VEROBOARD®

LED Type: VBDSH-2835-3000-648-24-NS
**Colour:** 3000K

RoHs | c(UL)us LISTED E514904

DESCRIPTION

Discover the limitless possibilities of lighting with our innovative 3000K (Warm White) Flexible LED Light Sheet. Thin, bendable, and easily shaped, it adapts flawlessly to various uses including signage, backlighting, trade shows, displays, and panels. Effortlessly create captivating designs by bending it into intricate shapes, and with cut lines in both directions, odd shapes are a breeze to achieve.

Installing our LED sheet is a breeze with slot-in and push-it electrical connections, wired and ready to go within minutes. Long lifespan of over 50,000 hours, and a high color rendering index (CRI). Illuminate curved objects like columns and point- of-sale displays with ease, opening up a world of creative possibilities.
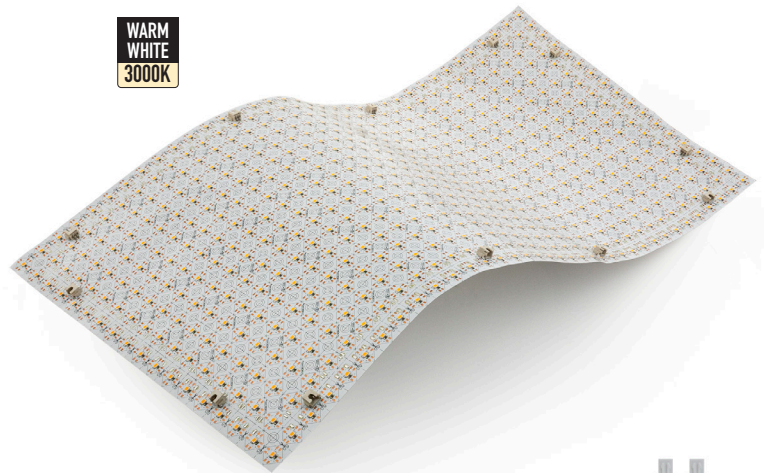
SPECIFICATIONS

|	
Model:	VBDSH-2835-3000-648-24-NS
Color Temperature:	3000K (Warm White)
LED Type:	2835 SMD
LED Qty:	648 LEDs
Input Voltage (VF):	24V DC
Brightness:	1200Lm
Power:	24W
Lifespan:	>50,000 hours
IP Rating:	IP20
Rendering Index (Ra):	CRI>90+
Beam Angle:	120°
Dimmable:	Yes
Cut Size:	Every 16.50mm (0.65")
Installation Method:	3M Double Sided Tape
Operating Temperature:	-15ºC to +40ºC
Silicon Bumper Dimensions:	⌀ 12mm x H 7.75mm (⌀ 0.4" x H 0.3")
Connector Size:	40mm (1.6") *Sheet to Sheet*
	150mm (6") *Sheet to Power*
	20AWG
Certificates:	UL / RoHs
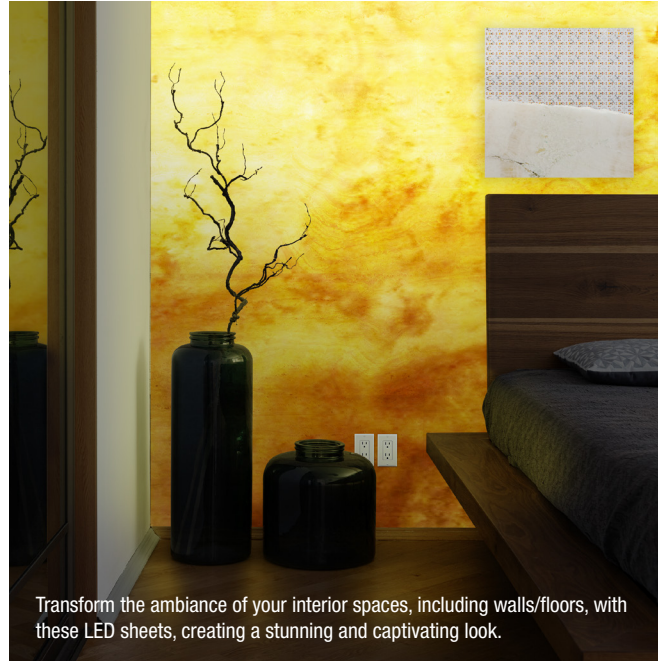
Transform the ambiance of your interior spaces, including walls/floors, with these LED sheets, creating a stunning and captivating look.

WARM WHITE 3000K

DIMENSIONS

Free cut in any direction

305 mm (12 in)

610 mm (24 in)
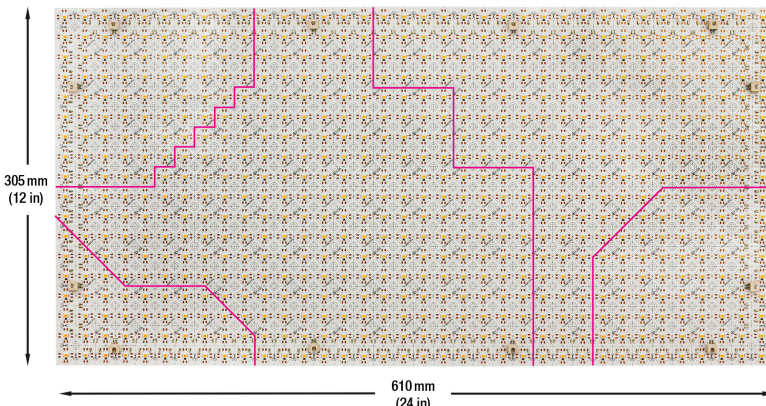
Package also includes:

- 2 x 1.6" Connectors
- 2 x 6" Connectors
- 6 x Screws
- 8 x Silicon Bumpers

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.
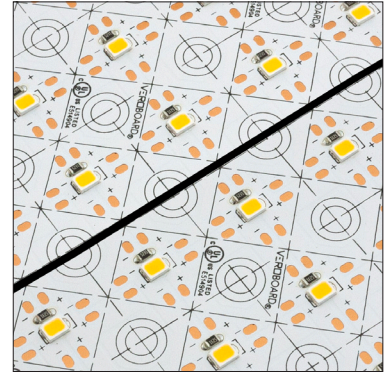
Installation:

Prior to installing the LED sheets, please take note and read each instruction attentively.


ATTENTION: To prevent electrical shortages, leave a 2mm gap between each LED sheets during assembly.


Ensure to check the polarity of the connectors; otherwise, the light will not turn on (pay attention to the input and output decals on each sheet). Those decals must be removed after installation.
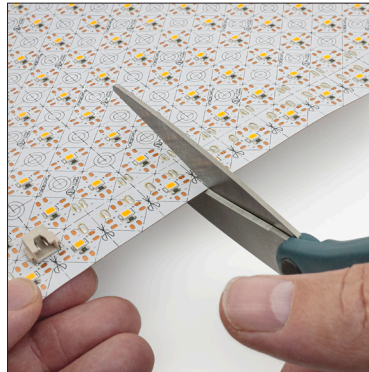
Easily tailor the LED sheet to suit your requirements by cutting it in any direction.
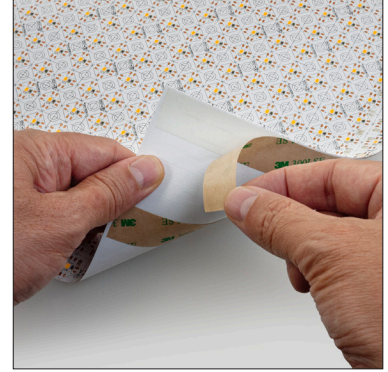
The LED sheet comes with 3M double-sided tape backing, making it easy to apply on flat or curved surfaces such as wood, metal, stone.
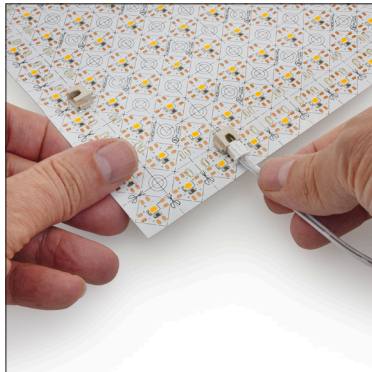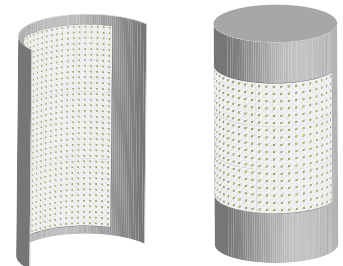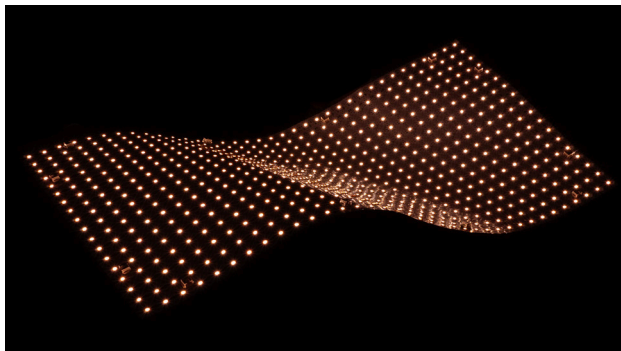

Use the 6" cables to link the LED sheet to the power supply.

Use the 1.6" connectors to interconnect the LED sheets with each other.
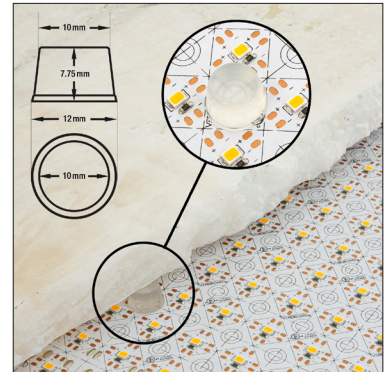
Employing silicon bumpers to prevent direct contact between the stone marble and the LED sheet.

The flexibility of the LED sheet allows you to bend it on all directions.

Light Measurement Report

Print date: 2023-07-31
Measurement date and time: 2023-07-31 1:11:05 PM – Measurement no. VFR-230731-0286-MS

Luminous Intensity diagram   Unit: 0-100% of peak intensity

120°
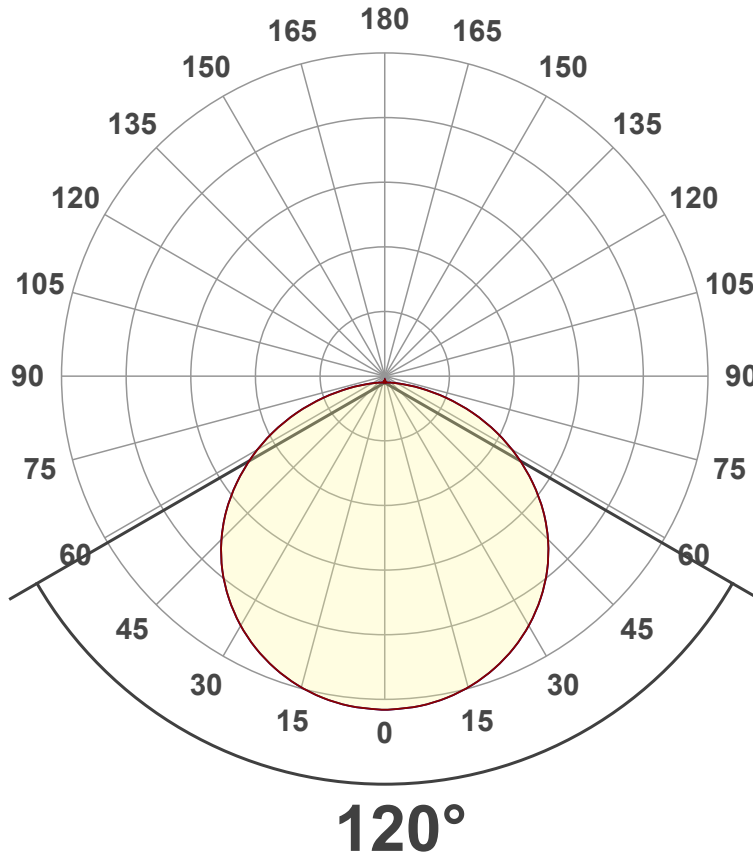
Main Values

Output (total Lumen)	1200 lm
Lumen Up% / Down%	0.91% / 99.09%
Peak Intensity	385 cd
Beam Angle (50%)	120°
Beam Angle (90%)	119°
Beam Angle (10%)	119°

Cut-off Angle
Average 2,5%   178.7°

Field Angle
Average 10%   164.6°

Intensity Ratio
In 120° cone   76.4%
In 90° cone   51.0%

C000-C180
C090-C270

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

γ-angles

Color details

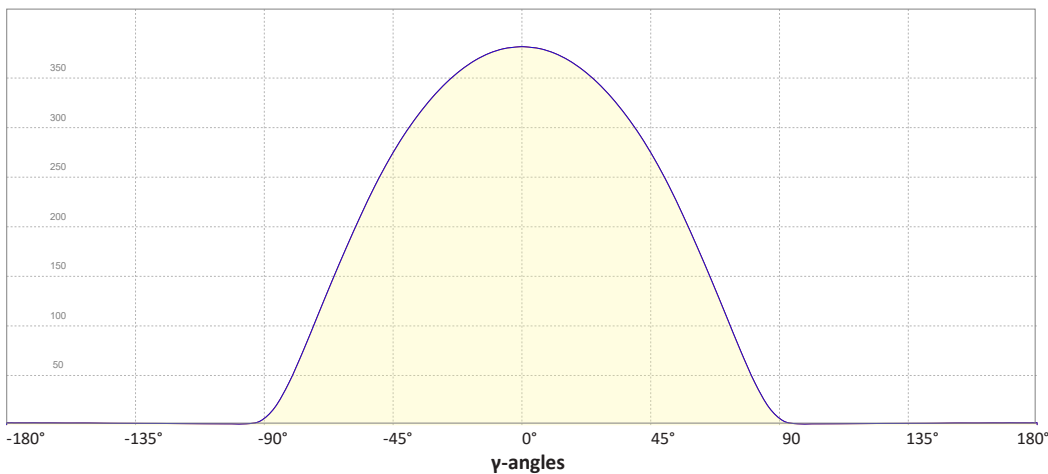|			
Correlated Color Temperature, Target	CCT = 3000 K	MacAdam Steps	SDCM = 4.6
Correlated Color Temperature, Measured	CCT = 2935 K	Color coordinates CIE 1931	(x;y) = (0.437;0.404)
Color Rendering Index	CRI 91.5	Color coordinate CIEs 1960	(u;v) = (0.251;0.348)
Color Rendering Index, R9 (red component)	R9 = 67.9	Color deviation from BBL	Duv = -0.0046
Color Rendering TM30-18	R_f 88.6 — R_g 96.3	Color coordinate CIEs 1976 (CIELUV)	(u';v') = (0.251;0.521)
Color Quality Scale	CQS = 91.2		
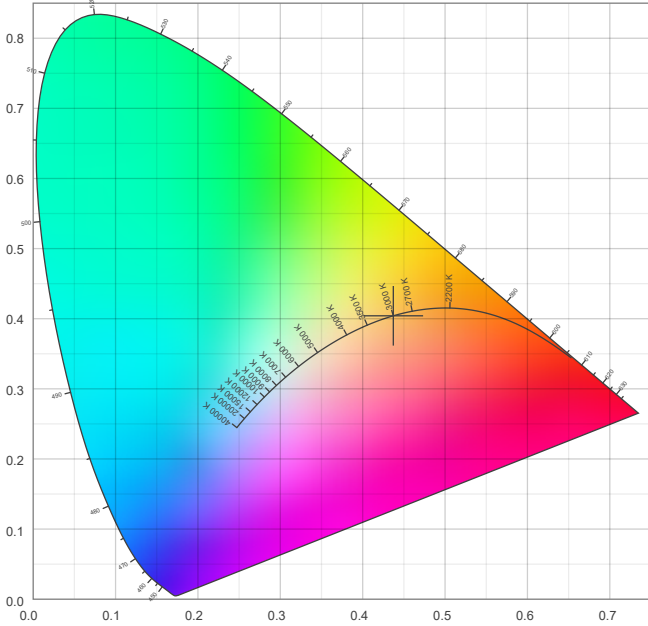
CIE 1931

CIE 1931 – zoomed on Planckian locus
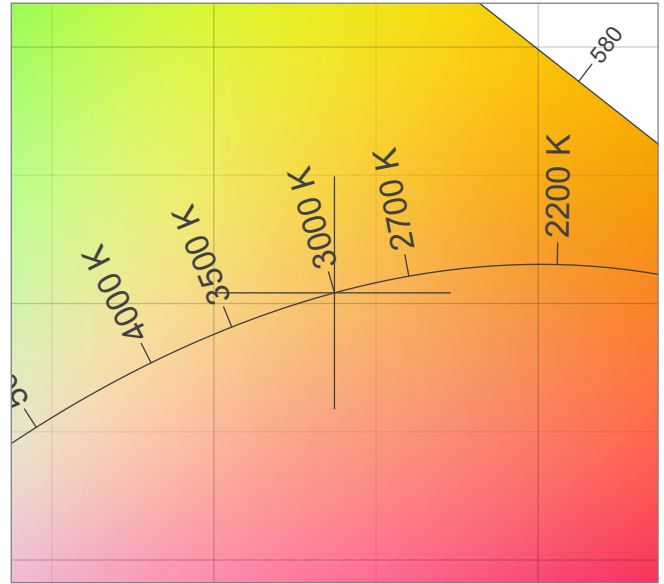
Color Rendering Index per reference color (CIE 1995)
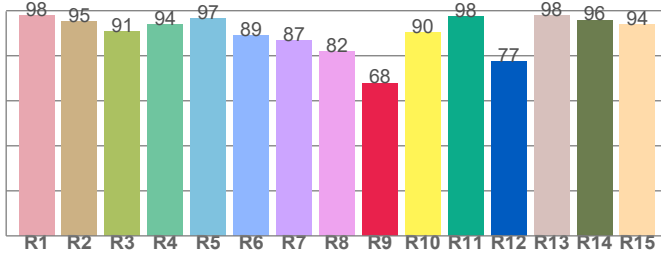
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
97.9	95.2	90.8	94.0	96.5	88.9	86.8	81.9	67.9	90.3	97.5	77.4	97.9	95.9	94.0

Spectral power distribution (SPD) / W/nm – 0-100%
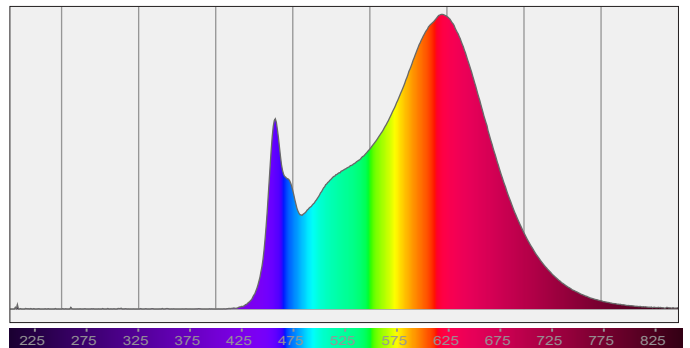
TM30-18 Rf-values per hue bin
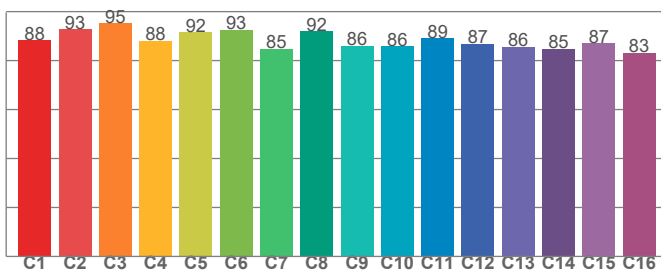
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
88.3	92.8	95.2	88.0	91.5	92.5	84.9	91.9	86.1	85.8	89.1	86.8	85.5	84.9	87.0	83.2

Color Quality Scale by reference color
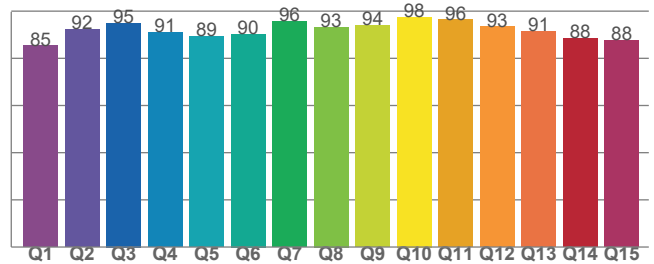
CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
85.4	92.4	95.0	91.0	89.4	90.3	95.7	93.3	94.1	97.5	96.4	93.4	91.4	88.5	87.6

Beam Details

Distance	1 m	2 m	3 m	4 m	5 m
Beam Width	3.5 m	6.9 m	10.4 m	17.3 m	17.3 m

LUX* /Metric

15 lx
24 lx
43 lx
96 lx
385 lx

Beam angle 120°   Beam center

36 fc
9 fc
4 fc
2 fc
1 fc

FOOTCANDLES* /Imperial

*Measured at center of beam

Beam Width	11.4 ft	22.9 ft	33.9 ft	45.4 ft	56.8 ft
Distance	3.3 ft	6.6 ft	9.8 ft	13.1 ft	16.4 ft
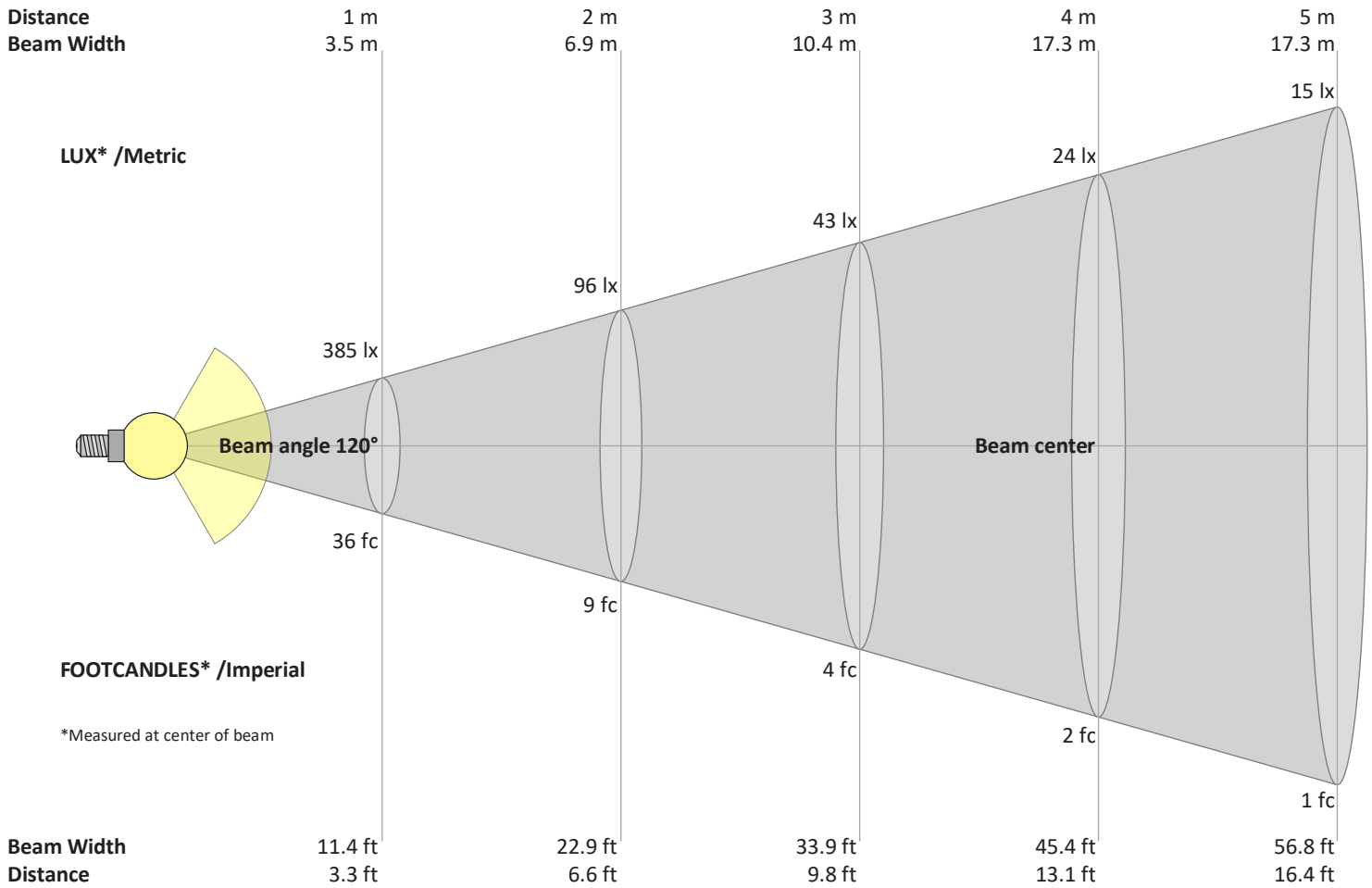
Beam intensities from 1 – 20 m

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
385	96	43	24	15	11	8	6	5	4	3	3	2	2	2	2	1	1	1	1	lux
35.8	8.9	4	2.2	1.4	1	0.7	0.6	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	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°	γ
385	384	380	373	364	352	337	320	300	277	251	221	189	156	121	85	52	25	8	2	cd
100%	100%	99%	97%	95%	91%	88%	83%	78%	72%	65%	57%	49%	40%	31%	22%	14%	6%	2%	1%	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°	γ
385	384	380	373	364	352	337	320	300	277	251	221	189	156	121	85	52	25	8	2	cd
100%	100%	99%	97%	95%	91%	88%	83%	78%	72%	65%	57%	49%	40%	31%	22%	14%	6%	2%	1%	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°	γ
385	384	380	373	364	352	337	320	300	277	251	221	189	156	121	85	52	25	8	2	cd
100%	100%	99%	97%	95%	91%	88%	83%	78%	72%	65%	57%	49%	40%	31%	22%	14%	6%	2%	1%	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°	γ
385	384	380	373	364	352	337	320	300	277	251	221	189	156	121	85	52	25	8	2	cd
100%	100%	99%	97%	95%	91%	88%	83%	78%	72%	65%	57%	49%	40%	31%	22%	14%	6%	2%	1%	of 0°val