

## Low Voltage Recessed IC Rated LED Step Light

This low voltage recessed LED step light is ideal for walls or in steps. Recessed lights in those areas provide edge lighting that adds sleek sophistication to contemporary and modern staircases. It is an IC-rated fixture. The air gap between the housing can and the light fixture creates an insulating effect that keeps the outer can cooler. Therefore, it has less risk of combustion when installed in direct contact with insulation. The light fixture is available in both round and square shapes in different color finishes.

### SPECIFICATIONS

<b>Voltage:</b>	12V DC
<b>Wattage:</b>	1W
<b>Color Temperature:</b>	3000K (Warm White)
<b>Brightness:</b>	80~100 Lumens
<b>LED Type:</b>	Integrated LED
<b>Insulation Contact:</b>	Type IC
<b>Rendering Index:</b>	CRI>80
<b>Fixture Style:</b>	Round and Square
<b>Fixture Material:</b>	Die-cast Aluminum
<b>Housing Material:</b>	Metallic Housing
<b>Available Fixture Finish:</b>	White, Black, Brushed Aluminum
<b>Rated Life:</b>	50,000 Hours
<b>IP Rating:</b>	IP20 (Indoor Rated)
<b>Beam Angle:</b>	35°
<b>Dimmable:</b>	Yes
<b>Installation:</b>	Recessed Installation
<b>Included Content::</b>	Light Fixture, Metallic Housing, Butterfly Clips



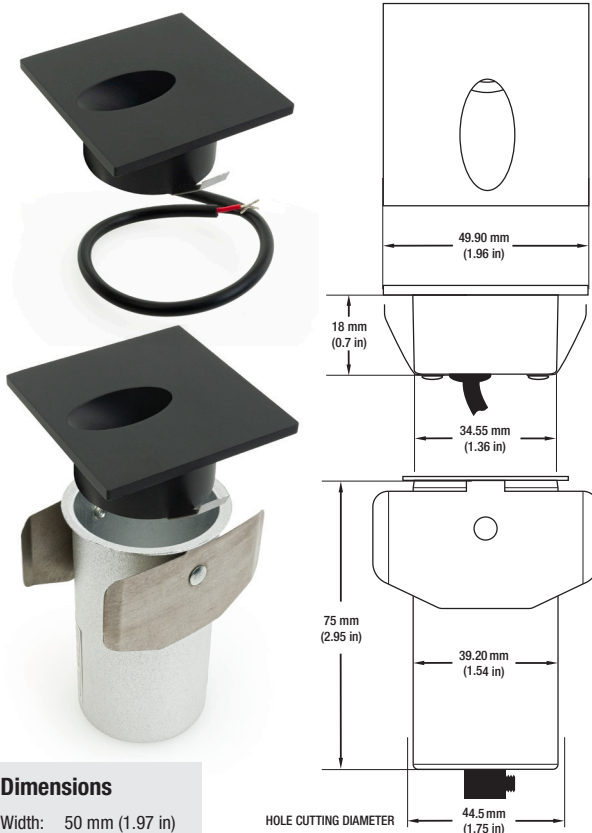
Name: \_\_\_\_\_

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

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

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

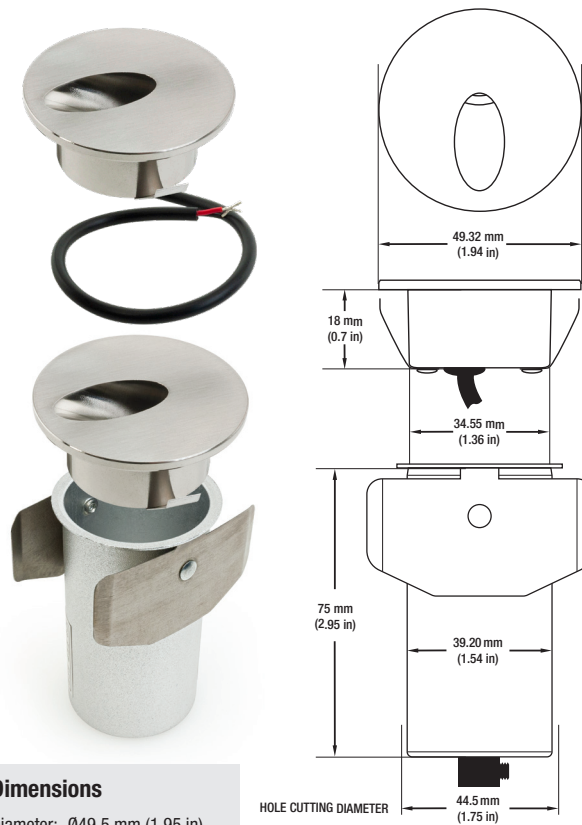
### Model: VBD-SQ25-1W-3K



#### Dimensions

Width: 50 mm (1.97 in)  
 Length: 50 mm (1.97 in)  
 Height: 82 mm (3.2 in)

### Model: VBD-RD25-1W-3K



#### Dimensions

Diameter: Ø49.5 mm (1.95 in)  
 Height: 82 mm (3.2 in)

#### PART NUMBER BUILDER / ORDERING GUIDE

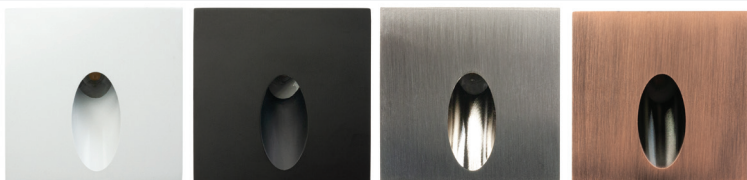
Example part number: **VBD-SQ25-1W-3K-DB**

##### MODEL

VBD-SQ25-1W

##### FIXTURE COLOR

WH (White)    BN (Brushed Nickel)  
 BK (Black)    DB (Dark Bronze)



White (WH)

Black (BK)

Brushed Nickel (BN)

Dark Bronze (DB)

SKU: 666561416539    SKU: 666561425340    SKU: 666561425319    SKU: 666561418243

#### PART NUMBER BUILDER / ORDERING GUIDE

Example part number: **VBD-RD25-1W-3K-DB**

##### MODEL

VBD-RD25-1W

##### FIXTURE COLOR

WH (White)    BN (Brushed Nickel)  
 BK (Black)    DB (Dark Bronze)



White (WH)

Black (BK)

Brushed Nickel (BN)

Dark Bronze (DB)

SKU: 666561425296    SKU: 666561425302    SKU: 666561425326    SKU: 666561418250

#### 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.

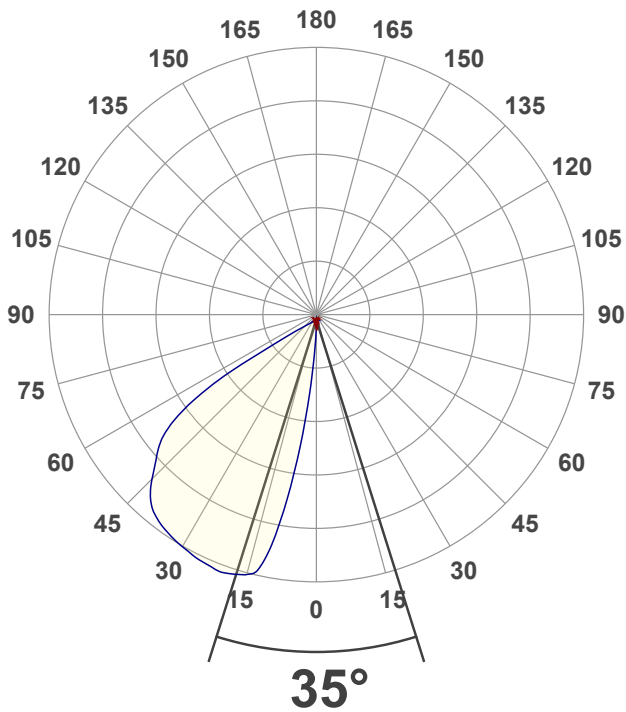
# Light Measurement Report

Print date: 2023-01-30

Measurement date and time: 2023-01-30 12:30:33 PM – Measurement no. VFR-230130-0030-MS

## Luminous Intensity diagram

Unit: 0-100% of peak intensity



### Main Values

Output (total Lumen)	
Lumen Up% / Down%	0.22% / 99.78%
Peak Intensity	52.0 cd
Beam Angle (50%)	35°
Beam Angle (90%)	50.2°
Beam Angle (10%)	20.1°

### Cut-off Angle

Average 2,5%	85.6°
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### Field Angle

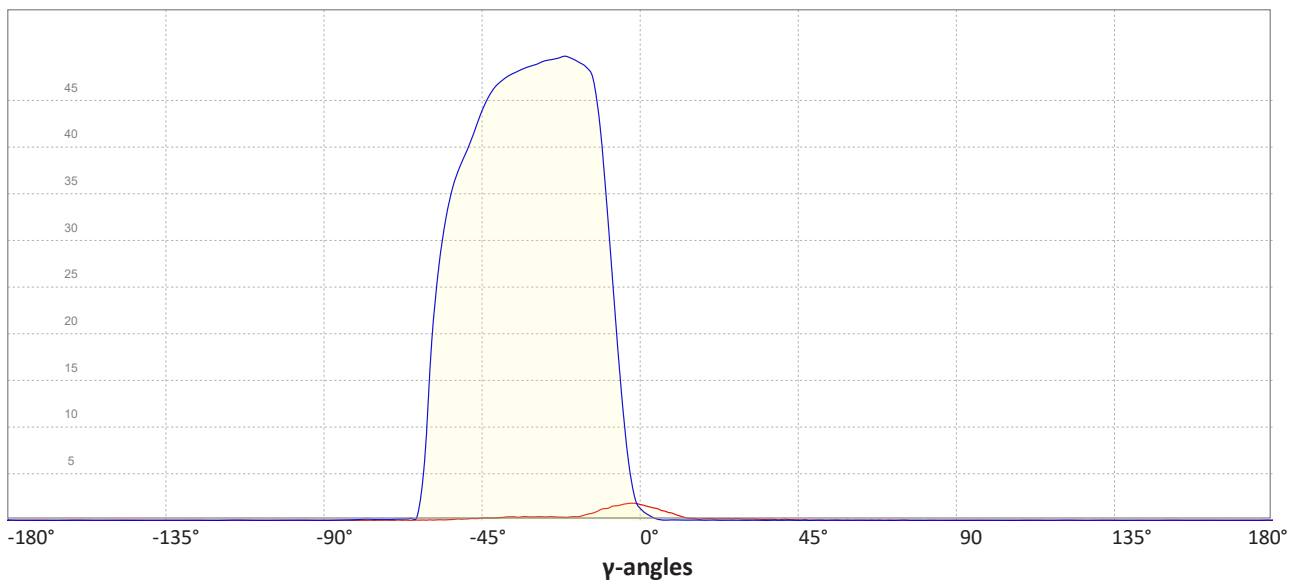
Average 10%	67.8°
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### Intensity Ratio

In 120° cone	98.0%
In 90° cone	64.6%

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

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



## Color details

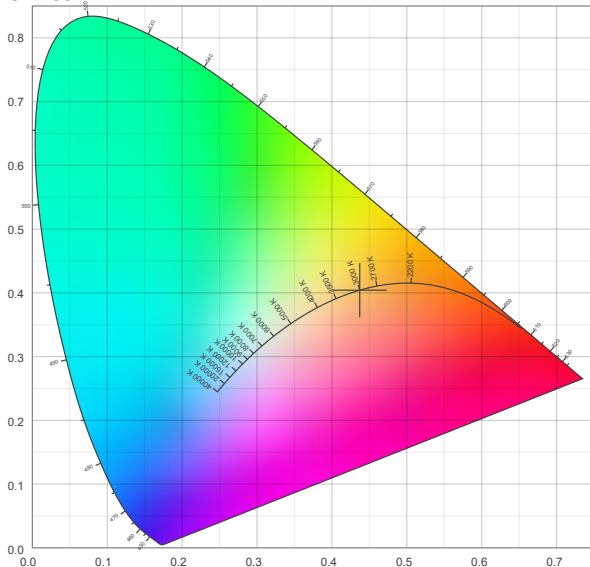
Correlated Color Temperature, Target  
Correlated Color Temperature, Measured  
Color Rendering Index  
Color Rendering Index, R9 (red component)  
Color Rendering TM30-18  
Color Quality Scale

CCT = 3000 K  
CCT = 2904 K  
CRI 93.1  
R9 = 65.7  
R<sub>f</sub> 90.4 – R<sub>g</sub> 97.8  
CQS = 91.2

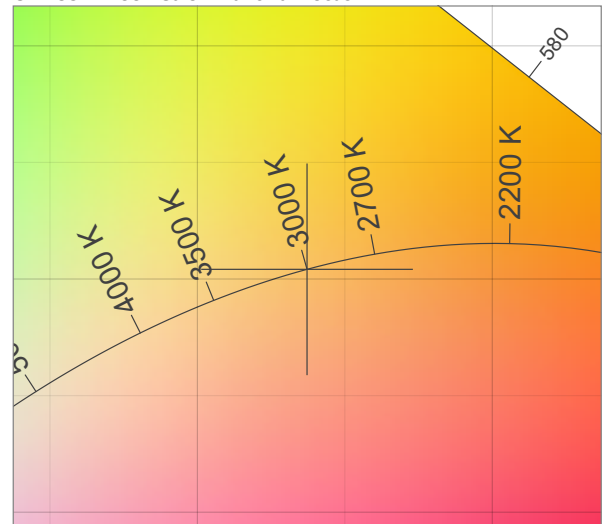
MacAdam Steps  
Color coordinates CIE 1931  
Color coordinate CIEs 1960  
Color deviation from BBL  
Color coordinate CIEs 1976 (CIELUV)

SDCM = 4.5  
(x;y) = (0.437;0.404)  
(u;v) = (0.251;0.348)  
Duv = -0.0038  
(u';v') = (0.251;0.251)

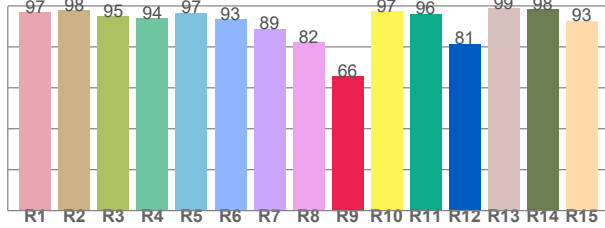
## CIE 1931



## CIE 1931 – zoomed on Planckian locus



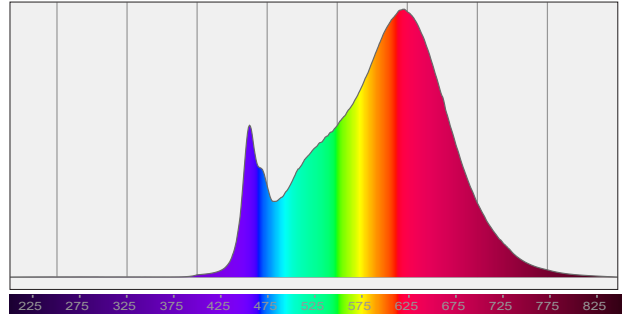
**Color Rendering Index per reference color (CIE 1995)**



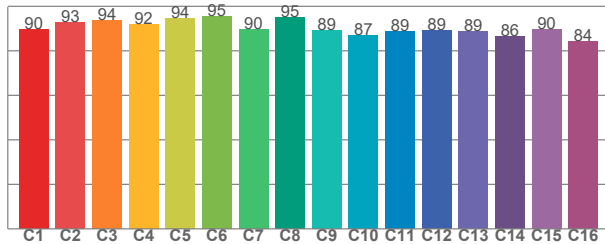
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
96.8	97.9	94.9	93.9	96.6	93.3	88.9	82.3	65.7	97.3	96.2	81.4	98.8	98.3	92.7

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



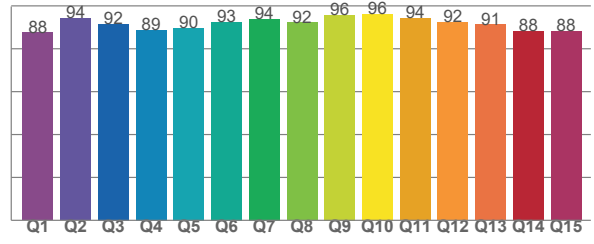
**TM30-18 Rf-values per hue bin**



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
89.6	92.7	93.7	91.8	94.4	95.4	89.6	94.9	89.1	86.8	88.9	89.2	88.6	86.5	89.7	84.1

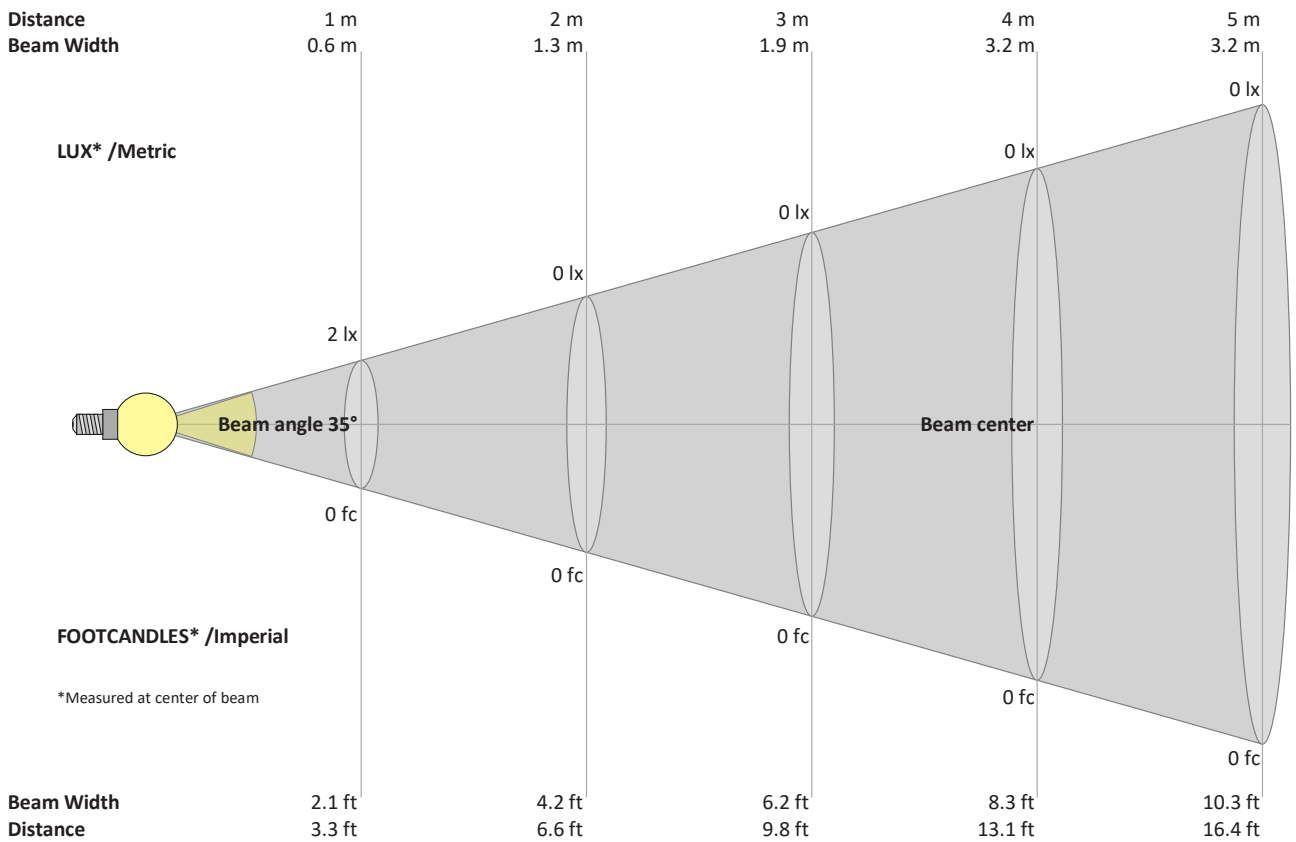
**Color Quality Scale by reference color**



CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
87.5	94.1	91.5	88.6	89.8	92.6	93.9	92.2	95.8	96.3	94.2	92.3	91.2	88.3	88.1

**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	
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	lux
0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	fc

**Intensities in 0° c-plane**

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°	γ
1.63	1.92	1.86	1.68	1.58	1.33	1.05	0.77	0.58	0.41	0.38	0.36	0.38	0.41	0.41	0.39	0.39	0.38	0.41	0.39	cd
100%	117%	114%	103%	97%	81%	64%	47%	35%	25%	23%	22%	23%	25%	25%	24%	24%	23%	25%	24%	of 0°val

**Intensities in 90° c-plane**

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°	γ
1.63	0.72	0.28	0.07	0.04	0.05	0.04	0.03	0.04	0.02	0.03	0.02	0.02	0.02	0.02	0.01	0.02	0.01	0.01	0.01	cd
100%	44%	17%	5%	3%	3%	2%	2%	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	0%	1%	of 0°val

**Intensities in 180° c-plane**

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°	γ
1.63	1.58	1.38	1.11	0.89	0.66	0.41	0.24	0.19	0.19	0.22	0.17	0.17	0.17	0.20	0.15	0.16	0.14	0.12	0.12	cd
100%	97%	85%	68%	54%	41%	25%	15%	11%	12%	13%	10%	11%	10%	12%	9%	10%	8%	7%	7%	of 0°val

**Intensities in 270° c-plane**

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°	γ
1.6	3.7	9.1	17.5	27.6	37.6	45.7	49.9	51.0	51.5	51.9	52.0	51.8	51.6	51.4	51.1	50.8	50.5	50.1	49.7	cd
100%	225%	559%	1075%	1692%	2305%	2799%	3056%	3124%	3154%	3177%	3184%	3172%	3162%	3149%	3129%	3114%	3094%	3071%	3044%	of 0°val