

VEROBOARD®

LED Type: VBDFS-3528-XXXX-60-12-NS
Colour: 3000K • 3500K • 4000K • 5000K

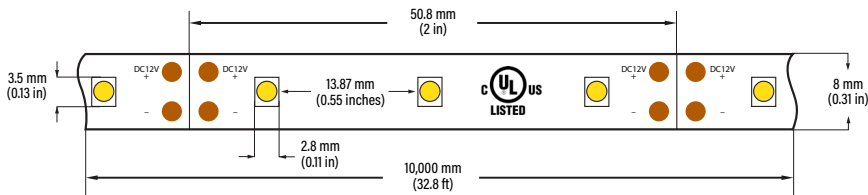
	Wattage	Brightness
Per Foot	1.5W/ft	128-146Lm/ft
Per Meter	4.5W/m	420-480Lm/m



DESCRIPTION

Flexible 8 mm wide linear LED strip. Available in 10 meter (32.8 feet) rolls that can be cut every 3 LEDs (50.8 mm or 2 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), it 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

Model:	VBDFS-3528-xxxx-60-12-NS
Color Temperature:	3000K • 3500K • 4000K • 5000K
LED Type:	3528 SMD
LED Qty:	60 LEDs per meter
LM/LED:	7-8 Lm per LED
Input Voltage (VF):	12V DC
Power:	4.5W per meter (1.5W/ft)
Brightness:	420-480 Lm/meter (128-146 Lm/ft)
Lifespan:	>50,000 hours
PCB:	4oz PCB, Double-side, white colour 8mm width
IP Rating:	IP20 (Indoor use only)
Rendering Index (Ra):	CRI>95
Beam Angle:	120°
Dimmable:	Yes
Cut Size:	Every 3 LED chips (2")
Operating Temperature:	-15°C to +40°C
Dimensions:	10,000mm x 8mm x 3mm (393.6" x 0.31" x 0.1")
Certificates:	UL / RoHS
Roll Length:	10 meter roll (32.8ft)

Contact Name: _____

Company: _____

Phone: _____

Email: _____



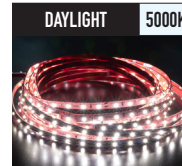
666561423896



666561425593



666561423889



666561423902



Every 2 inch
Cut Points



ORDERING GUIDE

Example part number: **VBDFS - 3528 - XXXX - 60 - 12 - NS**

MODEL	SERIES	COLOUR	LEDS/METER	VOLTAGE	LENGTH
VBDFS	3528	XXXX 3000K 3500K 4000K 5000K	60	12V	XXXX Custom Length NS (Full Roll 10 Meter)

For more information about our products and services, please visit our website: www.veroboard.com

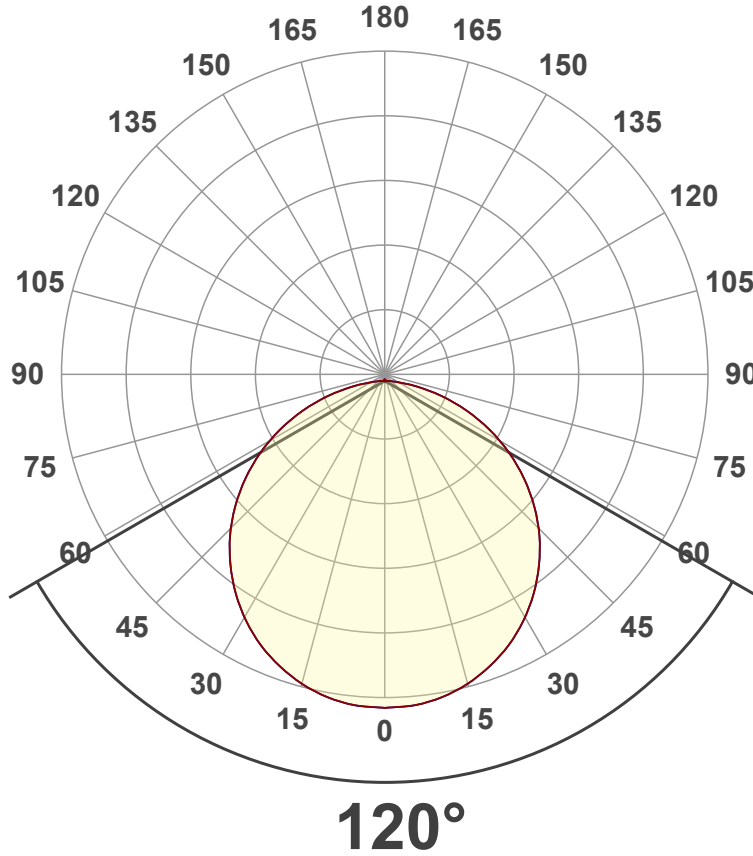
Light Measurement Report

Print date: 2023-04-26

Measurement date and time: 2023-04-25 2:01:07 PM – Measurement no. VFR-230425-0166-MS

Luminous Intensity diagram

Unit: 0-100% of peak intensity



Main Values

Lumen Up% / Down%	0.48% / 99.52%
Peak Intensity	41.3 cd
Beam Angle (50%)	120°
Beam Angle (90%)	114.1°
Beam Angle (10%)	114.1°

Cut-off Angle

Average 2,5%	173.3°
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Field Angle

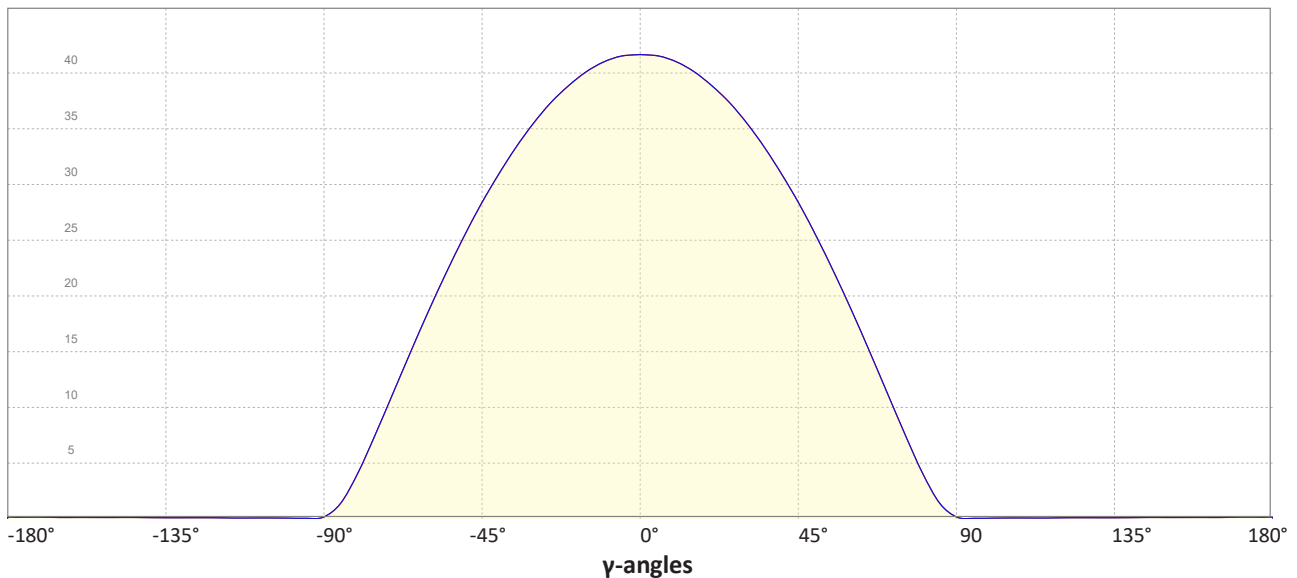
Average 10%	160.5°
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Intensity Ratio

In 120° cone	78.6%
In 90° cone	53.2%

C000-C180
C090-C270

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



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Color details

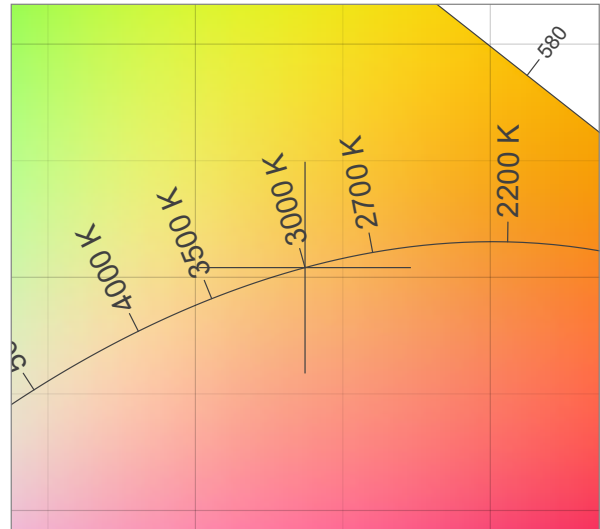
Correlated Color Temperature, Target CCT = 3000 K
 Correlated Color Temperature, Measured CCT = 2959 K
 Color Rendering Index CRI 98.2
 Color Rendering Index, R9 (red component) R9 = 98.1
 Color Rendering TM30-18 R_f 94.2 – R_g 100.5
 Color Quality Scale CQS = 95.5

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 = -0.0005
 Color coordinate CIEs 1976 (CIELUV) (u'';v'') = (0.251;0.251)

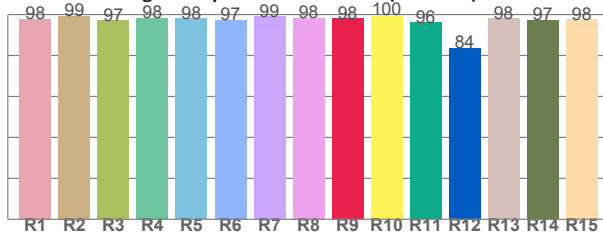
CIE 1931



CIE 1931 – zoomed on Planckian locus



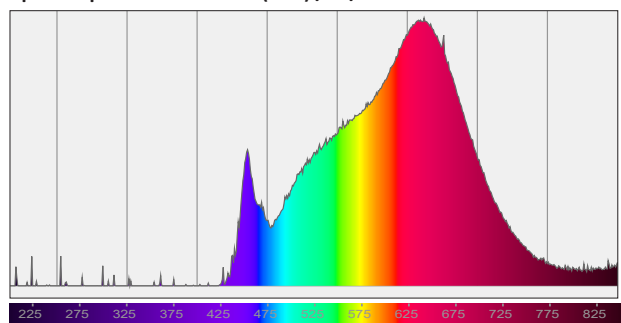
Color Rendering Index per reference color (CIE 1995)



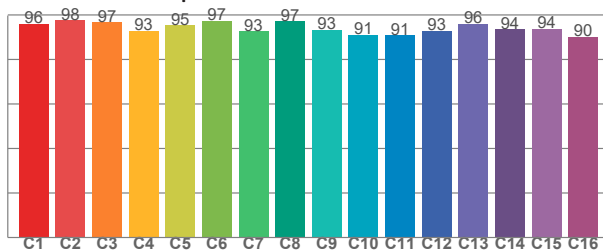
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
97.8	99.3	97.1	98.3	98.2	97.4	99.0	98.4	98.1	99.9	96.1	83.6	98.1	97.4	97.8

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



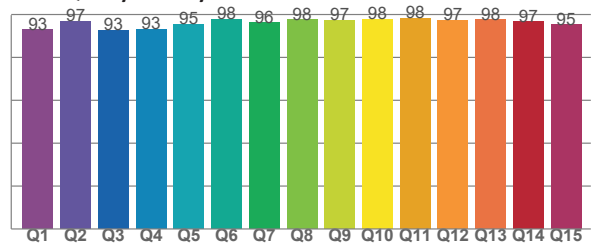
TM30-18 Rf-values per hue bin



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
96.1	97.7	96.7	92.9	95.3	97.3	92.7	97.2	93.4	91.0	90.8	92.9	96.0	93.6	93.9	90.3

Color Quality Scale by reference color



CQS Q values

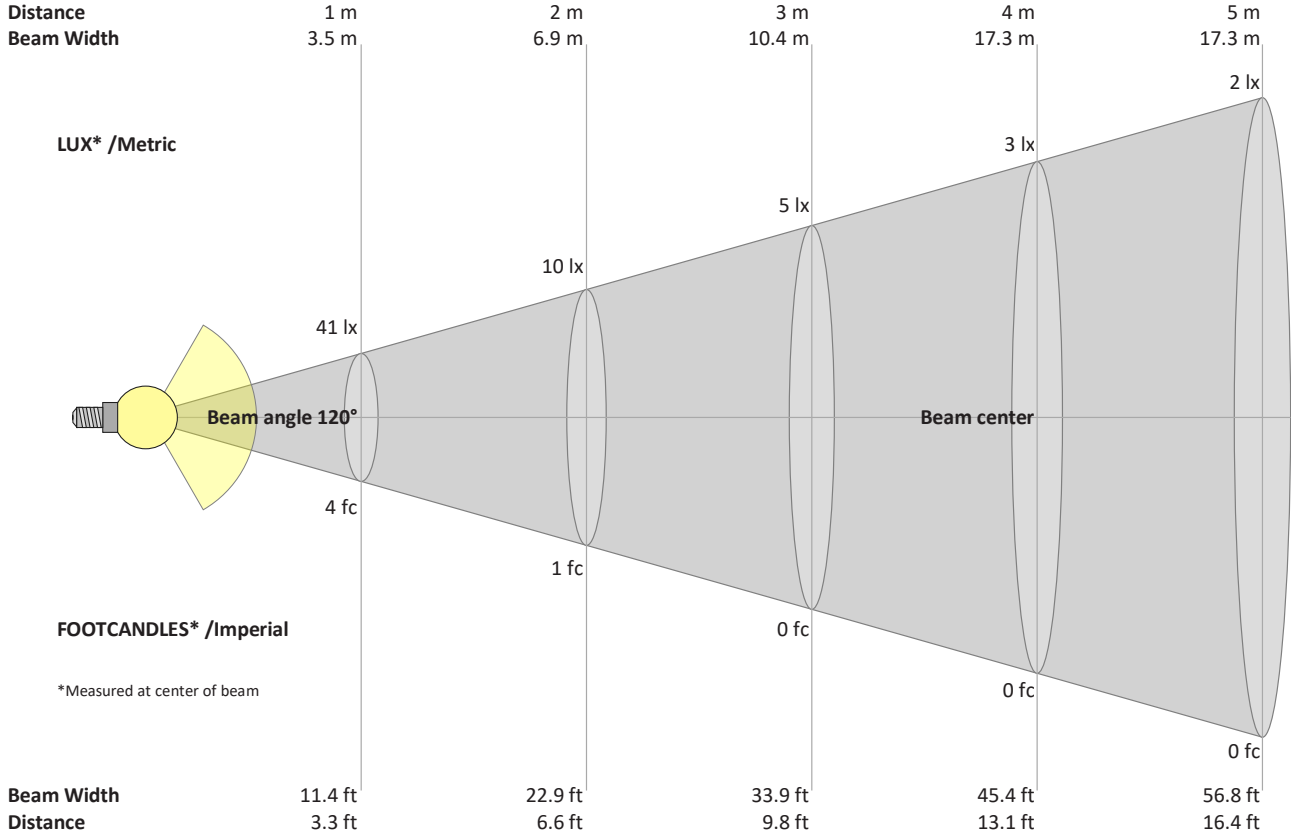
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
92.9	96.9	92.7	93.1	95.4	97.9	96.2	97.6	97.3	97.9	98.1	97.5	97.6	96.5	95.2

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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
41	10	5	3	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	lux
3.8	1	0.4	0.2	0.2	0.1	0.1	0.1	0	0	0	0	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
41.3	41.2	40.7	39.8	38.6	37.1	35.3	33.2	30.8	28.1	25.2	22.0	18.6	15.1	11.4	7.8	4.3	1.5	0.2	0.1	cd
100%	100%	99%	96%	94%	90%	86%	80%	75%	68%	61%	53%	45%	37%	28%	19%	10%	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
41.3	41.2	40.7	39.8	38.6	37.1	35.3	33.2	30.8	28.1	25.2	22.0	18.6	15.1	11.4	7.8	4.3	1.5	0.2	0.1	cd
100%	100%	99%	96%	94%	90%	86%	80%	75%	68%	61%	53%	45%	37%	28%	19%	10%	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
41.3	41.2	40.7	39.8	38.6	37.1	35.3	33.2	30.8	28.1	25.2	22.0	18.6	15.1	11.4	7.8	4.3	1.5	0.2	0.1	cd
100%	100%	99%	96%	94%	90%	86%	80%	75%	68%	61%	53%	45%	37%	28%	19%	10%	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
41.3	41.2	40.7	39.8	38.6	37.1	35.3	33.2	30.8	28.1	25.2	22.0	18.6	15.1	11.4	7.8	4.3	1.5	0.2	0.1	cd
100%	100%	99%	96%	94%	90%	86%	80%	75%	68%	61%	53%	45%	37%	28%	19%	10%	4%	1%	0%	of 0°val