

# VEROBOARD®

**LED Type:** VBDFS-3528-XXXX-120-12-NS  
**Colour:** 2700K • 3000K • 3500K • 4000K • 5000K

**Contact Name:** \_\_\_\_\_

**Company:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**Email:** \_\_\_\_\_

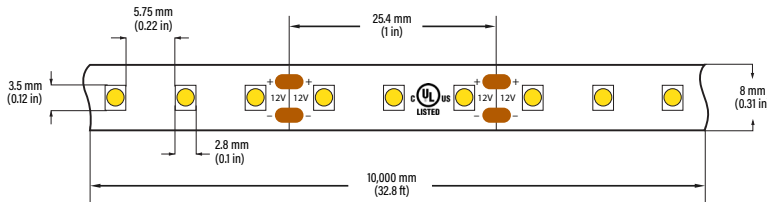
	Wattage	Brightness
Per Foot	3W/ft	258-292Lm/ft
Per Meter	9W/m	840-960Lm/m



## DESCRIPTION

Flexible 8 mm wide linear LED strip. Available in 10 meter (32.8 feet) rolls that can be cut every 3 LEDs (25.4 mm or 1 in). The LED Strip lights are manufactured with high-quality materials and designed for professional lighting. Every strip light begins with a heavy-duty dual-core copper printed circuit board (PC Board), which is then soldered with an array of chips and color options. Moreover, the strip lights come with a strong 3M adhesive backing. They can be cut to any size (marked interval points) and rejoined by soldering.

## DIMENSIONS



## SPECIFICATIONS

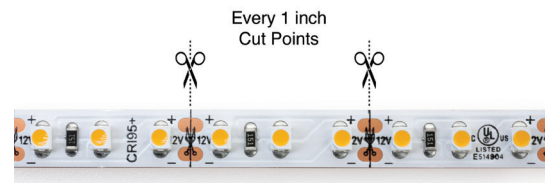
<b>Model:</b>	VBDFS-3528-xxxx-120-12-NS
<b>Color Temperature:</b>	2700K • 3000K • 3500K • 4000K • 5000K
<b>LED Type:</b>	3528 SMD
<b>LED Qty:</b>	120 LEDs per meter
<b>LM/LED:</b>	7-8 Lm per LED
<b>Input Voltage (VF):</b>	12V DC
<b>Power:</b>	9W per meter (3W/ft)
<b>Brightness:</b>	840-960 Lm/meter (258-292 Lm/ft)
<b>Lifespan:</b>	>50,000 hours
<b>PCB:</b>	4oz PCB, Double-side, white colour 8mm width
<b>IP Rating:</b>	IP20 (Indoor use only)
<b>Rendering Index (Ra):</b>	CRI>95
<b>Beam Angle:</b>	120°
<b>Dimmable:</b>	Yes
<b>Cut Size:</b>	Every 3 LED chips (1")
<b>Operating Temperature:</b>	-15°C to +40°C
<b>Dimensions:</b>	10,000mm x 8mm x 3mm (393.6" x 0.31" x 0.1")
<b>Certificates:</b>	UL / RoHS
<b>Roll Length:</b>	10 meter roll (32.8ft)



666561425562  666561423926  666561423957



666561425579  666561425586



## ORDERING GUIDE

Example part number: **VBDFS - 3528 - XXXX - 120 - 12 - NS**

MODEL	SERIES	COLOUR	LEDS/METER	VOLTAGE	LENGTH
VBDFS	3528	XXXX	120	12V	XXXX
		2700K 3000K 3500K 4000K 5000K			Custom Length
					NS (Full Roll 10 Meter)

For more information about our products and services, please visit our website: [www.veroboard.com](http://www.veroboard.com)

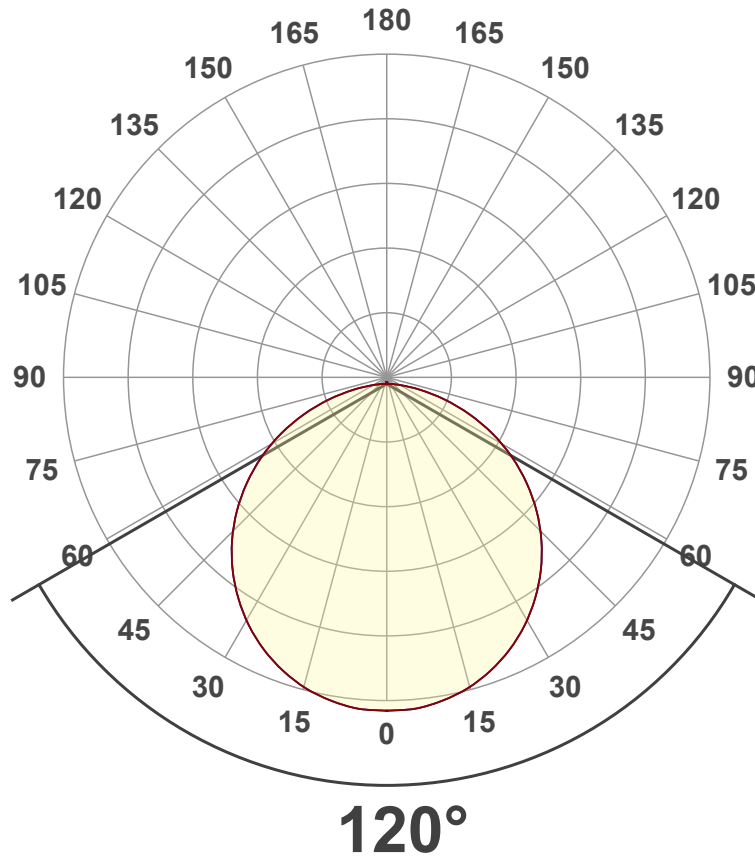
# Light Measurement Report

Print date: 2023-04-26

Measurement date and time: 2023-04-25 2:10:41 PM – Measurement no. VFR-230425-0167-MS

## Luminous Intensity diagram

Unit: 0-100% of peak intensity



## Main Values

Lumen Up% / Down%	0.54% / 99.46%
Peak Intensity	89.2 cd
Beam Angle (50%)	120°
Beam Angle (90%)	114°
Beam Angle (10%)	114°

## Cut-off Angle

Average 2,5%	174.7°
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## Field Angle

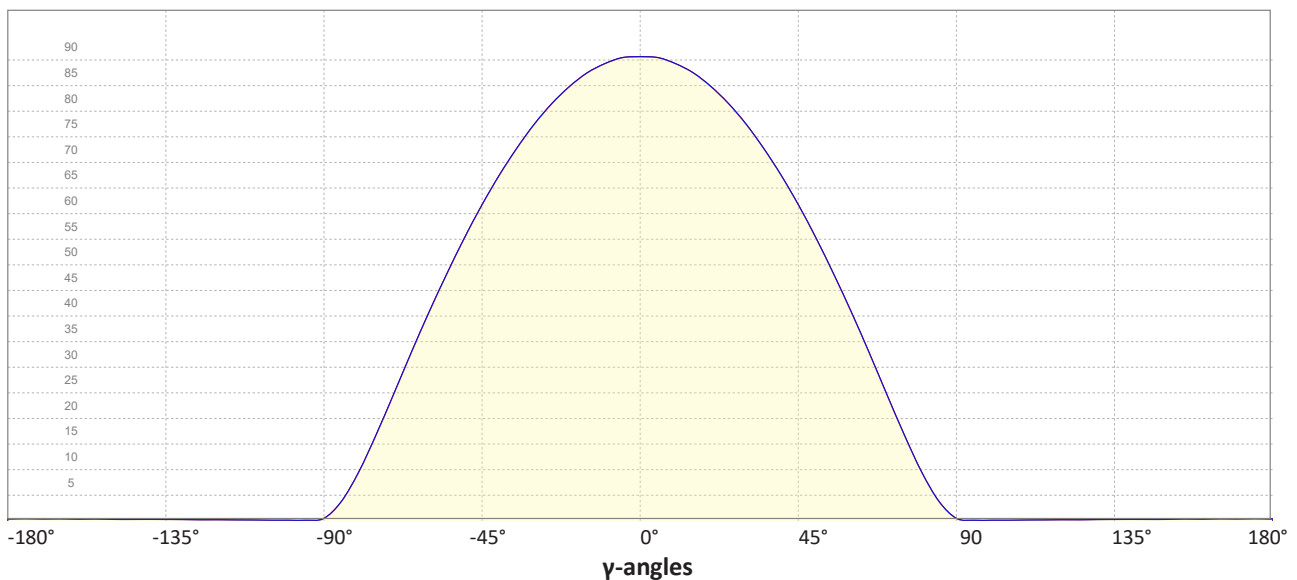
Average 10%	161°
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## Intensity Ratio

In 120° cone	78.4%
In 90° cone	53.1%

**C000-C180**  
**C090-C270**

## Linear distribution diagram - Intensity (candela) vs $\gamma$ -angle



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## Color details

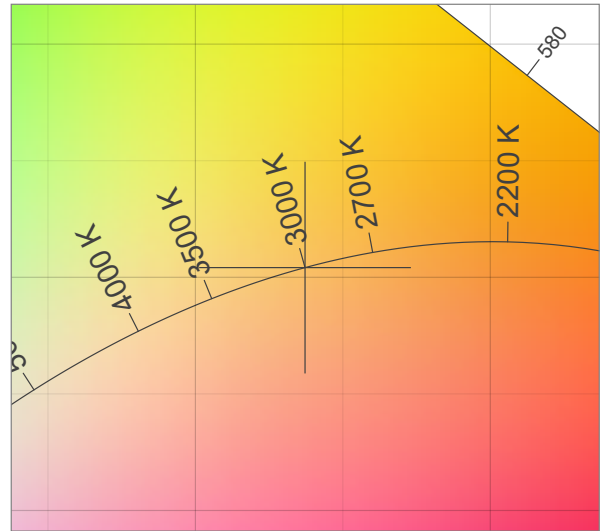
Correlated Color Temperature, Target CCT = 3000 K  
 Correlated Color Temperature, Measured CCT = 2953 K  
 Color Rendering Index CRI 98.1  
 Color Rendering Index, R9 (red component) R9 = 98.0  
 Color Rendering TM30-18 R<sub>f</sub> 94.5 – R<sub>g</sub> 100.7  
 Color Quality Scale CQS = 95.7

MacAdam Steps  
 Color coordinates CIE 1931 (x;y) = (0.437;0.404)  
 Color coordinate CIEs 1960 (u';v') = (0.251;0.348)  
 Color deviation from BBL Duv = -0.0008  
 Color coordinate CIEs 1976 (CIELUV) (u';v') = (0.251;0.251)

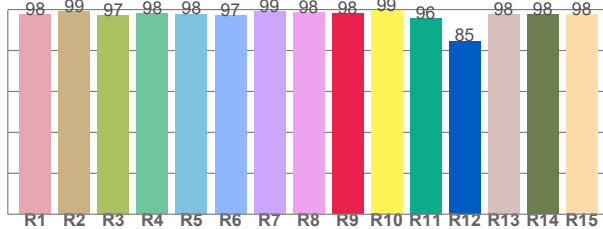
CIE 1931



CIE 1931 – zoomed on Planckian locus



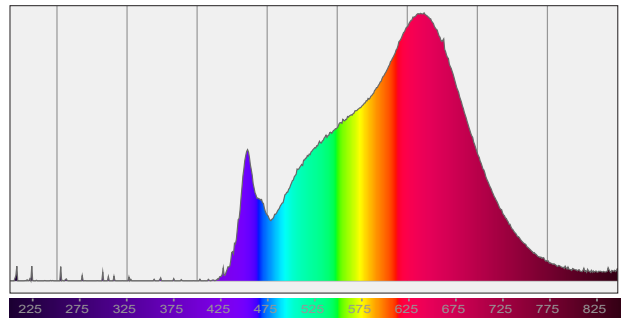
Color Rendering Index per reference color (CIE 1995)



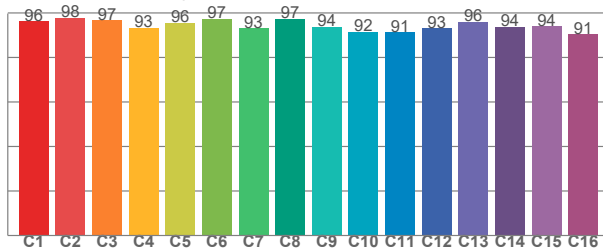
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
97.6	99.0	97.3	98.0	97.9	97.1	99.0	98.5	98.0	99.5	95.6	84.7	97.7	97.5	97.7

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



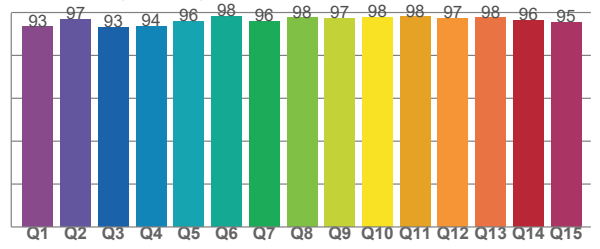
TM30-18 Rf-values per hue bin



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
96.3	97.7	96.7	93.4	95.6	97.4	93.0	97.4	93.9	91.7	91.3	93.0	95.9	93.8	94.1	90.5

Color Quality Scale by reference color



CQS Q values

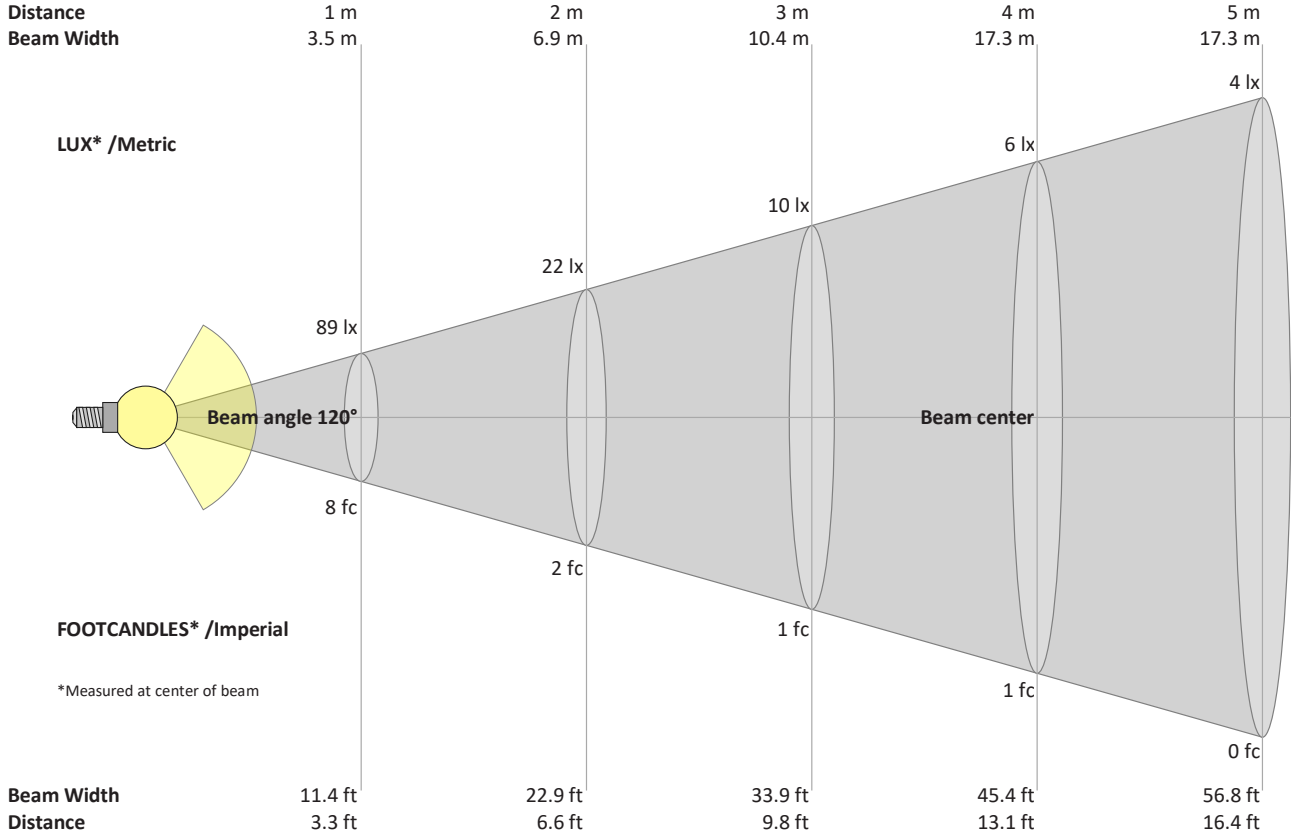
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
93.3	96.9	93.0	93.5	95.8	98.2	96.1	97.6	97.3	97.8	98.1	97.5	97.6	96.4	95.3

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## Beam 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	
89	22	10	6	4	2	2	1	1	1	1	1	1	0	0	0	0	0	0	0	0	lux
8.3	2.1	0.9	0.5	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	0	0	0	0	0	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°	y
89.2	89.1	87.9	86.2	83.6	80.3	76.4	71.7	66.6	60.8	54.4	47.5	40.3	32.6	24.6	16.8	9.5	3.8	0.5	0.1	cd
100%	100%	99%	97%	94%	90%	86%	80%	75%	68%	61%	53%	45%	37%	28%	19%	11%	4%	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°	y
89.2	89.1	87.9	86.2	83.6	80.3	76.4	71.7	66.6	60.8	54.4	47.5	40.3	32.6	24.6	16.8	9.5	3.8	0.5	0.1	cd
100%	100%	99%	97%	94%	90%	86%	80%	75%	68%	61%	53%	45%	37%	28%	19%	11%	4%	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°	y
89.2	89.1	87.9	86.2	83.6	80.3	76.4	71.7	66.6	60.8	54.4	47.5	40.3	32.6	24.6	16.8	9.5	3.8	0.5	0.1	cd
100%	100%	99%	97%	94%	90%	86%	80%	75%	68%	61%	53%	45%	37%	28%	19%	11%	4%	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°	y
89.2	89.1	87.9	86.2	83.6	80.3	76.4	71.7	66.6	60.8	54.4	47.5	40.3	32.6	24.6	16.8	9.5	3.8	0.5	0.1	cd
100%	100%	99%	97%	94%	90%	86%	80%	75%	68%	61%	53%	45%	37%	28%	19%	11%	4%	1%	0%	of 0°val