Photometric Test Report

FL50-G2-XXX-3083-4010-INF-XXXXX-X

Laboratory and Equipment

Test lab	Viso LabSpion - serial: 2007279764 sensor
Spectrometer Manufacturer and Model	LabSpion – Type C, horizontal
Measurement serial number	PH-GVA-2025.Nov.28-6056-VO
Measurement date	2025-11-28

Measurement Conditions

Tested c-planes	36 planes – 10°
Tested gamma resolution	0.5°
Input Power	52.3 W

Electrical Data

Input Power	52.3 W
Input Voltage	379 V DC
Input Current	0.138 A
Power Factor	1.0

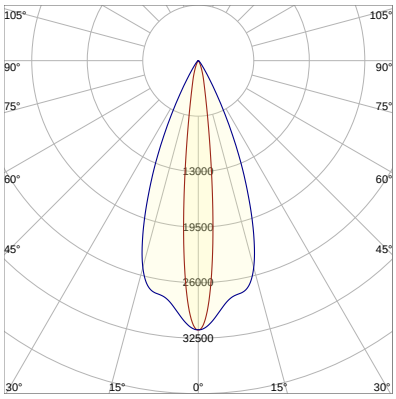
Tested Light Source

Product family	FL50-G2
Luminaire configuration	FL50-G2-XXX-3083-4010-INF-XXXXX-X
Manufacturer	GVA Lighting.Inc.
Size (width x length x height)	84 mm 0 mm x 250 mm

Main Light Measurement

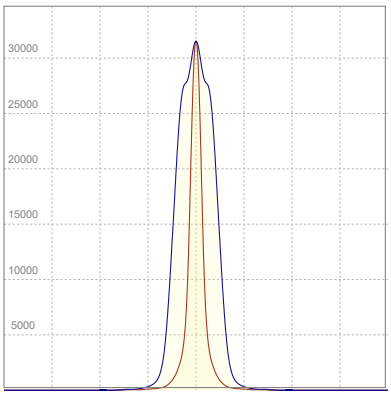
Output – Total Lumen (Up% / Down%)	6058 lm – 0% / 100%
Efficiency	116 lm/W
Peak Intensity	31536 cd
Correlated Color Temperature, CCT	2977 K
Color Rendering Index	CRI 82.8
Beam Angle (FWHM) | C0/180	12.1°
Beam Angle (FWHM) | C90/270	42°
Field Angle (10%) | C0/180	26.5°Unit: 0-100% of peak intensity
Field Angle (10%) | C90/270	60.7°
Optical Power	18.2 mW
Peak Wavelength	606 nm
Dominant Wavelength	584 nm

Polar Light Distribution Diagram
Unit: 0-100% of peak intensity

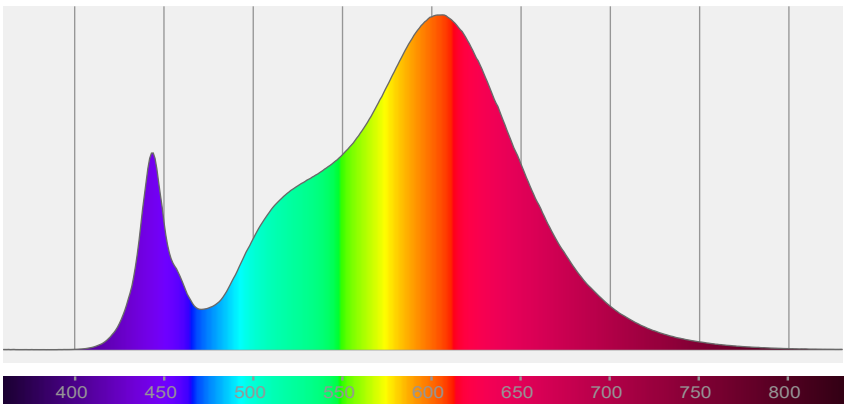


C0 - C180
C90 - C270
η = 100.0%

Linear distribution Diagram



Spectral Distribution



Color Temperature

2977 K

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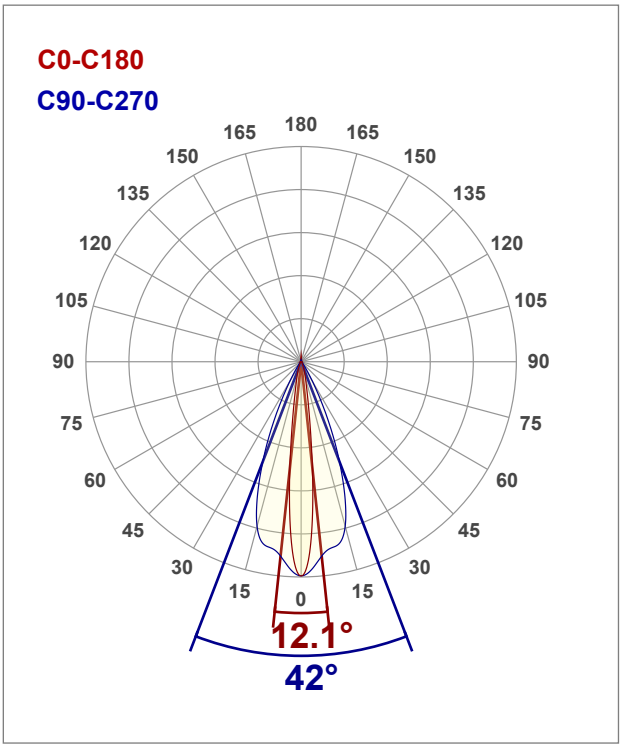
Luminous Intensity diagram

Unit: 0-100% of peak intensity



Main Values

Output (total Lumen)	6058 lm
Lumen Up% / Down%	0% / 100%
Peak Intensity	31536 cd
Beam Angle (50%-FWHM)	21.12°

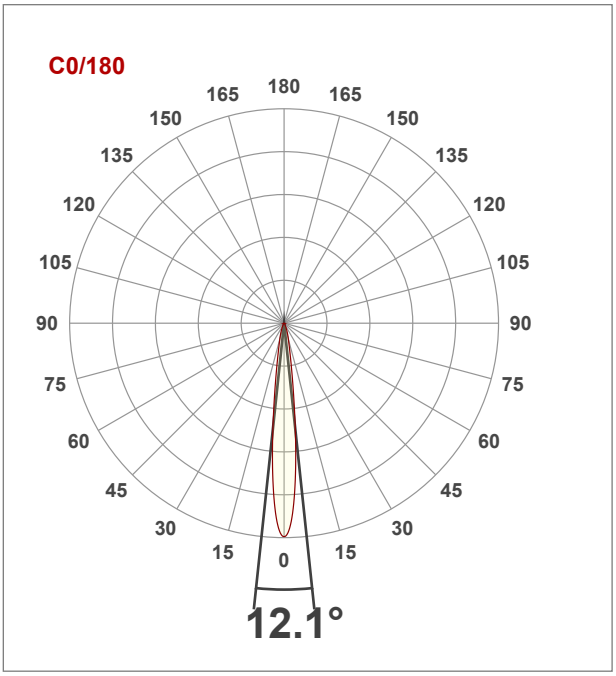
EU Ecodesign parameters

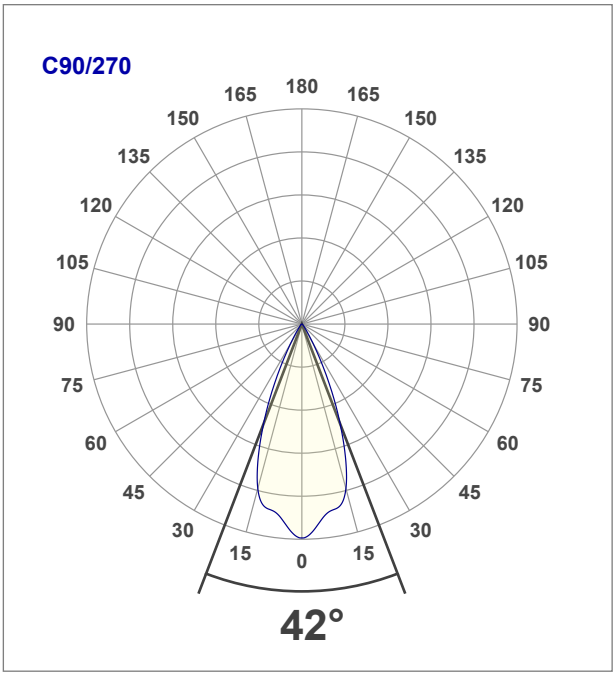
Directionality (DLS or NDLS)	DLS
Ecodesign Useful Luminous	5898 lm
Ecodesign Energy Class	E

Intensity Ratio

In 120° cone	99.3%
In 90° cone	97.4%

Angular Distribution





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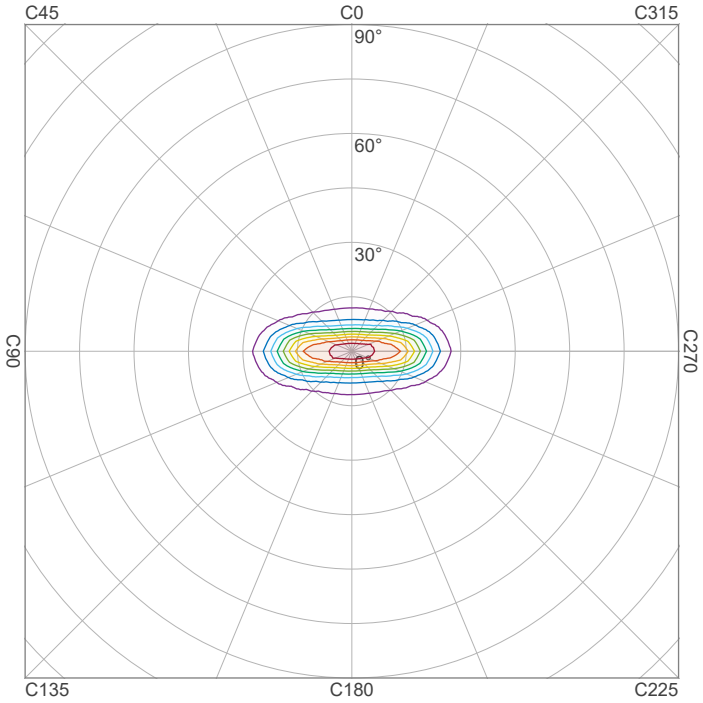
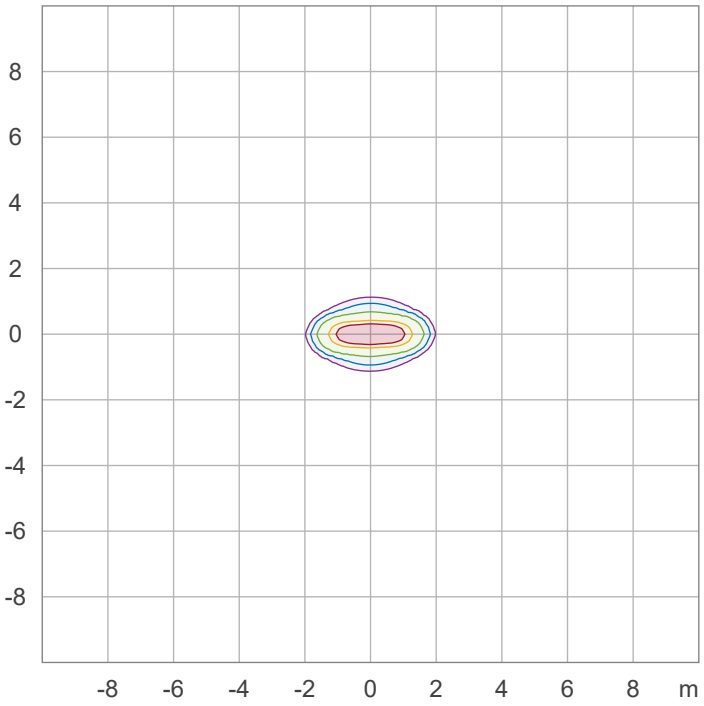
Iso-intensity Diagram (Iso-candela)



90 %	28353.9 cd
80 %	25203.5 cd
70 %	22053.0 cd
60 %	18902.6 cd
50 %	15752.2 cd
40 %	12601.7 cd
30 %	9451.3 cd
20 %	6300.9 cd
10 %	3150.4 cd

Peak intensity: 31504.3 cd
Number of c-planes: 36

Iso-illuminance Diagram (Iso-lux)



50.0 %	1750.2 lx
30.0 %	1050.1 lx
10.0 %	350.0 lx
5.0 %	175.0 lx
3.0 %	105.0 lx

Peak illuminance: 3500.5 lx
Mounting height: 3.0 m
Number of c-planes: 36

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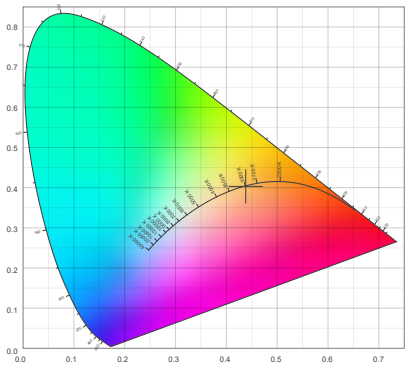
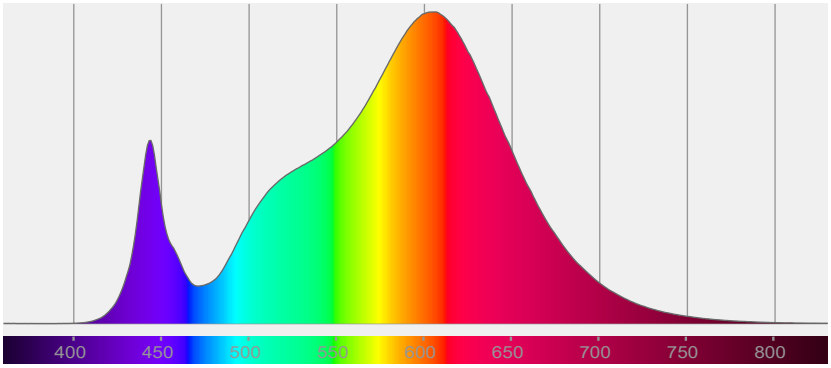
Color details

Correlated Color Temperature, Target	CCT = 2977 K	MacAdam Steps	SDCM = n/a
Correlated Color Temperature, Measured	CCT = 2977 K	Color deviation from BBL	Duv = -0.0005
Color Rendering Index	CRI 82.8	Color coordinates CIE 1931	(x;y) = (0.438;0.403)
Color Rendering Index, R9 (red)	R9 = 4.2	Color coordinate CIEs 1960	(u;v) = (0.252;0.347)
Color Rendering TM30-18	Rf 83.4	Color coordinate CIEs 1976	(u';v') = (0.252;0.521)
	Rg 98.8	Color Quality Scale	CQS = 81.5

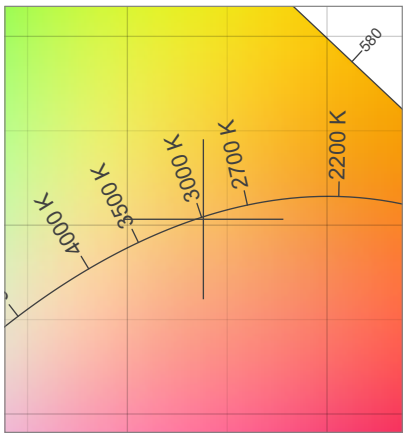
CIE 1931 Chromaticity diagram



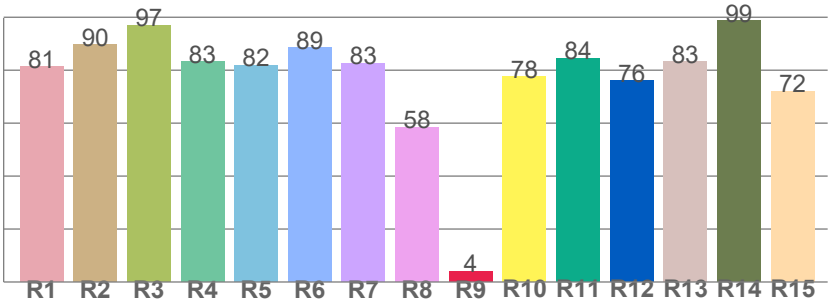
Spectral power distribution



CIE 1931 Chromaticity - zoomed



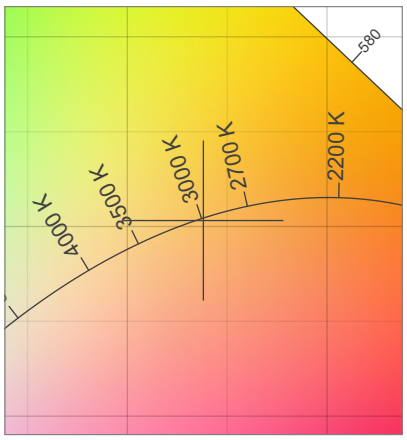
Color Rendering Index per reference color (CIE 1995)



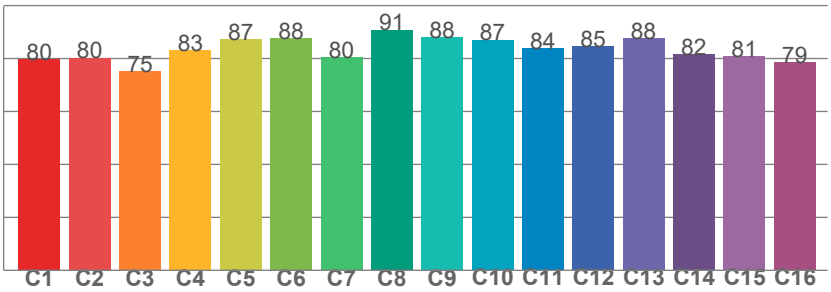
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
81.3	89.7	97.0	83.1	81.8	88.6	82.7	58.5	4.2	77.5	84.5	76.0	83.2	98.6	72.1

CIE 1931 Chromaticity - SDCM



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
79.7	80.3	75.1	83.1	87.4	87.8	80.3	90.9	88.2	87.1	83.8	84.7	87.6	81.6	80.9	78.7

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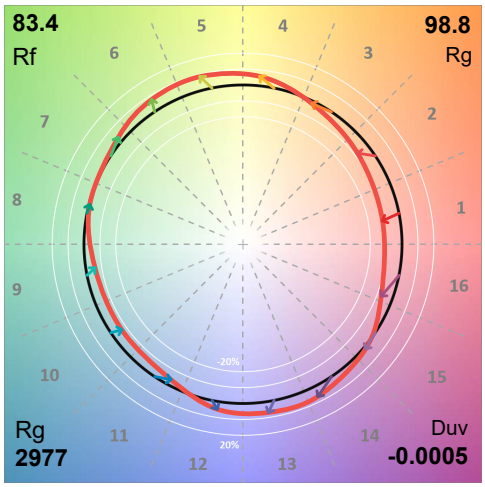
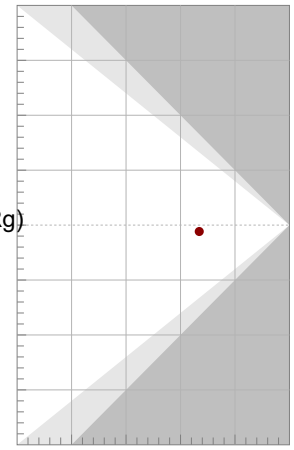
Color details - ANSI/IES TM-30-18 Color Rendition Report

Color Vector Graphic



Color Distortion Graphic

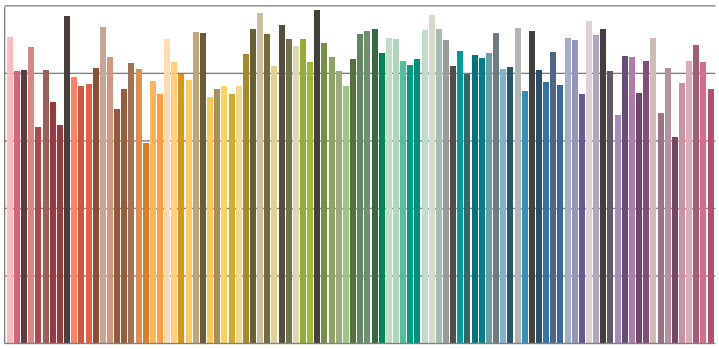
Gamut Index vs. Fidelity Index



Gamut index (Rg)

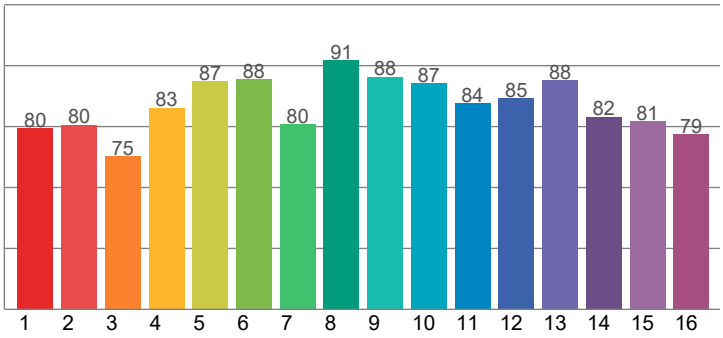
Fidelity index (Rf)

Color Rendition by Color Evaluation Sample (CES)



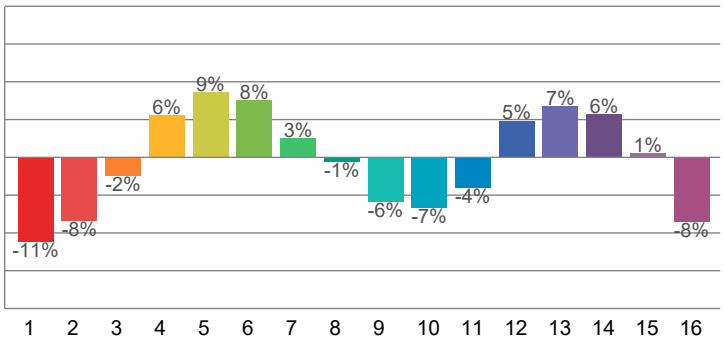
Color evaluation sample CES01 through CES99

Local Color Fidelity (per hue bin)



Hue angle bin (j)

Local Chroma Shift (per hue bin)



Hue angle bin (j)

CIE x	0.438
CIE y	0.438
CIE u'	0.252
CIE v'	0.521

CIE	13.3-1995
Ra	82.8
R9	4.2

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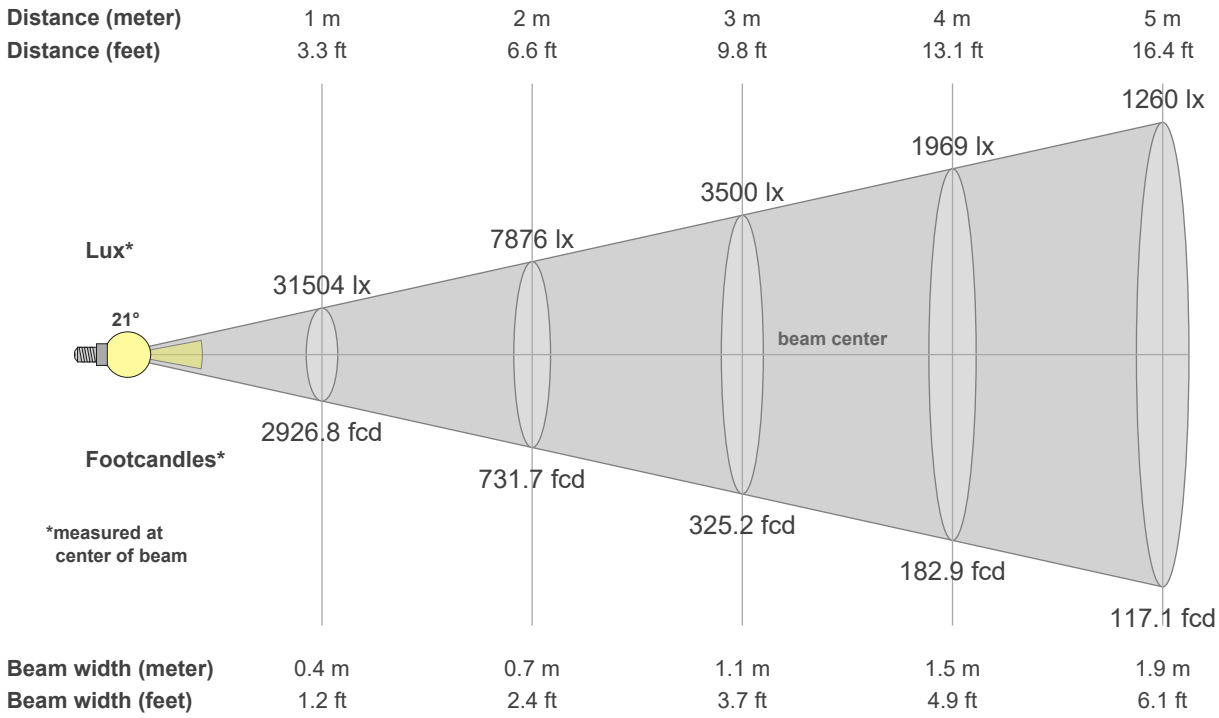
Beam details



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FL50-G2-XXX-3083-4010-INF-XXXXX-X

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
31504	7876	3500	1969	1260	875	643	492	389	315	260	219	186	161	140	123	109	97	87	79	lux
2926.8	731.7	325.2	182.9	117.1	81.3	59.7	45.7	36.1	29.3	24.2	20.3	17.3	14.9	13	11.4	10.1	9	8.1	7.3	fc

Intensities in 0° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	γ
31.5K	31.0K	29.4K	26.8K	23.5K	19.7K	15.9K	12.4K	9.5K	7.4K	5.8K	4.7K	3.9K	3.3K	2.8K	2.5K	2.2K	1.9K	1.7K	1.4K	cd
100%	98%	93%	85%	75%	63%	50%	39%	30%	23%	19%	15%	12%	10%	9%	8%	7%	6%	5%	5%	of 0°val

Intensities in 90° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	γ
31.5K	31.4K	31.1K	30.6K	30.0K	29.4K	28.8K	28.3K	28.0K	27.8K	27.7K	27.6K	27.3K	26.8K	26.1K	25.1K	23.9K	22.4K	20.9K	19.2K	cd
100%	100%	99%	97%	95%	93%	91%	90%	89%	88%	88%	88%	87%	85%	83%	80%	76%	71%	66%	61%	of 0°val

Intensities in 180° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	γ
31.5K	31.0K	29.4K	26.8K	23.5K	19.7K	15.9K	12.4K	9.5K	7.4K	5.8K	4.7K	3.9K	3.3K	2.8K	2.5K	2.2K	1.9K	1.7K	1.4K	cd
100%	98%	93%	85%	75%	63%	50%	39%	30%	23%	19%	15%	12%	10%	9%	8%	7%	6%	5%	5%	of 0°val

Intensities in 270° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°	γ
31.5K	31.4K	31.1K	30.6K	30.0K	29.4K	28.8K	28.3K	28.0K	27.8K	27.7K	27.6K	27.3K	26.8K	26.1K	25.1K	23.9K	22.4K	20.9K	19.2K	cd
100%	100%	99%	97%	95%	93%	91%	90%	89%	88%	88%	88%	87%	85%	83%	80%	76%	71%	66%	61%	of 0°val

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Power details

Input power	
Frequency of input power	0 Hz
Power feed to light source	52.3 W
RMS Input voltage feed V,RMS	379 V
RMS Input current feed I,RMS	0.138 A
Volt-Amp or apparent power = V,RMS*I,RMS	52.3 VA
Displacement factor of AC power feed	0.7
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

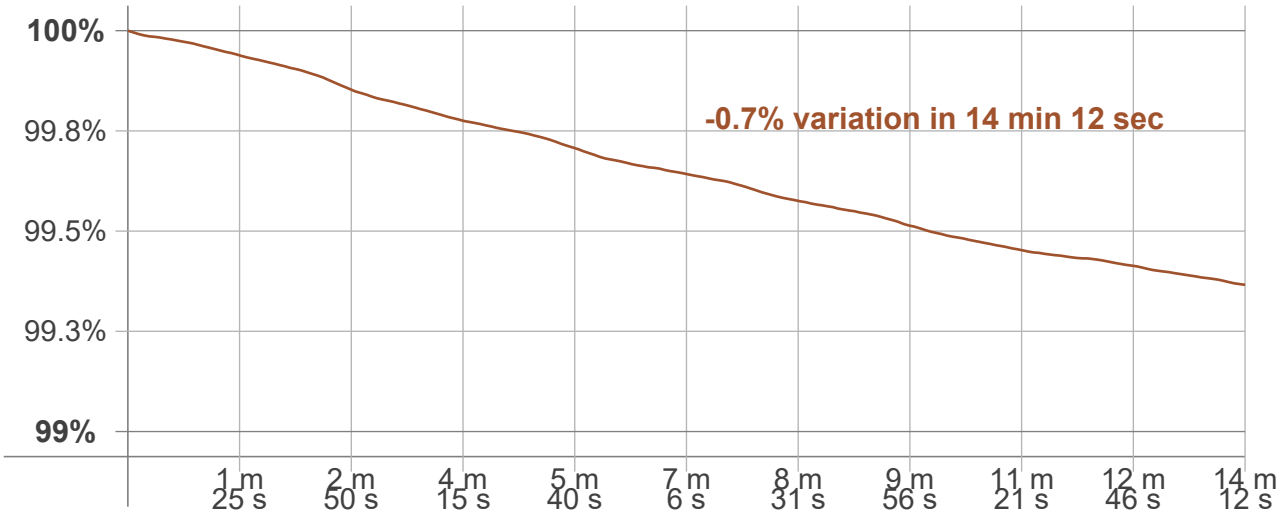
Efficiency

Radiated power efficiency	34.7%
Lumen efficiency	116 lm/W

Stabilization details

Warmup Conditions		Color Temperature Change	
Stable period	15 min	CCT start	2976 K
Stable change max	2.0%	CCT shift	+1 K
Minimum time	15 min	CCT end	2977 K
Warmup Result		**Output Change**	
Total warmup time	Not completed	Output start	6097 lm
Warmup variation	-0.7%	Output change	-39 lm
		Output end	6058 lm

Stabilization Curve



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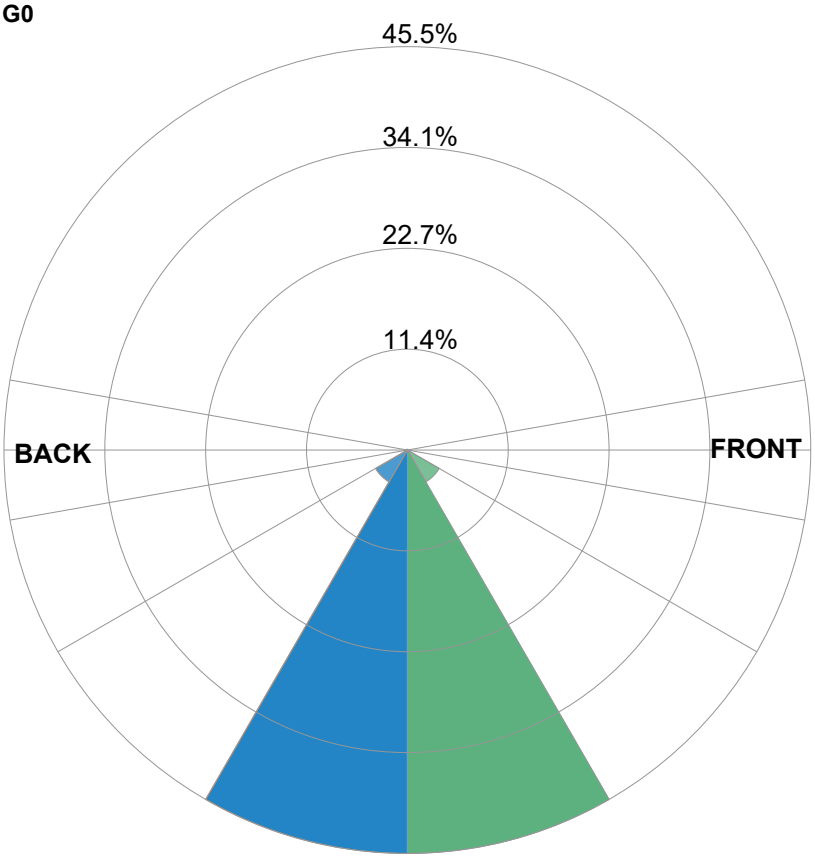
FL50-G2-XXX-3083-4010-INF-XXXXX-X

IESNA TM-15-07 LUMINIARE CLASSIFICATION SYSTEM FOR OUTDOOR LUMINAIRES

Forward Light			
Low (0-30°)	2756.4	lm	45.5%
Medium (30-60°)	251.3	lm	4.1%
High (60-80°)	21.5	lm	0.4%
Very High (80-90°)	0	lm	0%
Back Light			
Low (0-30°)	2756.4	lm	45.5%
Medium (30-60°)	251.3	lm	4.1%
High (60-80°)	21.5	lm	0.4%
Very High (80-90°)	0	lm	0%
Uplight			
Low (90-100°)	0	lm	0%
High (100-180°)	0	lm	0%
Total			
Sum	6058.3	lm	100%

BUG RATING B4 U0 G0