

VEROBOARD®

LED Type: VBDFS-3528-XXXX-60-12-WP
Colour: 3000K • 6000K

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



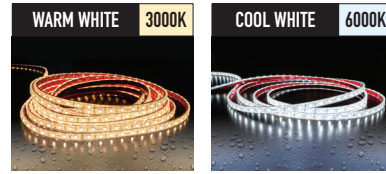
Job Name: _____

Distributor: _____

Type: _____

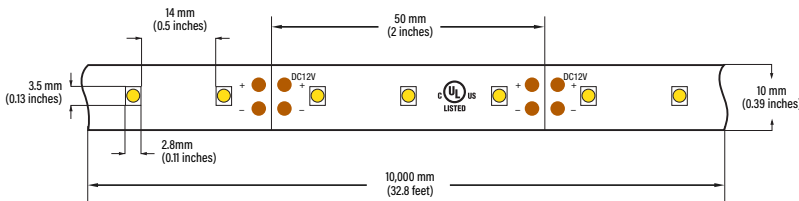
DESCRIPTION

Flexible 10 mm wide linear LED strip. Available in 10 meter (32.8 feet) rolls that can be cut every 3 LEDs (50 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. They can be cut to any size (marked interval points) and rejoined by soldering.



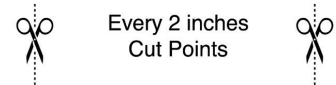
666561423933 666561420154

DIMENSIONS



SPECIFICATIONS

Model:	VBDFS-3528-xxxx-60-12-WP
Color Temperatures:	3000K • 6000K
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 10mm width
IP Rating:	IP68
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:	10,000 x 10 x 5.8mm (393.6" x 0.39" x 0.22")
Certificates:	UL / RoHS
Roll Length:	10 meter roll (32.8ft)



Accessories (Sold Separately)

Model: 3W-2C-SC
SKU: 666561406288

Model: 2W-2C-SC
SKU: 666561406295

Model: 3W-JB-M686
SKU: 666561434182

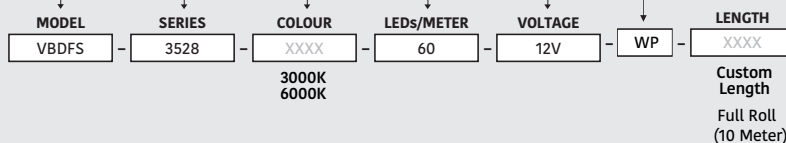
**3 Way Outdoor
Screw Type Connector
2 Contact**

**2 Way Outdoor
Screw Type Connector
2 Contact**



ORDERING GUIDE

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



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CUSTOM ORDERING GUIDE ✂

Single Run (Straight Run): The below ordering guide will be used for single run LED strip.

- **PFL:** Power Feed Length
- **SL:** Strip Length

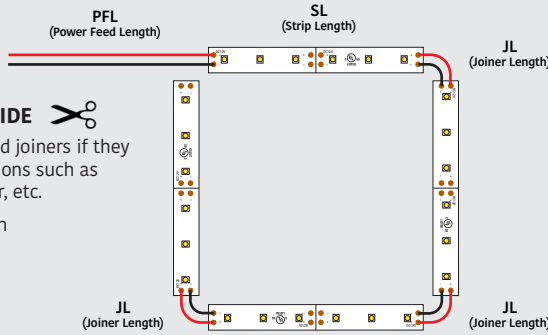


Example: 2 (QTY) x 36" (PFL) - 84" (SL) x -

CUSTOM ORDERING GUIDE ✂

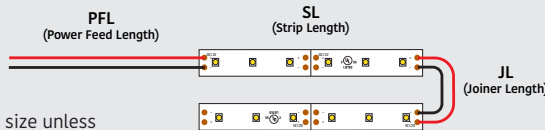
Joiner: LED strip lights need joiners if they are used for curve applications such as corner side, behind a mirror, etc.

- **PFL:** Power Feed Length
- **SL:** Strip Length
- **JL:** Joiner Length



x - - - - - - -

Example: 1 (QTY) x 12" (PFL) - 46" (SL) - 1" (JL) - 36" (SL) - 1" (JL) - 46" (SL) - 1" (JL) - 36" (SL)



Note: Joiners will be 1-inch size unless customers require a specific size.

x - - -

Example: 2 (QTY) x 24" (PFL) - 52" (SL) - 1" (JL) - 52" (SL)

RECOMMENDED LED ALUMINUM CHANNELS

(Sold Separately)

VBD-CH-S4 15.5mm x 12mm x 17.5mm	VBD-CH-S4B 15.5mm x 12mm x 17.5mm	VBD-CH-S6 10.6mm x 20.15mm x 23.44mm
SKU: 666561423278	SKU: 666561423285	SKU: 666561423315
VBD-CH-S5 8mm x 13mm x 17mm	VBD-CH-S5B 8mm x 13mm x 17mm	VBD-CH-B1 6.14mm x 13.89mm x 18.77mm
SKU: 666561423292	SKU: 666561423308	SKU: 666561423360
VBD-CH-C2 18.5mm x 14mm x 18.5mm	VBD-CH-C2B 18.5mm x 14mm x 18.5mm	VBD-CH-RF4 23.4mm x 18.6mm x 18.6mm
SKU: 666561423506	SKU: 666561423513	SKU: 666561423377
VBD-CH-RF1 12.5mm x 15mm x 17mm	VBD-CH-RF1B 12.5mm x 15mm x 17mm	VBD-CH-C1 25.68mm x 15.07mm x 21.19mm
SKU: 666561423339	SKU: 666561423346	SKU: 666561423490
VBD-CH-C3 30mm x 20mm x 30mm	VBD-CH-C3B 30mm x 20mm x 30mm	VBD-CH-W1 26.16mm x 12mm x 21.43mm
SKU: 666561423520	SKU: 666561423537	SKU: 666561423445
VBD-CH-RF7 32.16mm x 75mm x 90mm	VBD-CH-RF8 32mm x 70.15mm x 75mm	VBD-CH-S2 9.68mm x 56.75mm x 17.29mm
SKU: 666561423407	SKU: 666561423414	SKU: 666561423254
VBD-CH-WC4 45.50mm x 85mm x 37.85mm	VBD-CH-WC5 39mm x 43.03mm x 43.03mm	VBD-CH-ST2 21mm x 95mm x 13mm
SKU: 666561423629	SKU: 666561423636	SKU: 666561423582
VBD-CH-S3 55.38mm x 13.56mm x 7.96mm	VBD-CH-RF6 31.90mm x 46.42mm x 50.20mm	VBD-CH-RF5 32mm x 30.84mm x 35.65mm
SKU: 666561423261	SKU: 666561423391	SKU: 666561423384
VBD-CH-C4 30mm x 20mm x 30mm	VBD-CH-C4B 30mm x 20mm x 30mm	VBD-CH-RF2 11mm x 12.15mm x 21.45mm
SKU: 666561423544	SKU: 666561423551	SKU: 666561423353
VBD-CH-RF3 27mm x 20mm x 17mm	VBD-CH-R2 25.95mm x 22.94mm x 17.46mm	VBD-CH-R2B 25.95mm x 22.94mm x 17.46mm
SKU: 666561423360	SKU: 666561423742	SKU: 666561428280
VBD-CH-D10 136mm x 13.66mm x 12mm		SKU: 666561420023

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VBD-CH-WC1 SKU: 666561423599	VBD-CH-WC2 SKU: 666561423605	VBD-CH-WC3 SKU: 666561423612	VBD-CH-S1 SKU: 666561423247	VBD-CH-R3 SKU: 666561423759	VBD-CH-RF10 SKU: 666561423438
VBD-CH-E1 SKU: 666561423483	VBD-CH-W2 SKU: 666561423452	VBD-CH-C5 SKU: 666561423568	VBD-CH-S7 SKU: 666561423322	VBD-CH-R1 SKU: 666561423735	VBD-CH-D1 SKU: 666561423643
VBD-CH-W3 SKU: 666561423469	VBD-CH-W4 SKU: 666561423476	VBD-CH-D5 SKU: 666561423681	VBD-CH-D7 SKU: 666561423704	VBD-CH-D8 SKU: 666561423711	
VBD-CH-S5 SKU: 666561429966	VBD-CH-S5B SKU: 666561429973	VBD-CH-D9 SKU: 666561423728	VBD-CH-M1 SKU: 666561423773	VBD-CH-M1B SKU: 666561431013	
VBD-CH-RS5 SKU: 666561428631	VBD-CH-RS5B SKU: 666561428648				

Note: To avoid a dark spot on the sides of these channels (RF10, RF6, RF8, R3, S1, R3) we recommend installing more than one Run LED Strip. For more details please contact us at: sales@veroboard.com

RECOMMENDED LED POWER SUPPLIES (Sold Separately)

For more options and varieties, please visit our website: www.veroboard.com

Constant Voltage Dimmable LED Drivers (5 in 1), Triac/Phase, 0-10V, 1-10V, Potentiometer, 10V PWM 5 in 1 Dimming



Model No.	Input Voltage	Output Voltage	Wattage	IP Rating	Class	Max. Strip Length	SKU#
VBD-012-030C2DM5i1	100-277V	12V	30W	IP67	Class 2	16ft	666561425999
VBD-012-060C2DM5i1	100-277V	12V	60W	IP67	Class 2	32ft	666561426002
VBD-012-100C2DM5i1	100-277V	12V	100W	IP65	Type HL	53.3ft	666561428426
VBD-012-150C2DM5i1	100-277V	12V	150W	IP65	Type HL	80ft	666561428433
VBD-012-180C2DM5i1	100-277V	12V	180W (3x60W)	IP67	Class 2	96ft	666561426019
VBD-012-300C2DM5i1	100-277V	12V	300W (5x60W)	IP67	Class 2	160ft	666561426026

Constant Voltage Triac LED Drivers forward Phase, Magnetic Low Voltage & Triac Dimmers



Model No.	Input Voltage	Output Voltage	Wattage	IP Rating	Class	Max. Strip Length	SKU#
VBD-012-024DM	100-130V	12V	24W	IP20	Class 2	13ft	666561415761
VBD-012-048DM	100-130V	12V	48W	IP20	Class 2	25.6ft	666561415754
VBD-012-060DM	100-130V	12V	60W	IP20	Class 2	32ft	666561415747
VBD-012-096DM	100-130V	12V	96W	IP67	-	51ft	666561415730
VBD-012-150DM	100-130V	12V	150W	IP67	-	80ft	666561415723
VBD-012-200DM	100-130V	12V	200W	IP67	-	106.6ft	666561415716
VBD-012-300VTHWJ	100-277V	12V	300W	IP65	-	160ft	666561419790

Dali Dimming Constant Voltage



Model No.	Input Voltage	Output Voltage	Wattage	IP Rating	Class	Max. Strip Length	SKU#
VBD-012-030DD	100-265V AC	12V	30W	IP20	Class 2	16ft	666561427290
VBD-012-060DD	100-265V AC	12V	60W	IP65	Class 2	32ft	666561427313
VBD-012-096DD	100-265V AC	12V	96W	IP65	-----	51.2ft	666561427337
VBD-012-150DD	100-265V AC	12V	150W	IP65	-----	80ft	666561427351

Plug-in Drivers



Model No.	Input Voltage	Output Voltage	Wattage	IP Rating	Class	Max. Strip Length	SKU#
VBDA-012-012P1J	100-240V AC	12V	12W	IP20	Class 2	6.4ft	666561428945
VBDA-012-024P1J	100-240V AC	12V	24W	IP20	Class 2	12.8ft	666561428952
VBDA-012-036P1J	100-240V AC	12V	36W	IP20	Class 2	19.2ft	666561428976
VBDA-012-060P1J	100-240V AC	12V	60W	IP20	-----	32ft	666561428990

Notes: _____

Disclaimer:

The data and information contained in this specification sheet are subject to change without notice; the ratings supplied are provided based on the product manufacturer. The information contained in this specification sheet should not be considered a warranty, expressed or implied, including, but not limited to, a warranty of merchantability or fitness for a particular purpose. In no event shall Veroboard be liable for any incidental or consequential damages resulting from the use, misuse, or inability to use the product. This exclusion applies regardless of whether such damages are sought based on breach of warranty, breach of contract, negligence, strict liability in tort, or any other legal theory.

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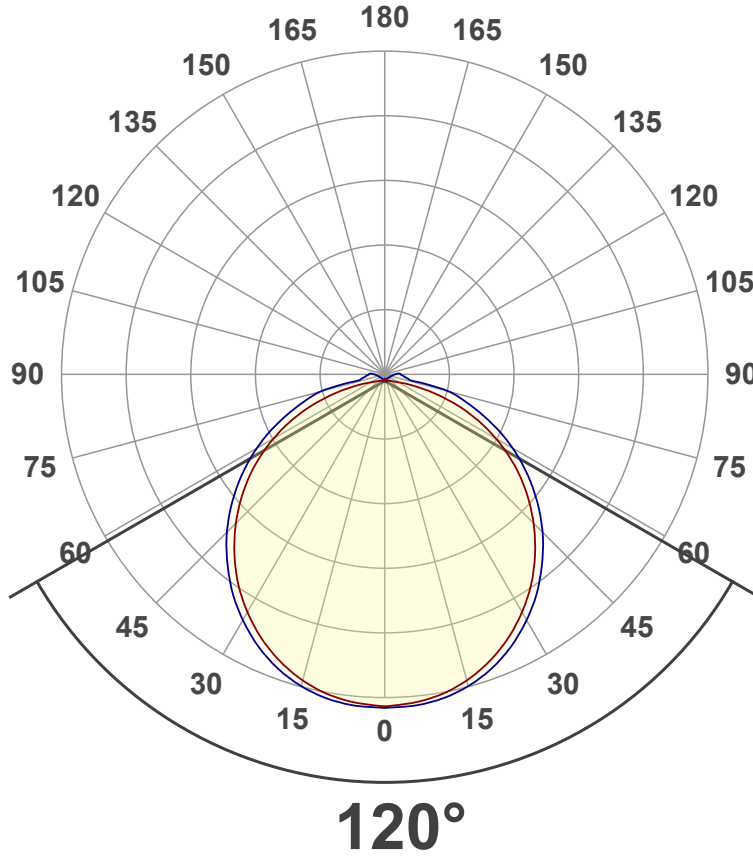
Light Measurement Report

Print date: 2023-04-26

Measurement date and time: 2023-04-25 3:02:35 PM – Measurement no. VFR-230425-0170-MS

Luminous Intensity diagram

Unit: 0-100% of peak intensity



Main Values

Lumen Up% / Down%	3.91% / 96.09%
Peak Intensity	32.0 cd
Beam Angle (50%)	120°
Beam Angle (90%)	118.3°
Beam Angle (10%)	112.5°

Cut-off Angle

Average 2,5%	212.8°
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Field Angle

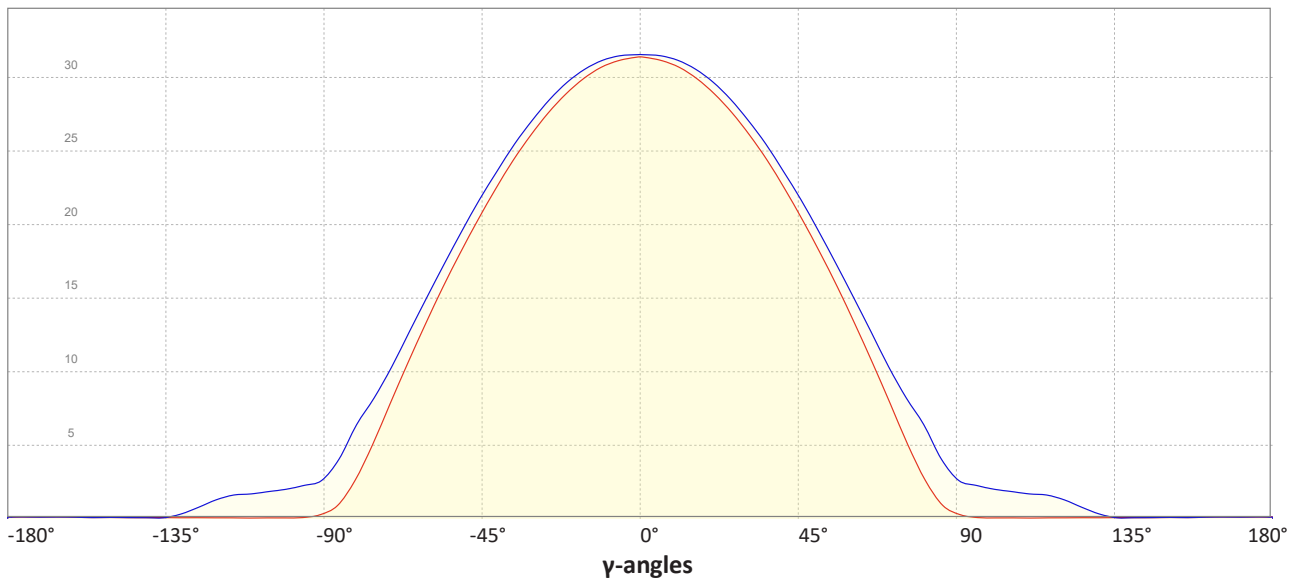
Average 10%	168.9°
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Intensity Ratio

In 120° cone	73.0%
In 90° cone	49.3%

C000-C180
C090-C270

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



Light Measurement Report

Print date: 2023-04-26

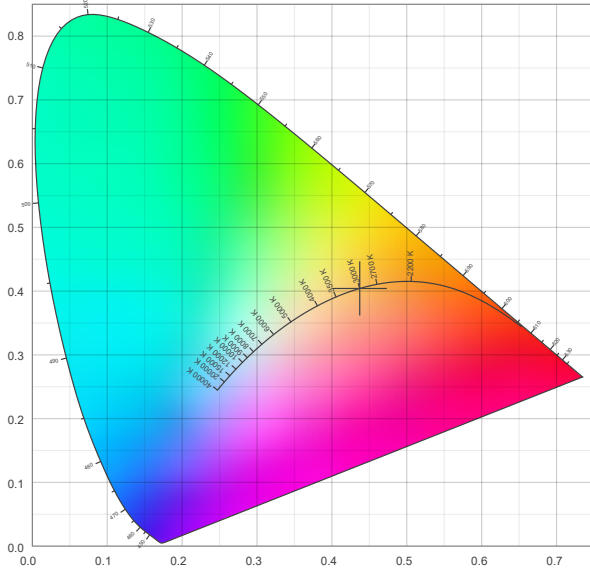
Measurement date and time: 2023-04-25 3:02:35 PM – Measurement no. VFR-230425-0170-MS

Color details

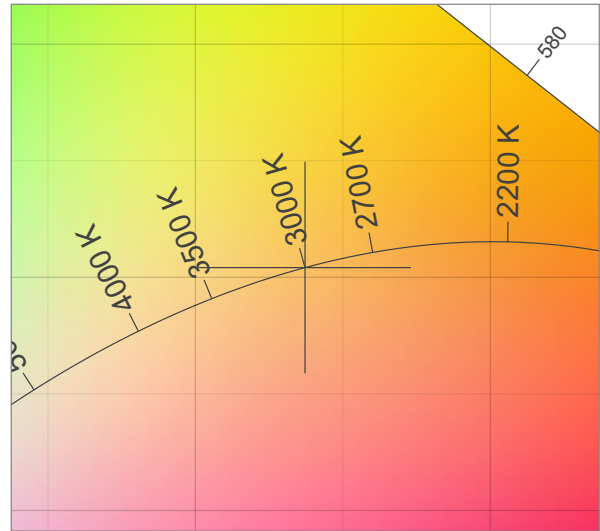
Correlated Color Temperature, Target CCT = 3000 K
 Correlated Color Temperature, Measured CCT = 2935 K
 Color Rendering Index CRI 94.6
 Color Rendering Index, R9 (red component) R9 = 88.4
 Color Rendering TM30-18 Rf 88.2 – Rg 92.4
 Color Quality Scale CQS = 83.6

MacAdam Steps SDCM = 10.2
 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 = 0.0088
 Color coordinate CIEs 1976 (CIELUV) (u'';v'') = (0.251;0.251)

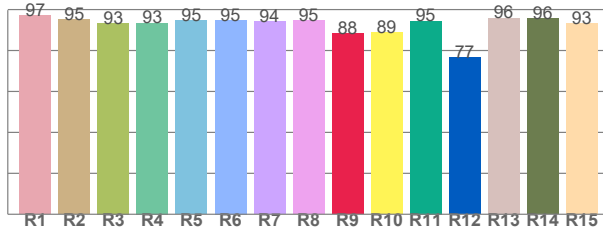
CIE 1931



CIE 1931 – zoomed on Planckian locus



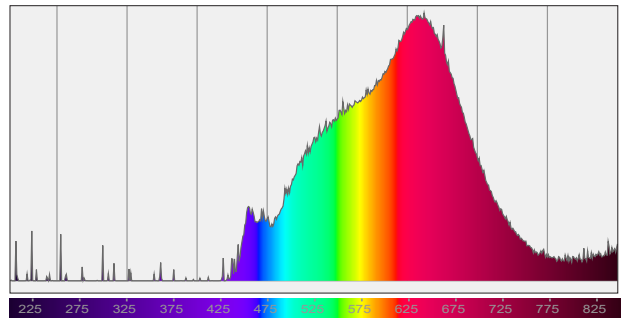
Color Rendering Index per reference color (CIE 1995)



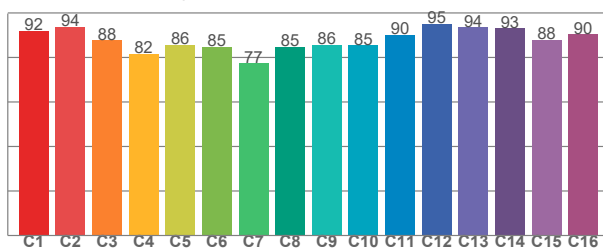
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
97.0	95.2	93.4	93.4	94.6	94.8	94.1	94.7	88.4	88.9	94.5	76.7	95.8	95.7	93.3

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



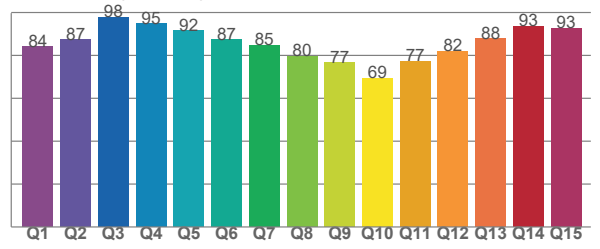
TM30-18 Rf-values per hue bin



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
92.0	93.9	87.7	81.7	85.7	84.8	77.3	84.9	85.6	85.4	90.3	95.2	93.5	93.2	87.9	90.4

Color Quality Scale by reference color



CQS Q values

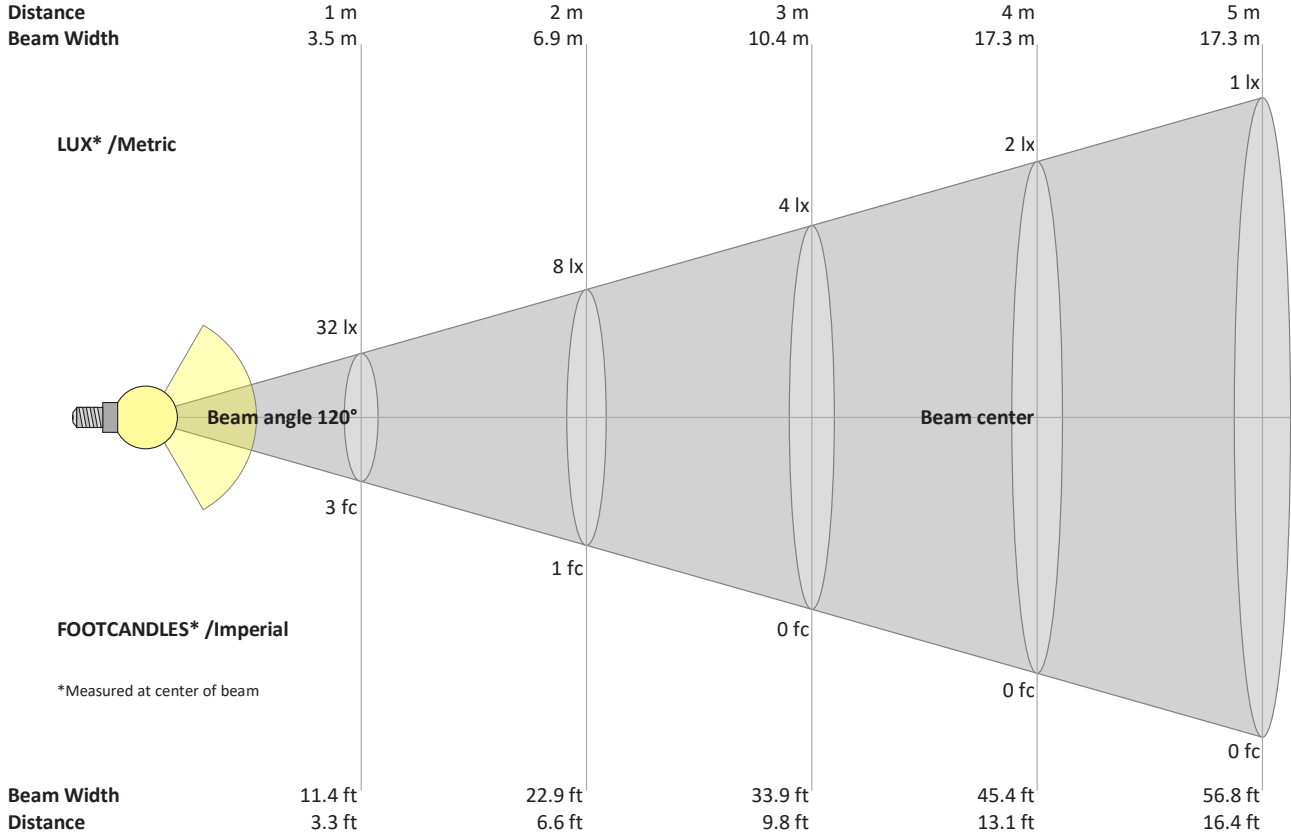
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
84.0	87.4	97.7	94.8	91.5	87.3	84.7	79.6	76.5	69.4	77.2	82.0	87.7	93.5	92.8

Light Measurement Report

Print date: 2023-04-26

Measurement date and time: 2023-04-25 3:02:35 PM – Measurement no. VFR-230425-0170-MS

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	
32	8	4	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	lux
3	0.7	0.3	0.2	0.1	0.1	0.1	0	0	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
31.9	31.6	31.2	30.5	29.5	28.3	26.8	25.1	23.2	21.1	18.9	16.5	14.0	11.3	8.6	5.8	3.2	1.3	0.4	0.1	cd
100%	99%	98%	96%	93%	89%	84%	79%	73%	66%	59%	52%	44%	36%	27%	18%	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
31.9	31.9	31.6	31.1	30.2	29.1	27.7	26.1	24.2	22.3	20.1	17.9	15.6	13.2	10.8	8.6	6.7	4.5	2.8	2.3	cd
100%	100%	99%	97%	95%	91%	87%	82%	76%	70%	63%	56%	49%	41%	34%	27%	21%	14%	9%	7%	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
31.9	31.6	31.2	30.5	29.5	28.3	26.8	25.1	23.2	21.1	18.9	16.5	14.0	11.3	8.6	5.8	3.2	1.3	0.4	0.1	cd
100%	99%	98%	96%	93%	89%	84%	79%	73%	66%	59%	52%	44%	36%	27%	18%	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
31.9	31.9	31.6	31.1	30.2	29.1	27.7	26.1	24.2	22.3	20.1	17.9	15.6	13.2	10.8	8.6	6.7	4.5	2.8	2.3	cd
100%	100%	99%	97%	95%	91%	87%	82%	76%	70%	63%	56%	49%	41%	34%	27%	21%	14%	9%	7%	of 0°val