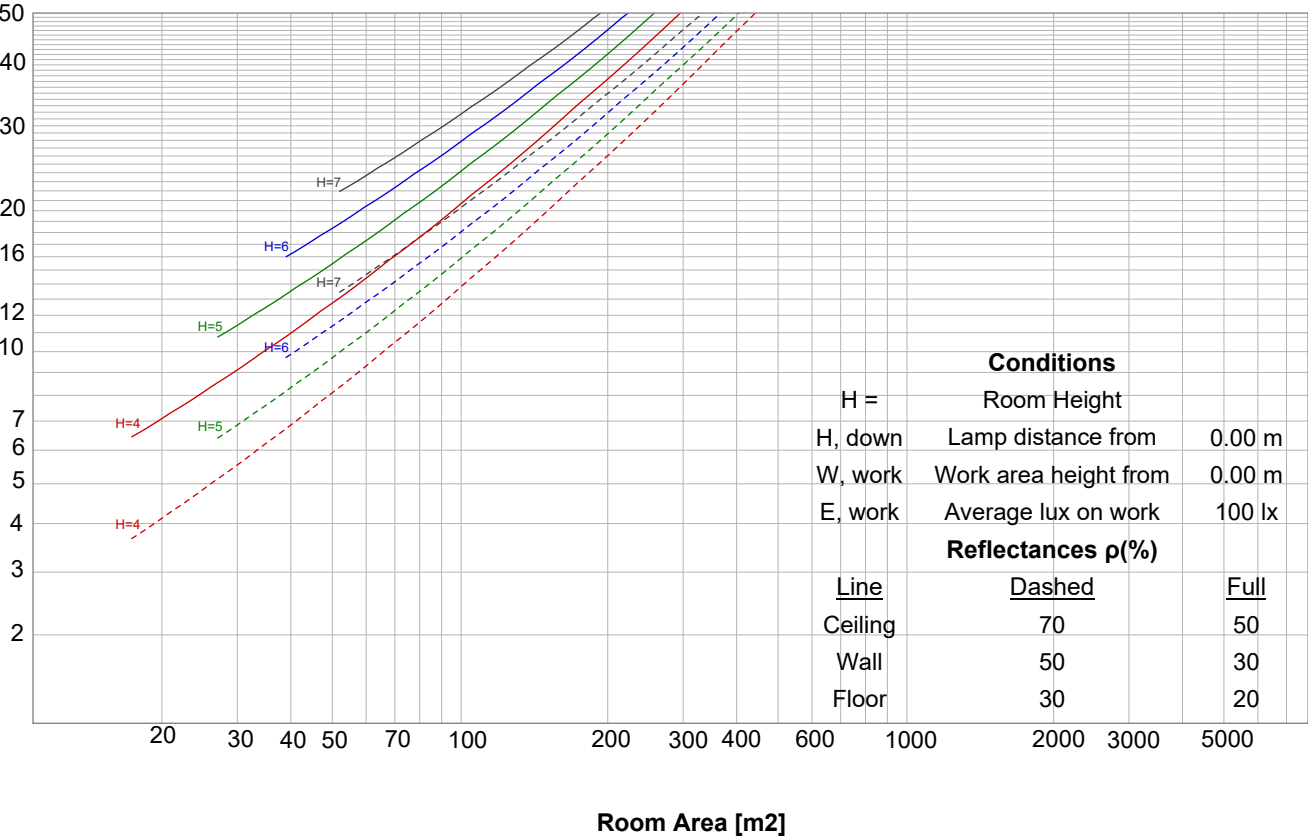


## Beam details



## Luminaire budgetary diagram

LAMPS (number of lamps)



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## 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
129	32	14	8	5	4	3	2	2	1	1	1	1	1	1	1	0	0	0	0	lux
11.9	3	1.3	0.7	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	0	0	fc

## Intensities in 0° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°	γ
129	129	129	130	131	131	132	132	132	132	135	139	140	140	140	139	138	137	135	134	cd
100%	100%	100%	101%	102%	102%	102%	103%	103%	103%	105%	108%	109%	109%	109%	108%	108%	107%	105%	104%	of 0°val

## Intensities in 90° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°	γ
129	123	115	104	91	76	59	42	25	9	8	24	42	60	77	93	107	119	127	133	cd
100%	95%	89%	81%	71%	59%	46%	33%	20%	7%	6%	18%	33%	47%	60%	73%	84%	92%	99%	103%	of 0°val

## Intensities in 180° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°	γ
129	130	132	133	134	136	136	137	136	134	127	125	128	129	131	132	132	132	132	133	cd
100%	101%	102%	103%	104%	105%	106%	106%	106%	104%	99%	97%	99%	101%	102%	102%	103%	103%	103%	103%	of 0°val

## Intensities in 270° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°	γ
129	128	126	119	110	98	83	67	51	33	17	20	37	55	72	88	103	115	125	131	cd
100%	100%	98%	93%	85%	76%	65%	52%	39%	26%	13%	15%	29%	43%	56%	69%	80%	90%	97%	102%	of 0°val



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## IESNA TM-15-07 LUMINAIARE CLASSIFICATION SYSTEM FOR OUTDOOR

### Forward Light

Low (0-30°)	52.9	lm	4.1%
Medium (30-60°)	129.4	lm	10%
High (60-80°)	97.6	lm	7.5%
Very High (80-90°)	46.7	lm	3.6%

### Back Light

Low (0-30°)	52	lm	4%
Medium (30-60°)	125	lm	9.7%
High (60-80°)	94.7	lm	7.3%
Very High (80-90°)	44.7	lm	3.5%

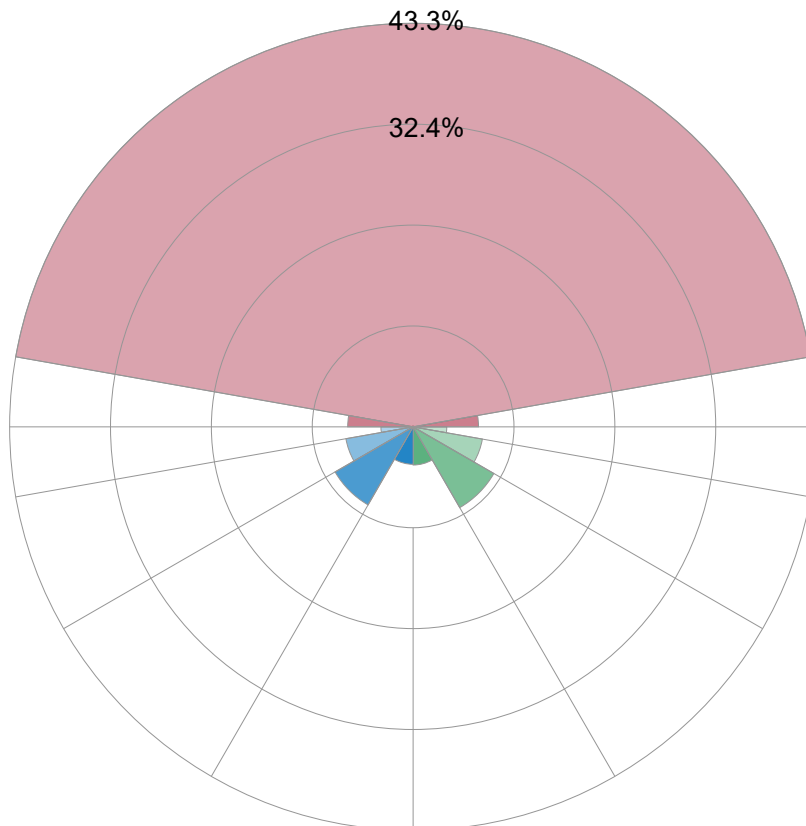
### Uplight

Low (90-100°)	90.8	lm	7%
High (100-180°)	559.8	lm	43.3%

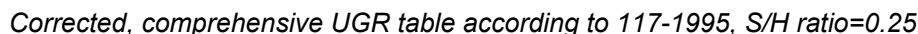
Total

<b>Sum</b>	<b>1294.2</b>	<b>lm</b>	<b>100%</b>
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### BUG RATING B0 U4 G1



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UGR data could not be calculated due to missing/wrong symmetry. Go to Edit -> Photometric -> Corrections and select Correct asymmetry

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
<b>RCR</b>	(Room Cavity Ratio)				Room values are expressed as percentage of Lumen delivered to the task surface													
0	107.1	107.1	107.1	107.1	98.7	98.7	98.7	98.7	83.2	83.2	83.2	68.9	68.9	68.9	55.9	55.9	55.9	49.7
1	94.4	88.6	83.4	78.7	86.4	81.4	76.8	72.7	67.9	64.4	61.3	55.5	52.9	50.6	44.1	42.2	40.5	34.9
2	84.6	75.6	68.1	61.8	77.2	69.4	62.8	57.2	57.7	52.6	48.3	46.9	43.1	39.8	36.9	34.2	31.7	26.8
3	76.5	65.4	56.9	50.0	69.7	60.0	52.5	46.4	49.9	44.0	39.2	40.5	36.0	32.3	31.8	28.5	25.7	21.3
4	69.5	57.3	48.3	41.5	63.3	52.6	44.6	38.5	43.7	37.5	32.6	35.5	30.7	26.9	27.9	24.3	21.3	17.5
5	63.5	50.6	41.6	34.9	57.8	46.5	38.5	32.4	38.8	32.4	27.5	31.5	26.6	22.8	24.8	21.1	18.1	14.6
6	58.3	45.1	36.3	29.9	53.1	41.5	33.6	27.8	34.7	28.4	23.6	28.3	23.3	19.6	22.3	18.5	15.6	12.5
7	53.8	40.5	31.9	25.9	49.0	37.3	29.6	24.1	31.3	25.1	20.5	25.6	20.7	17.0	20.2	16.5	13.6	10.8
8	49.8	36.6	28.3	22.6	45.5	33.8	26.3	21.1	28.4	22.3	18.0	23.3	18.5	15.0	18.5	14.8	12.0	9.5
9	46.3	33.3	25.3	20.0	42.3	30.8	23.6	18.6	25.9	20.1	16.0	21.3	16.7	13.3	17.0	13.4	10.7	8.4
10	43.2	30.4	22.8	17.7	39.5	28.2	21.2	16.6	23.8	18.1	14.2	19.7	15.1	11.9	15.8	12.2	9.6	7.6

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## Power details

### Input power

Frequency of input power	0 Hz
Power feed to light source	17.7 W
RMS Input voltage feed V,RMS	24.0 V
RMS Input current feed I,RMS	0.738 A
Volt-Amp or apparent power =	17.71 VA
Displacement factor of AC power feed	0.69
Power factor of AC current feed	1.0
Total harmonic distortion of the current	0%
Total harmonic distortion of the voltage	0%

### Input power curve



## Efficiency

Radiated power efficiency 27.0%

Lumen efficiency 73 lm/W

## Stabilization details

### Warmup Conditions

Stable period	n/a
Stable change max	n/a%
Minimum time	n/a

### Color Temperature Change

CCT start	n/a K
CCT shift	n/a K
CCT end	3949 K

### Warmup Result

Total warmup time	n/a
Warmup variation	n/a%

### Output Change

Output start	n/a lm
Output change	n/a lm
Output end	1294 lm

## Stabilization Curve



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## Flicker TLA details

Flicker Meter Type	Viso Systems LabFlicker
Frequency of input power	0 Hz
Flicker/TLA sample rate	n/a samples/s

Measurement time	
PstLM	180 sec.
All other indices	1,5 sec,

### Flicker indices according to Illuminating Engineering Society

Flicker frequency	n/a Hz
Percent Flicker	n/a %
Flicker index	n/a

### Flicker indices according to California Energy Commission (CEC)

JA8/10 40 Hz	n/a %
JA8/10 90 Hz	n/a %
JA8/10 200 Hz	n/a %
JA8/10 400 Hz	n/a %
JA8/10 1000 Hz	n/a %

### TLA indices (re IEC TR 61547-1, IEC 61000-3-3 and IEC

PstLM value ( $F < 80$ Hz)	n/a
SVM value ( $80 < F < 2000$ Hz)	n/a

### Flicker indices according to Lighting Research Center (2015)

Perception metric, Assist Mp	n/a
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### Flicker frame (frame of one flicker period in time domain)



### Flicker FFT (flicker curve in frequency domain)



## IEEE 1789 Frequency/modulation plot

