

Light Measurement Report

Print date: 2024-01-25

Measurement date and time: 2024-01-25 7:41:00 PM – Measurement no. TR-0060-240125

Operator: NC

SKU: I24VRGBW27360UCS8904 - RGB @ FULL



Laboratory and Equipment

Laboratory Owner and Location

Goniospectrometer System and Type

Sensor Name, Calibr. Date and Serial No.

Spectrometer Manufacturer and Model

Moss LED, 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°

4.50 m

16.6 W

24.3 V – 0.684 A

0 Hz

Tested Light Source

Product Name (-type of measurement if applicable)

Manufacturer

Description and colour tested

I24VRGBW27360UCS8904

MossLED Inc.

24V RGB+2700K Pixel, 72LPM - RGB

Main Light Measurement Results

Total Lumen Output per 1 meter

Efficiency (tested at 1 meter)

Peak Intensity and Beam Angle

Correlated Color Temperature, Target/Measured

Color Rendering Index

Color Rendering TM30-18

Color Shift, CIE duv and MacAdam Steps

Flicker

629 lm

38 lm/W

187 cd – 126.6°

CCT = 0 K / 0 K

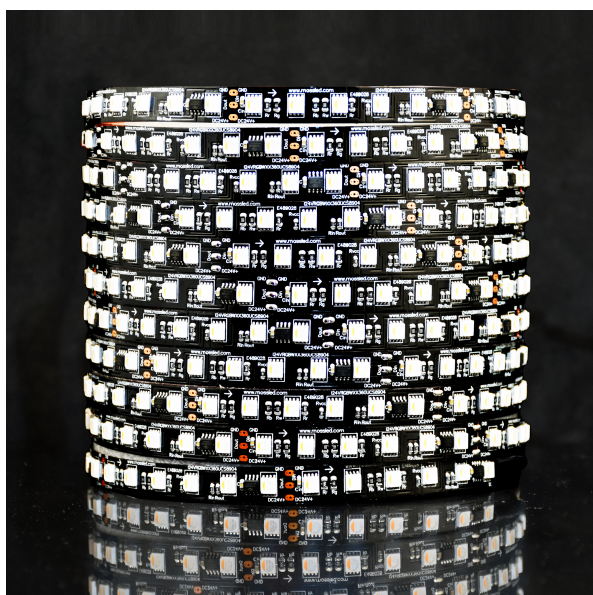
CRI 0.0

R_f 0.0 – R_g 0.0

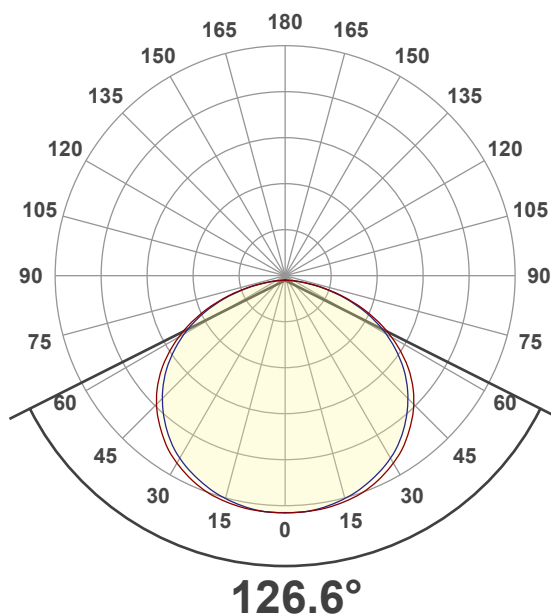
Duv n/a – SDCM n/a

SVM n/a – PstLM n/a

Product picture



50% Beam angle (absolute values)



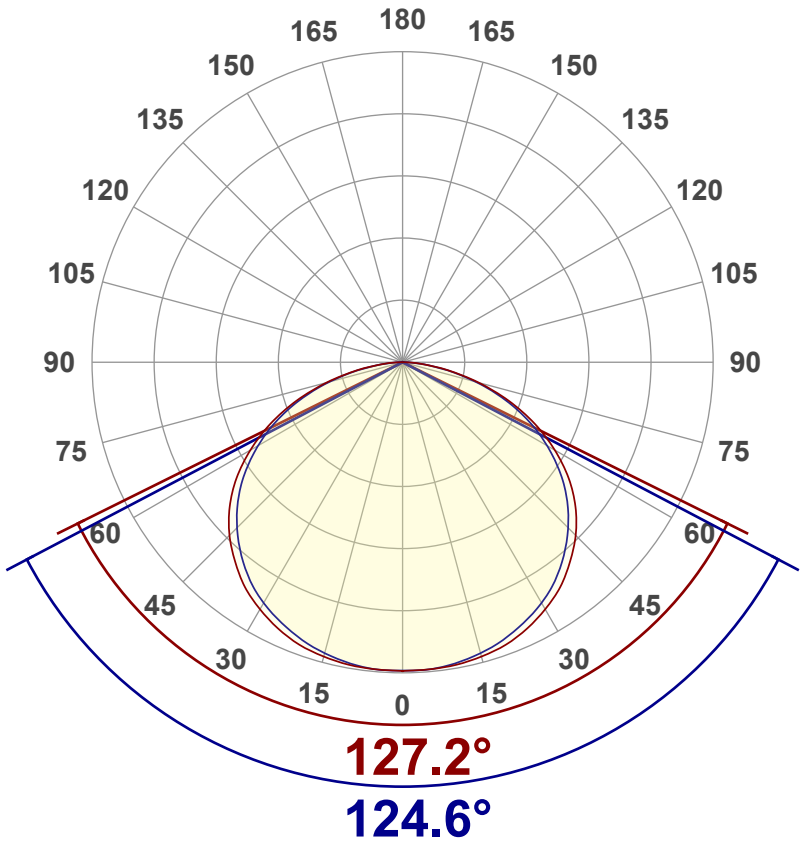
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Luminous Intensity diagram

Unit: 0-100% of peak intensity



Main Values

Output/m (total Lumen) 629 lm
Lumen Up% / Down% 0.5% / 99.5%
Peak Intensity 187 cd
Beam Angle (50%) 126.6°
Beam Angle (90%) 124.6°
Beam Angle (10%) 127.2°

Cut-off Angle

Average 2,5% 175.6°

Field Angle

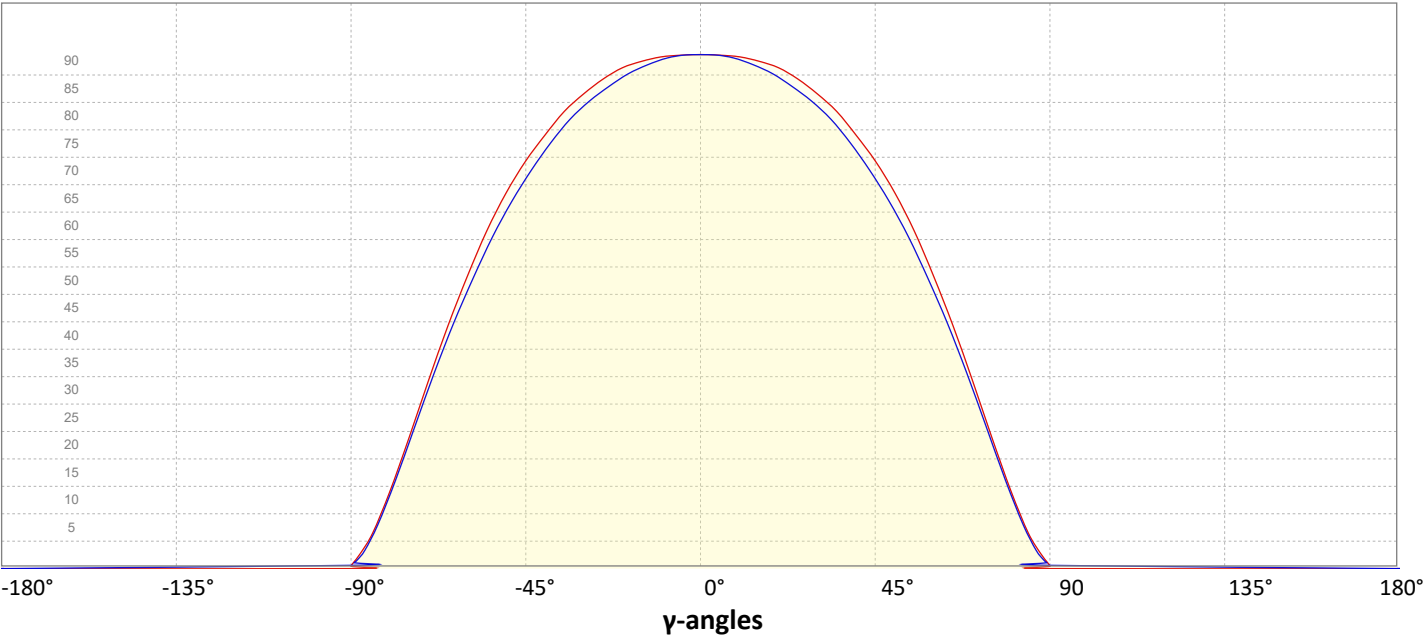
Average 10% 165.2°

Intensity Ratio

In 120° cone 75.6%
In 90° cone 49.4%

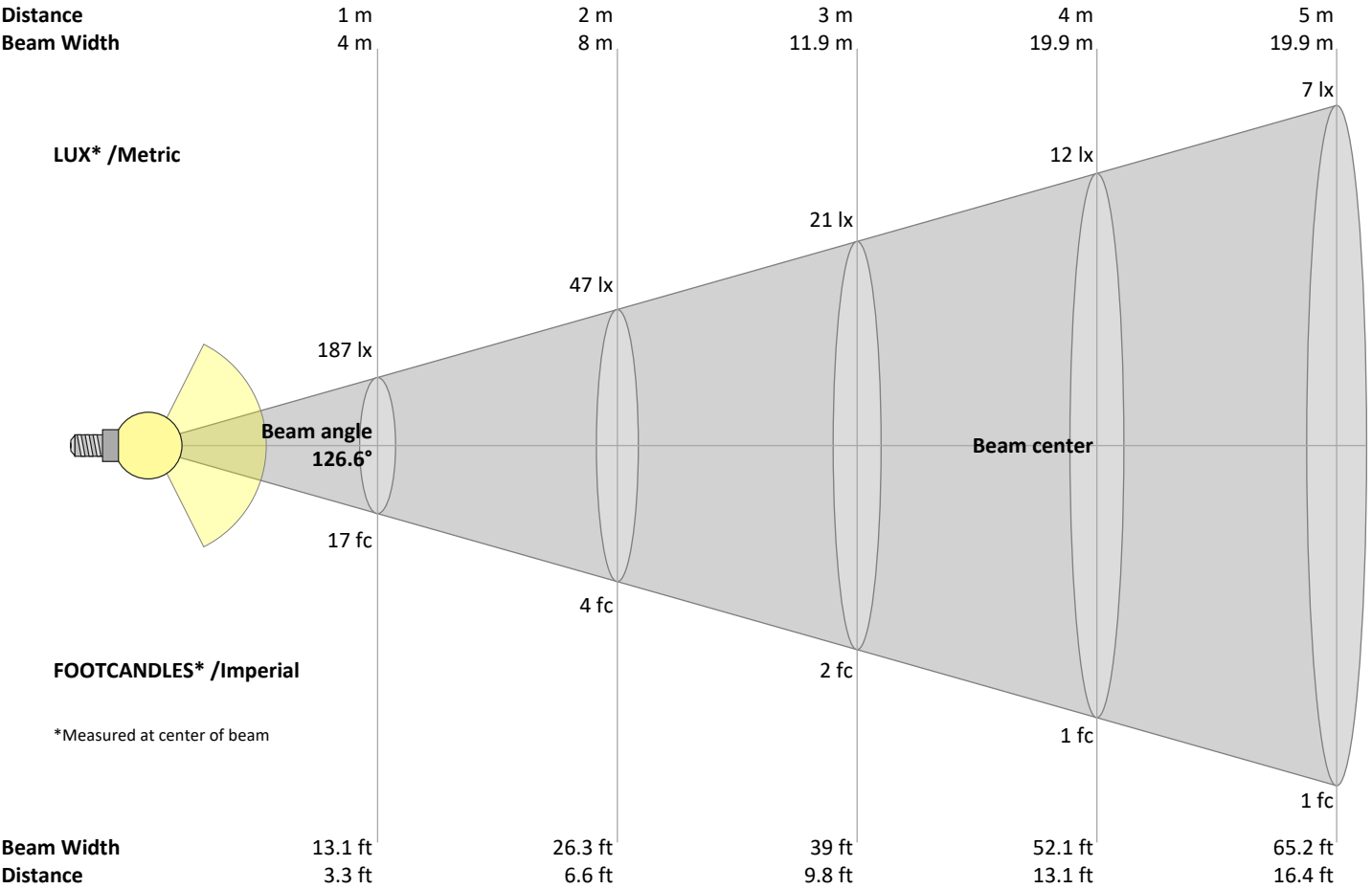
C000-C180
C090-C270

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



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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
187	47	21	12	7	5	4	3	2	2	2	1	1	1	1	1	1	1	1	0	lux
17.4	4.4	1.9	1.1	0.7	0.5	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	fc

Power Details

Input Power

RMS Input voltage feed, V_{RMS}
RMS Input current feed, I_{RMS}
Power feed to light source
Frequency of input power
Power factor of AC current feed

24.3 V
0.684 A
16.6 W
0 Hz
1.0

Efficiency

Radiated power efficiency 19.6%
Lumen efficiency 38 lm/W

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Light Planning – UGR table

Uncorrected, comprehensive UGR table according to 117-1995

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	21.3	22.6	21.5	22.9	23.1	22.1	23.3	22.3	23.6	23.9
	3H	22.6	23.9	23.0	24.2	24.4	23.7	25.0	24.1	25.3	25.5
	4H	23.1	24.3	23.5	24.6	24.9	24.3	25.6	24.7	25.9	26.1
	6H	23.4	24.5	23.7	24.8	25.2	24.9	26.0	25.2	26.3	26.6
	8H	23.5	24.5	23.8	24.8	25.3	25.0	26.1	25.3	26.4	26.8
	12H	23.5	24.5	23.8	24.8	25.3	25.1	26.1	25.4	26.4	26.9
4H	2H	22.0	23.2	22.4	23.5	23.8	22.5	23.8	23.0	24.1	24.3
	3H	23.5	24.6	23.9	24.9	25.4	24.4	25.5	24.8	25.8	26.3
	4H	24.0	25.0	24.5	25.4	26.0	25.1	26.1	25.6	26.5	27.0
	6H	24.4	25.3	24.9	25.7	26.1	25.7	26.6	26.2	27.0	27.3
	8H	24.5	25.3	25.0	25.7	26.1	25.9	26.7	26.4	27.1	27.4
	12H	24.5	25.2	25.0	25.6	26.1	26.0	26.7	26.4	27.1	27.6
8H	4H	24.3	25.2	24.8	25.5	25.9	25.3	26.1	25.8	26.5	26.9
	6H	24.8	25.4	25.3	25.9	26.4	26.0	26.6	26.5	27.1	27.6
	8H	24.9	25.5	25.5	26.0	26.7	26.2	26.8	26.7	27.3	27.9
	12H	25.0	25.5	25.6	26.0	26.6	26.3	26.8	26.9	27.3	27.9
12H	4H	24.3	25.0	24.8	25.4	25.9	25.3	26.0	25.8	26.4	26.9
	6H	24.9	25.4	25.4	25.9	26.6	26.0	26.6	26.5	27.1	27.7
	8H	25.0	25.5	25.6	26.0	26.6	26.2	26.7	26.8	27.2	27.8
Variations with the observer position for the luminaire spacings, S:											
S = 1.0H		0.1 / -0.1					0.0 / -0.1				
S = 1.5H		0.2 / -0.3					0.1 / -0.2				
S = 2.0H		0.5 / -0.7					0.5 / -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	0
RCR	(RCR: Room Cavity Ratio)																	
	Room Values are expressed as percentage of Lumen delivered to the task surface																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	99
1	108	103	99	94	105	101	97	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	45	72	60	51	44	57	50	44	55	48	43	53	47	43	40
6	68	54	45	39	66	53	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	28	24	34	28	24	22