

# VEROBOARD®

**LED Type:** VBDFS-5050-XXXX-60-12-NS  
**Colour:** 3000K • 6000K

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

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

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

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

	Wattage	Brightness
Per Foot	4.5W/ft	360-402Lm/ft
Per Meter	14.4W/m	1200-1320Lm/m



666561420161

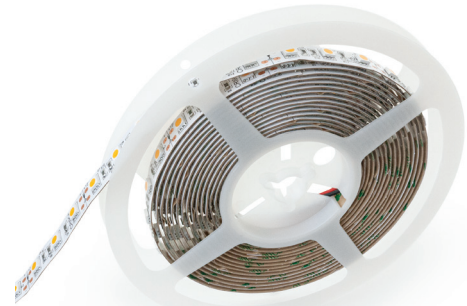
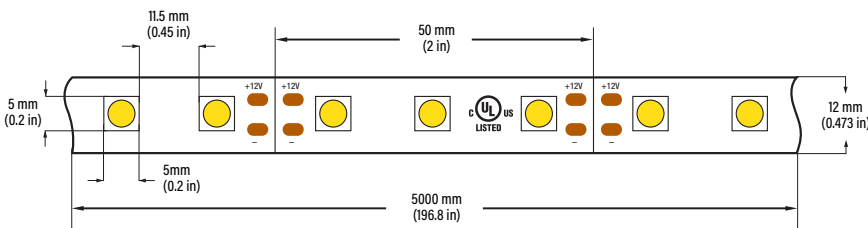


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## DESCRIPTION

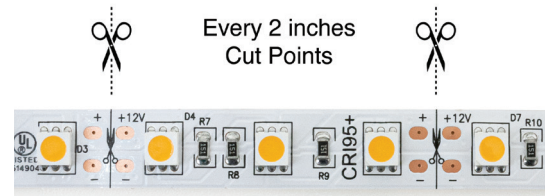
Flexible 12mm wide linear LED strip. Available in 5 meter (196.8 inches) rolls that can be cut every 3 LEDs (50mm or 2in). The LED Strip lights are manufactured with high-quality materials and designed for professional lighting. Every strip light begins with a heavy-duty dual-core copper printed circuit board (PC Board), it is then soldered with an array of chips and color options. They can be cut to any size (marked interval points) and rejoined by soldering.

## DIMENSIONS



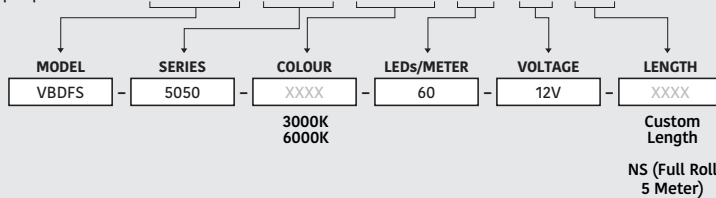
## SPECIFICATIONS

<b>Model:</b>	VBDFS-5050-xxxx-60-12-NS
<b>Color Temperature:</b>	3000K • 6000K
<b>LED Type:</b>	5050 SMD
<b>LED Qty:</b>	60 LEDs per meter
<b>LM/LED:</b>	20-22 Lm per LED
<b>Input Voltage (VF):</b>	12V DC
<b>Power:</b>	14.4W per meter (4.5W/ft)
<b>Brightness:</b>	1200-1320 Lm/meter (360-402 Lm/ft)
<b>Lifespan:</b>	>50,000 hours
<b>PCB:</b>	4oz PCB, Double-side, white colour 12mm 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 (2 inches)
<b>Operating Temperature:</b>	-15°C to +40°C
<b>Dimensions:</b>	5,000mm x 12mm (196.8in x 0.47in)
<b>Certificates:</b>	UL / RoHs
<b>Roll Length:</b>	5 meter roll (16.4 feet)



### ORDERING GUIDE

Example part number: **VBDFS - 5050 - XXXX - 60 - 12 - NS**



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

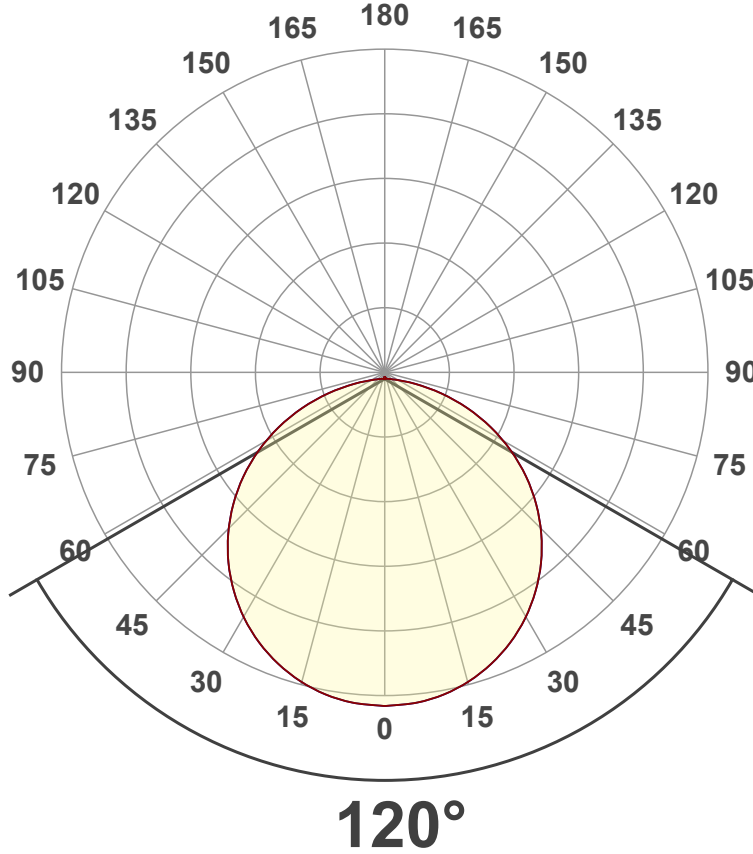
# Light Measurement Report

Print date: 2023-04-26

Measurement date and time: 2023-04-25 1:48:46 PM – Measurement no. VFR-230425-0165-MS

## Luminous Intensity diagram

Unit: 0-100% of peak intensity



## Main Values

Lumen Up% / Down%	0.6% / 99.4%
Peak Intensity	145 cd
Beam Angle (50%)	120°
Beam Angle (90%)	115.5°
Beam Angle (10%)	115.5°

## Cut-off Angle

Average 2,5%	173.9°
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## Field Angle

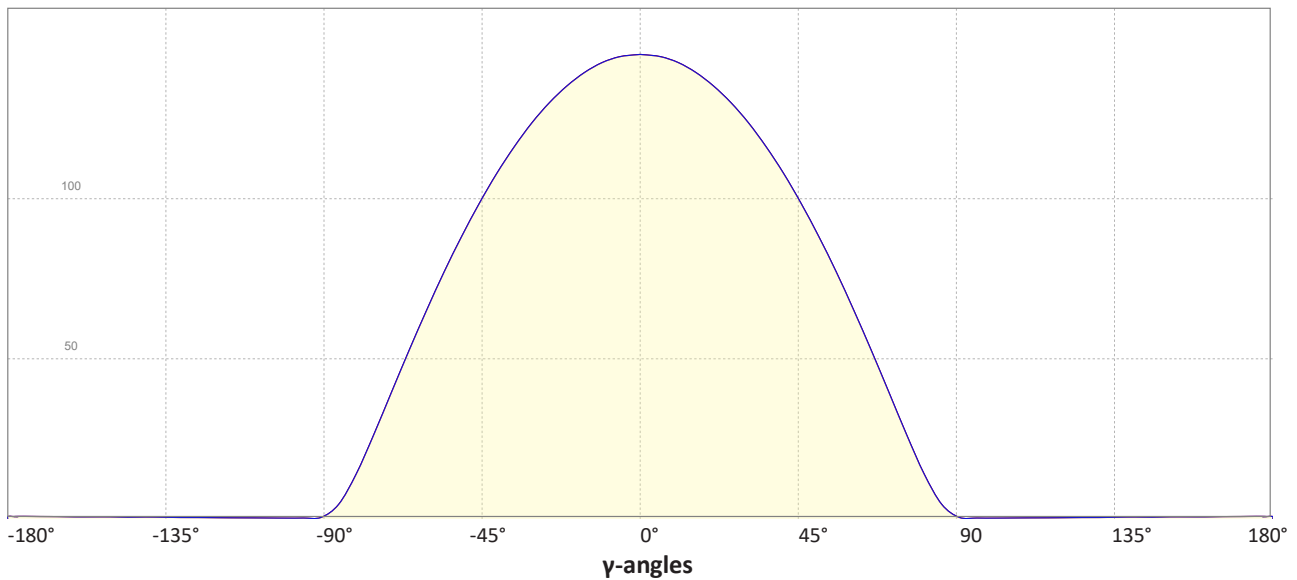
Average 10%	161.3°
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## Intensity Ratio

In 120° cone	78.0%
In 90° cone	52.7%

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

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



# Light Measurement Report

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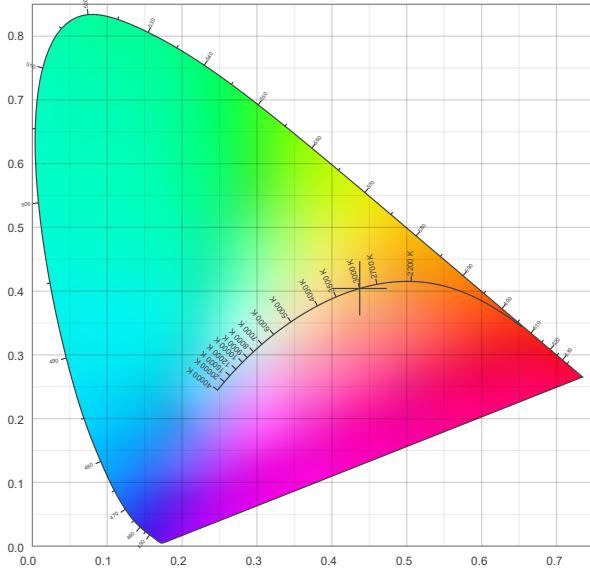
Measurement date and time: 2023-04-25 1:48:46 PM – Measurement no. VFR-230425-0165-MS

## Color details

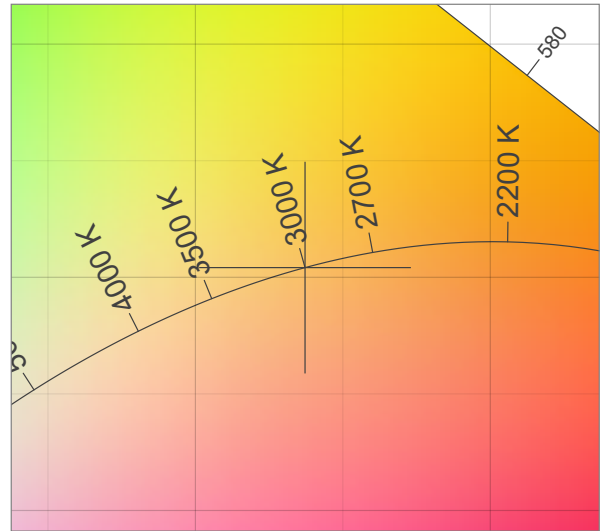
Correlated Color Temperature, Target CCT = 3000 K  
 Correlated Color Temperature, Measured CCT = 2908 K  
 Color Rendering Index CRI 97.9  
 Color Rendering Index, R9 (red component) R9 = 92.3  
 Color Rendering TM30-18 R<sub>f</sub> 95.0 – R<sub>g</sub> 102.0  
 Color Quality Scale CQS = 95.1

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 = -0.0017  
 Color coordinate CIEs 1976 (CIELUV) (u';v') = (0.251;0.251)

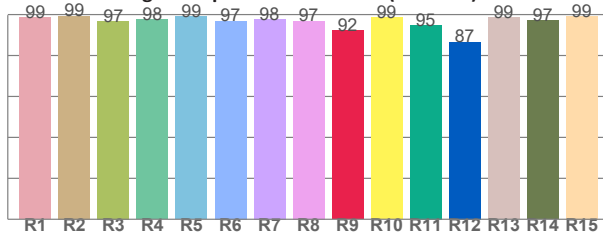
CIE 1931



CIE 1931 – zoomed on Planckian locus



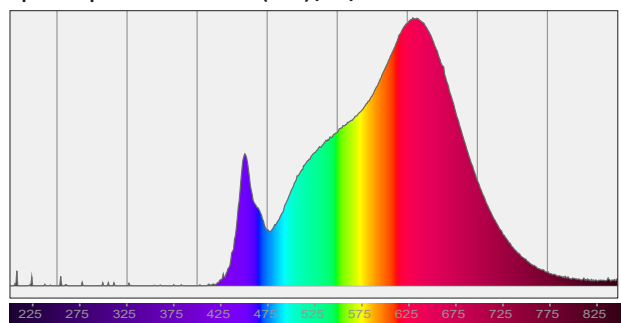
Color Rendering Index per reference color (CIE 1995)



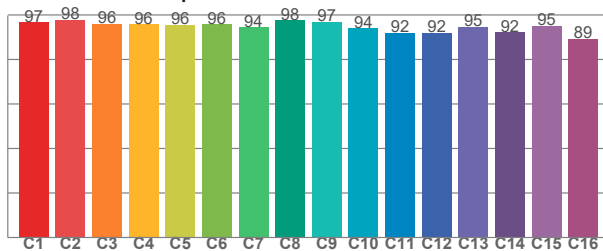
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
98.6	99.4	96.8	97.6	99.1	97.0	97.7	96.9	92.3	98.5	94.8	86.6	98.6	97.2	99.2

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



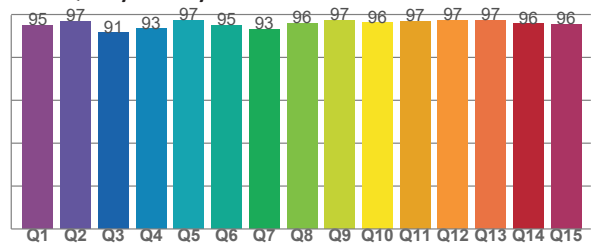
TM30-18 Rf-values per hue bin



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
96.8	97.9	96.1	95.8	95.7	95.9	94.5	97.6	97.0	94.0	92.0	92.0	94.7	92.2	95.2	89.4

Color Quality Scale by reference color



CQS Q values

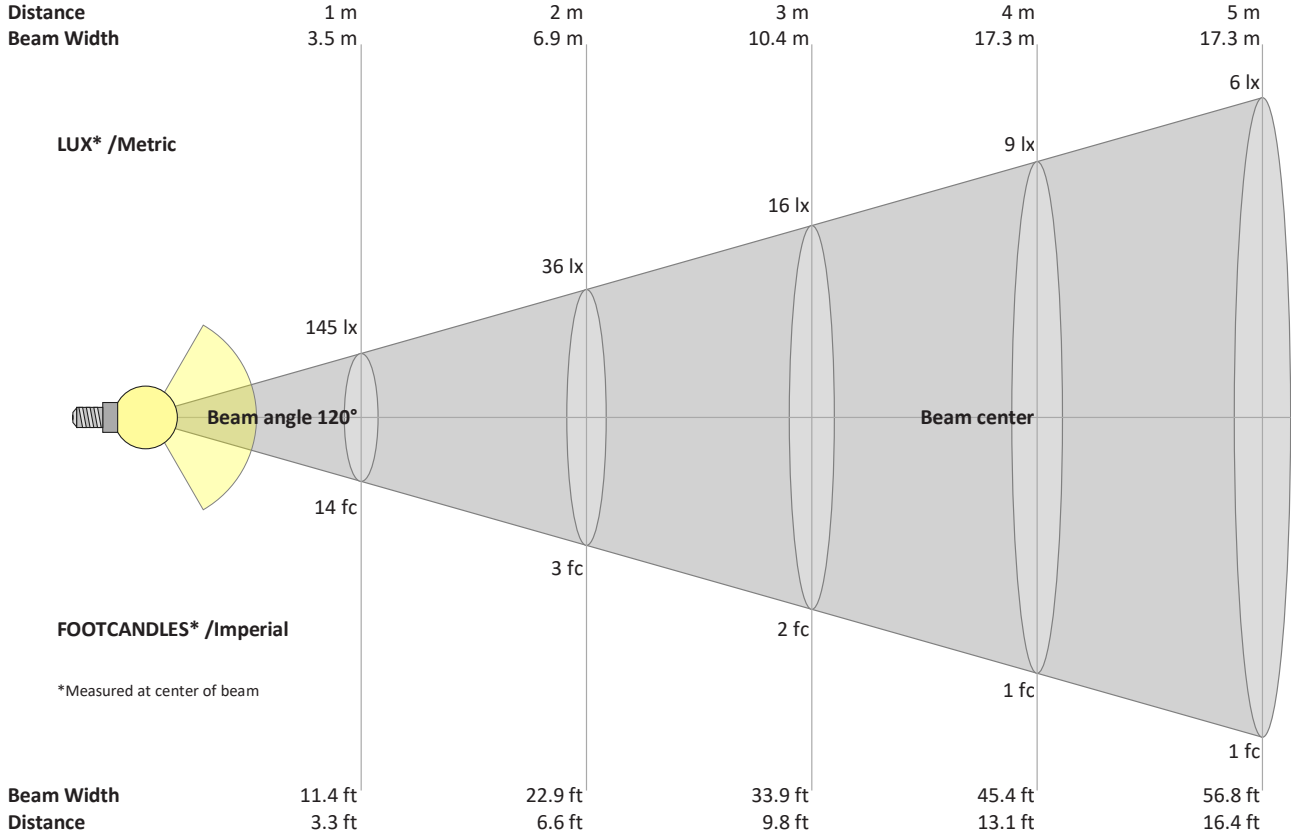
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
95.0	96.9	91.5	93.3	97.3	94.9	93.1	95.8	97.4	96.1	96.9	97.4	97.4	95.6	95.6

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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
145	36	16	9	6	4	3	2	2	1	1	1	1	1	1	1	1	0	0	0	lux
13.5	3.4	1.5	0.8	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	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
145	145	143	140	136	131	125	118	110	100	90	79	67	55	42	29	16	6	1	0	cd
100%	100%	99%	97%	94%	90%	86%	81%	75%	69%	62%	54%	46%	38%	29%	20%	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
145	145	143	140	136	131	125	118	110	100	90	79	67	55	42	29	16	6	1	0	cd
100%	100%	99%	97%	94%	90%	86%	81%	75%	69%	62%	54%	46%	38%	29%	20%	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
145	145	143	140	136	131	125	118	110	100	90	79	67	55	42	29	16	6	1	0	cd
100%	100%	99%	97%	94%	90%	86%	81%	75%	69%	62%	54%	46%	38%	29%	20%	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
145	145	143	140	136	131	125	118	110	100	90	79	67	55	42	29	16	6	1	0	cd
100%	100%	99%	97%	94%	90%	86%	81%	75%	69%	62%	54%	46%	38%	29%	20%	11%	4%	1%	0%	of 0°val