

Light Measurement Report

Print date: 2025-04-14

Measurement date and time: 2025-04-14 12:14:45 PM – Measurement no. VFR-250414-0115-MS

Operator: NC

SKU: I24VCW569803528



Laboratory and Equipment

Laboratory Owner and Location

Goniospectrometer System and Type

Sensor Name, Calibr. Date and Serial No.

Spectrometer Manufacturer and Model

Moss LED Inc., Toronto, Ontario, Canada

BaseSpion – Type C, horizontal

BaseSensor – 2023-06-27 – 2807073281

Ibsen Photonics, Denmark – Freedom VIS (Custom Viso)

Measurement Conditions

Number of C-planes and Resolution

γ (gamma)-Resolution

Test Distance

Input Power per 1 meter

Input RMS Voltage and Current per 1 meter

Frequency of Input Power

12 planes – 30°

5°

2.50 m

33.6 W

24.0 V – 1.40 A

0 Hz

Tested Light Source

Product Name and Type of Test, Manufacturer

Product Description, Test details

I24VCW569803528-CW-149 / MossLED Inc.

24V, CW 5600K, 196LPM

Main Light Measurement Results

Total Lumen Output per 1 meter

Efficiency

Peak Intensity and Overall Beam Angle

Correlated Color Temperature: Nominal / Straight-on / Average

Color Rendering Index

Color Rendering TM30-18

Color Shift, CIE duv and MacAdam Steps

Flicker

3148 lm

93 lm/W

1061 cd – 116.4°

CCT = 5600 K / 6060 K / 5703 K

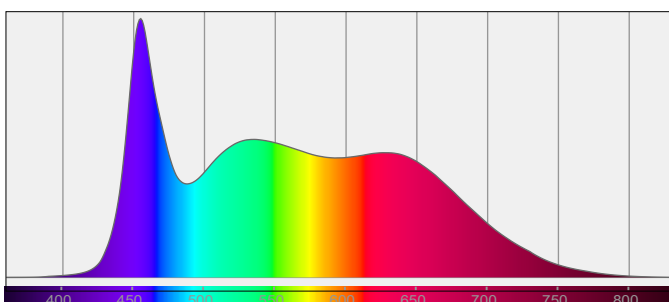
CRI = 96.5

R_f 91.1 – R_g 99.5

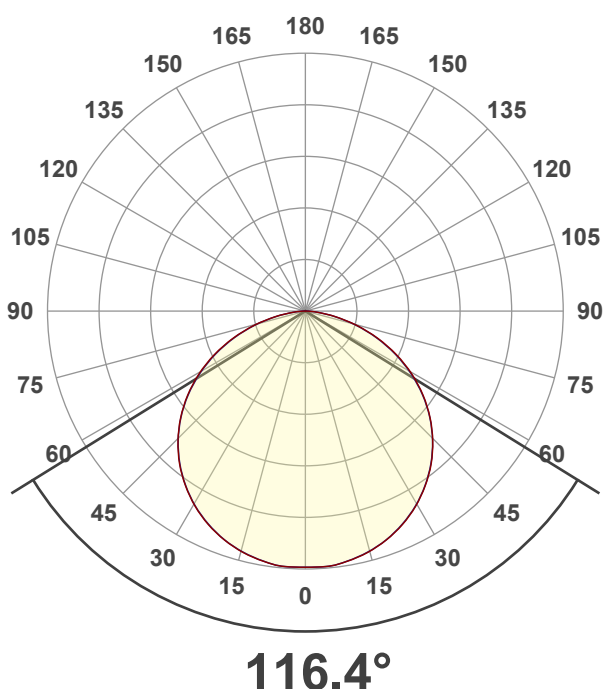
Duv -0.0002 – SDCM 2.8

SVM n/a – PstLM n/a

Product picture:



50% Beam Angle (overall H+V, % values)

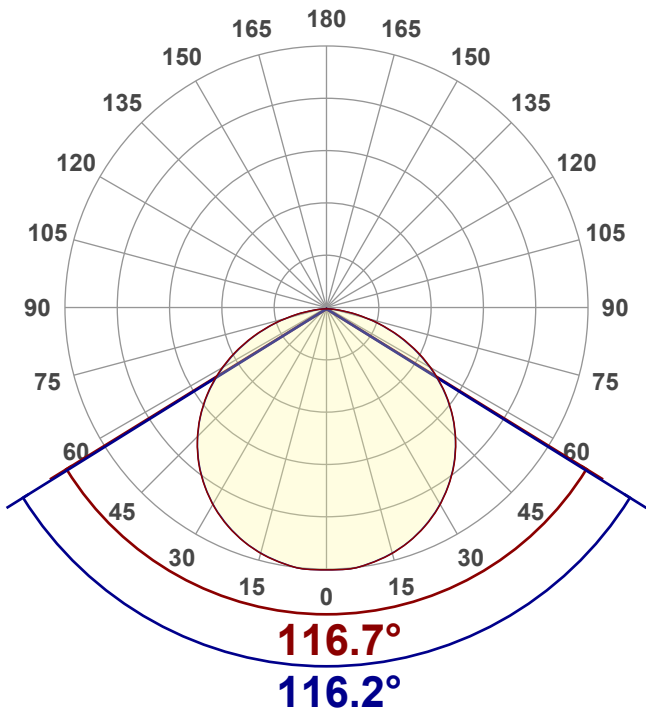


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50% Beam Angle (horizontal and vertical, % values)



Main Values	
Output (total Lumen)	3148 lm
Peak Intensity	1061 cd
Beam Angle (10%)	116.7°
Beam Angle (50%)	116.4°
Beam Angle (90%)	116.2°

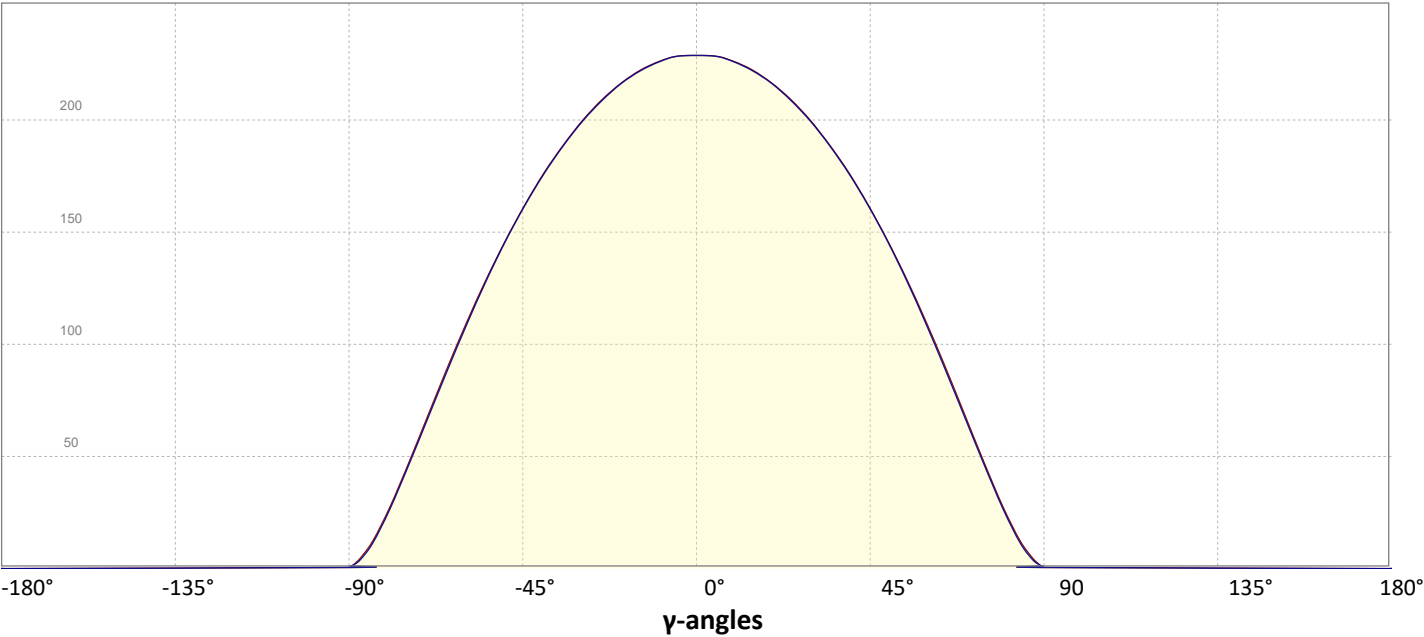
Cut-off Angle	
Average 2,5%	173°

Field Angle	
Average 10%	161°

Intensity Ratio	
In 120° cone	78.5%
In 90° cone	52.9%

C000-C180 Horiz.	116.7°
C090-C270 Vertical	116.2°

Linear distribution diagram - Intensity (candela) vs γ-angle



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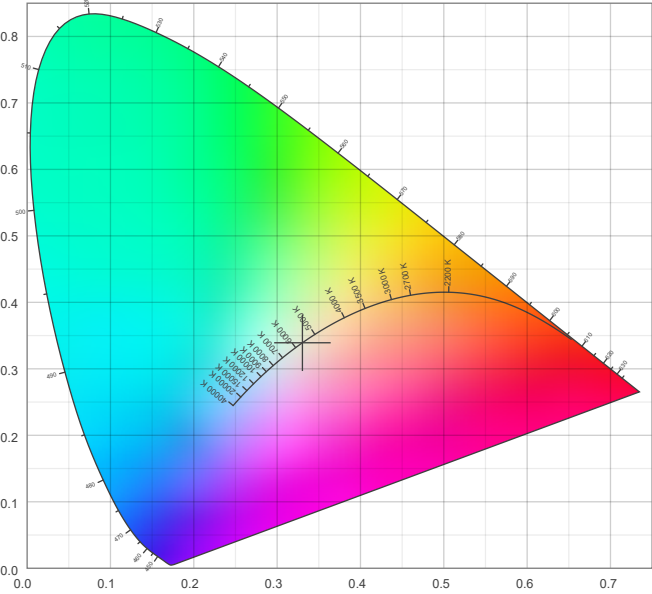
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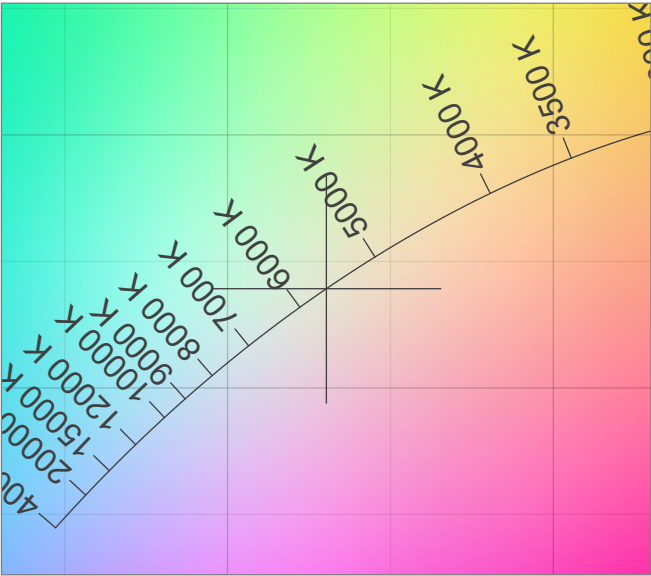
Color details

Correlated Color Temperature, Target	CCT = 5600 K	MacAdam Steps	SDCM = 2.8
Correlated Color Temperature, Measured	CCT = 5703 K	Color coordinates CIE 1931	(x;y) = (0.330;0.339)
Color Rendering Index	CRI = 96.5	Color coordinate CIEs 1960	(u;v) = (0.206;0.318)
Color Rendering Index, R9 (red component)	R9 = 92.8	Color deviation from BBL	Duv = -0.0002
Color Rendering TM30-18	Rf 91.1 – Rg 99.5	Color coordinate CIEs 1976 (CIELUV)	(u';v') = (0.206;0.476)
Color Quality Scale	CQS = 93.1		

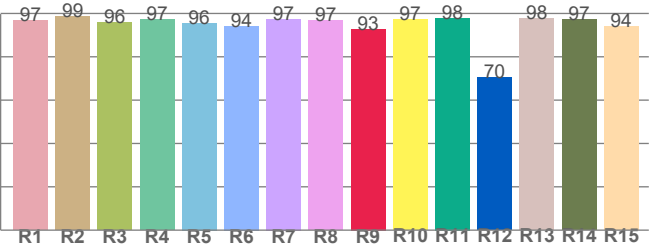
CIE 1931



CIE 1931 – zoomed on Planckian locus



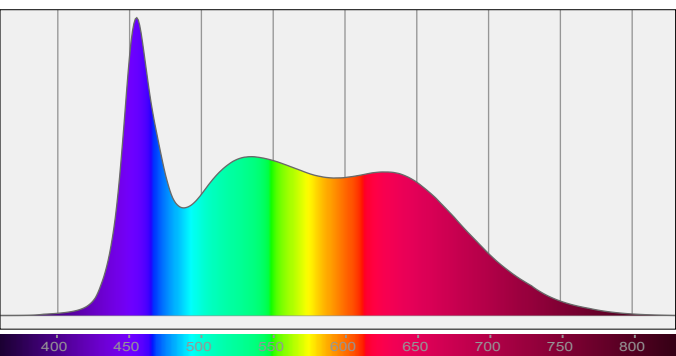
Color Rendering Index per reference color (CIE 1995)



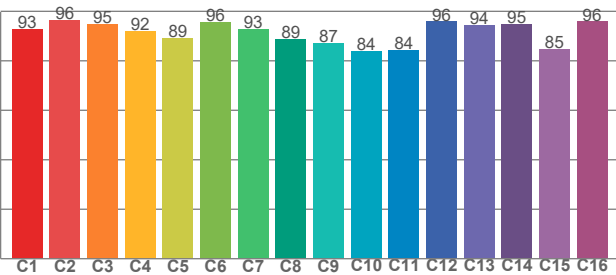
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
96.9	98.7	95.8	97.1	95.6	94.2	97.4	96.6	92.8	97.4	97.9	70.5	97.8	97.2	94.0

Spectral power distribution (SPD) / W/nm – 0-100%



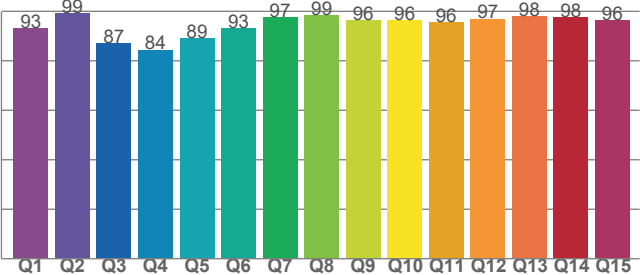
TM30-18 Rf-values per hue bin



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
92.7	96.3	94.8	91.9	89.1	95.7	92.9	88.9	87.2	83.8	84.4	95.8	94.3	94.9	84.9	95.9

Color Quality Scale by reference color

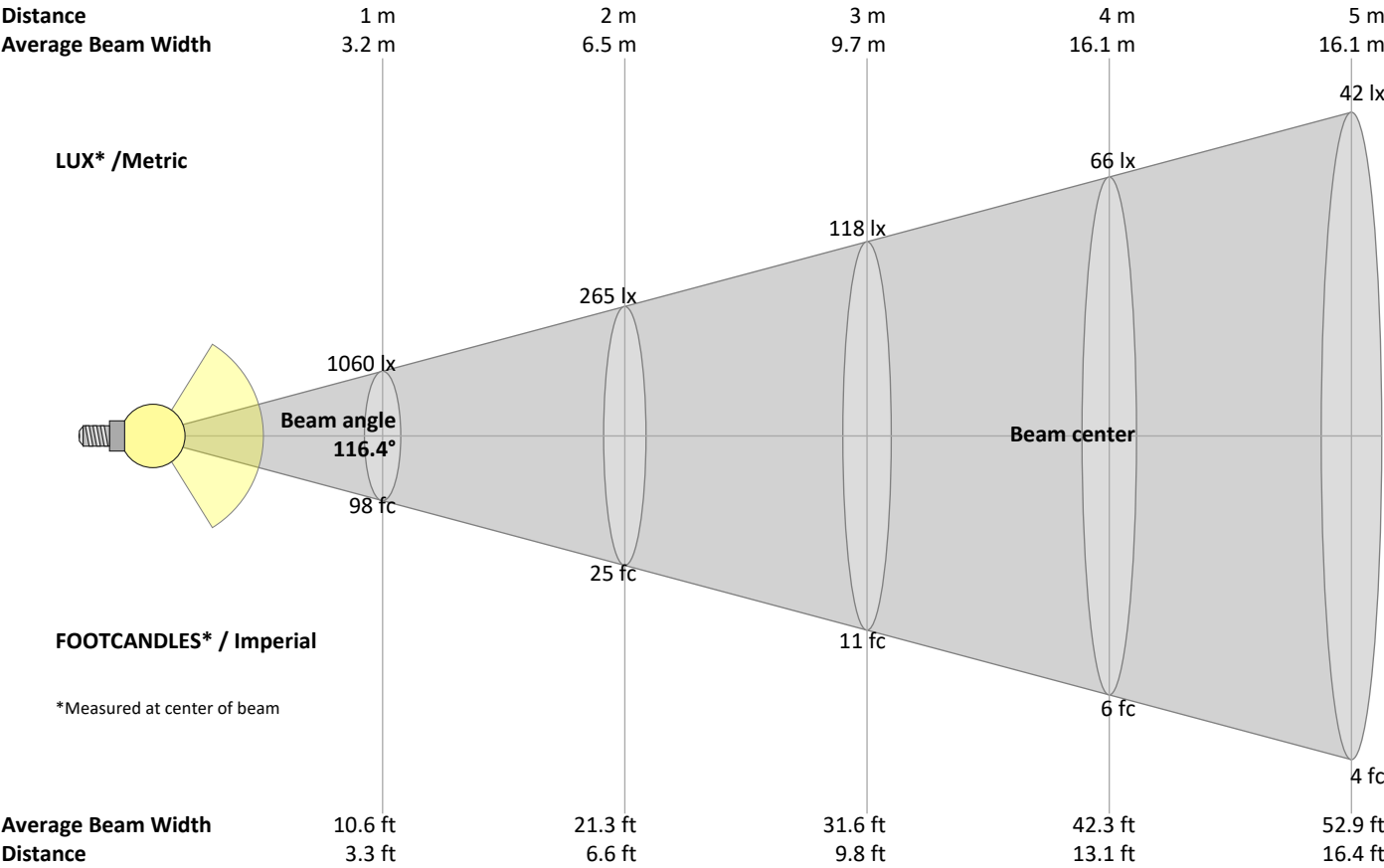


CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
93.0	99.3	87.2	84.5	89.2	93.0	97.4	98.5	96.4	96.3	95.7	97.0	98.1	97.8	96.2

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Beam intensities from 1 – 20 m

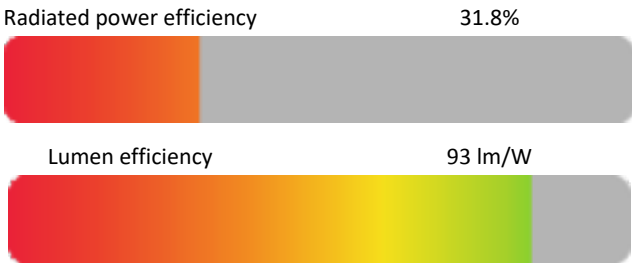
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	m
3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6	ft
1060	265	118	66	42	29	22	17	13	11	9	7	6	5	5	4	4	3	3	3	lux
98.5	24.6	10.9	6.2	3.9	2.7	2	1.5	1.2	1	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.2	fc

Power Details

Input Power

Power feed to light source	33.6 W
Frequency of input power	0 Hz
RMS Input voltage feed, VRMS	24.0 V
RMS Input current feed, IRMS	1.40 A
Volt-Ampere or apparent power = VRMS*IRMS	0.0 VA
Displacement factor of AC power feed	0.0
Power factor of AC current feed	1.0
Total harmonic distortion of the current	0%
Total harmonic distortion of the voltage	0%

Efficiency



Main250319