

# VEROBOARD®

## 4" Trimless Downlight

Veroboard 4 inches trimless downlight is specially designed to eliminate glare when illuminated. It is an IC-rated fixture that comes along with a junction box LED driver. It has the option of choosing desired color temperature from 2700K-3000K-3500K-4000K-5000K. This light is perfect for both new construction and remodeling installation with easy push spring clips.

### SPECIFICATIONS



<b>Engine Model No:</b>	LED-4-S15W-L5CCTWH-T
<b>Voltage:</b>	120V AC
<b>Wattage:</b>	15W
<b>LED Driver:</b>	IC Rated
<b>Color Temperature:</b>	5CCT Selectable Color Temperature (2700K-3000K-3500K-4000K-5000K)
<b>Dimmable:</b>	Yes
<b>Dimming:</b>	100 - 10% (Triac Dimming)
<b>Dimmers:</b>	LED/CEL Dimmers
<b>Brightness:</b>	1000 Lumens
<b>Rendering Index:</b>	CRI>90
<b>LED Type:</b>	Integrated COB LED
<b>Fixture Color:</b>	White
<b>Fixture Material:</b>	Die-Cast Aluminum
<b>Rated Life:</b>	50,000 Hours
<b>Installation:</b>	Recessed/Flush Mount
<b>IP Rating:</b>	IP20 (Damp Locations)
<b>Outer Dimensions:</b>	Ø89.76 x 79 mm Depth (Ø3.5 x 3.1 in)
<b>LED Driver Dimensions:</b>	95 x 59 x 39 mm (3.75 x 2.34 x 1.56 in)
<b>Cut Size:</b>	98 mm (3.875 in)
<b>Package Content:</b>	Light Fixture with IC-Rated LED Driver
<b>Certification:</b>	FCC/ETL/Energy Star/RoHS



Selectable  
Color Temperature  
Switch



**LED DRIVER  
INCLUDED**

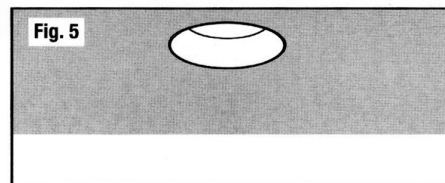
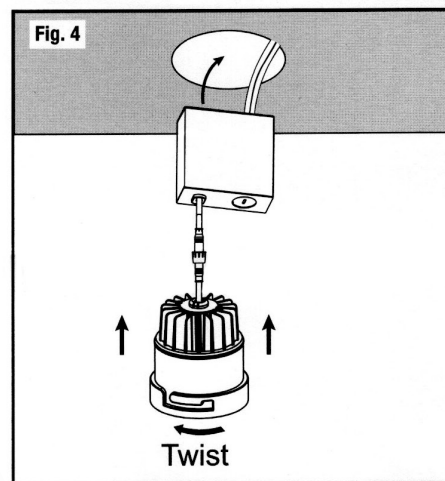
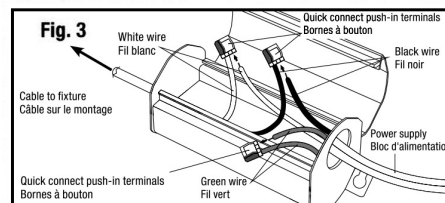
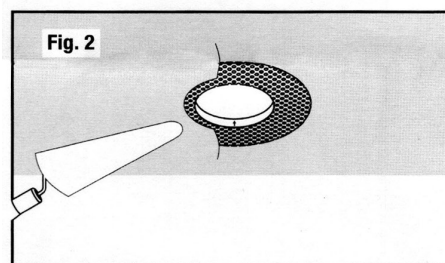
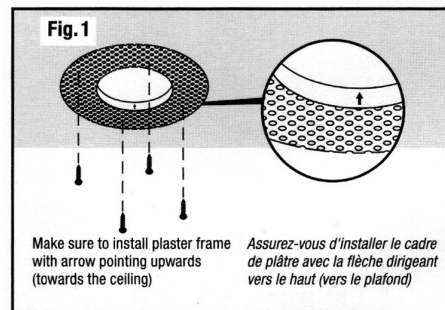
#### Disclaimer:

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.

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

Distributor: \_\_\_\_\_

Type: \_\_\_\_\_



SKU: 666561425708

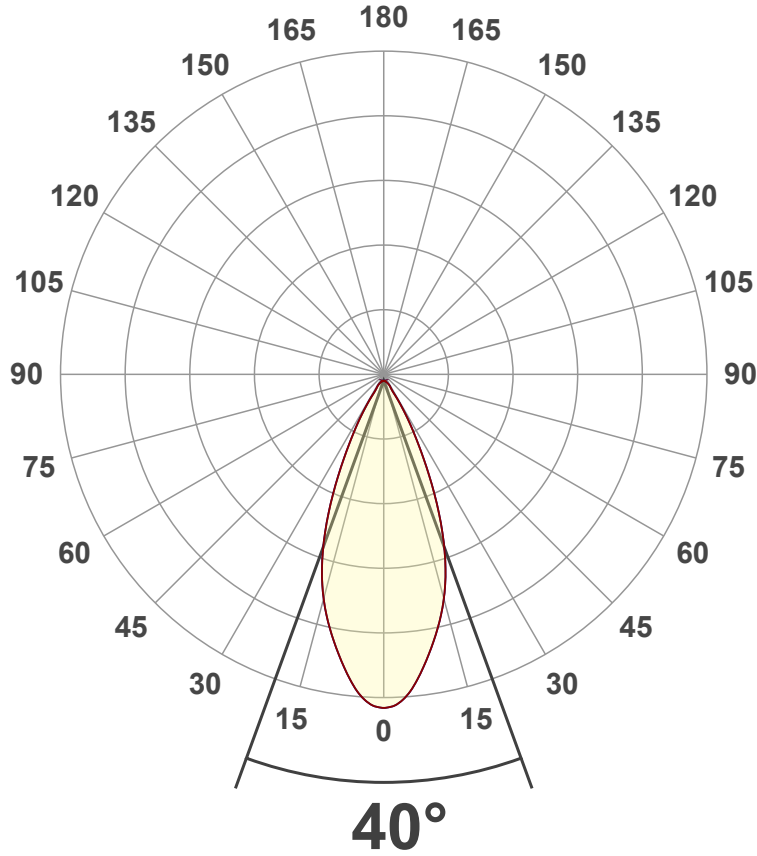
# Light Measurement Report

Print date: 2023-01-06

Measurement date and time: 2023-01-06 2:08:11 PM – Measurement no. VFR-230106-0055-MS

## Luminous Intensity diagram

Unit: 0-100% of peak intensity



## Main Values

Output (total Lumen)	1000 lm
Lumen Up% / Down%	0% / 100%
Peak Intensity	1769 cd
Beam Angle (50%)	40°
Beam Angle (90%)	42.9°
Beam Angle (10%)	42.9°

## Cut-off Angle

Average 2,5%	99.7°
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## Field Angle

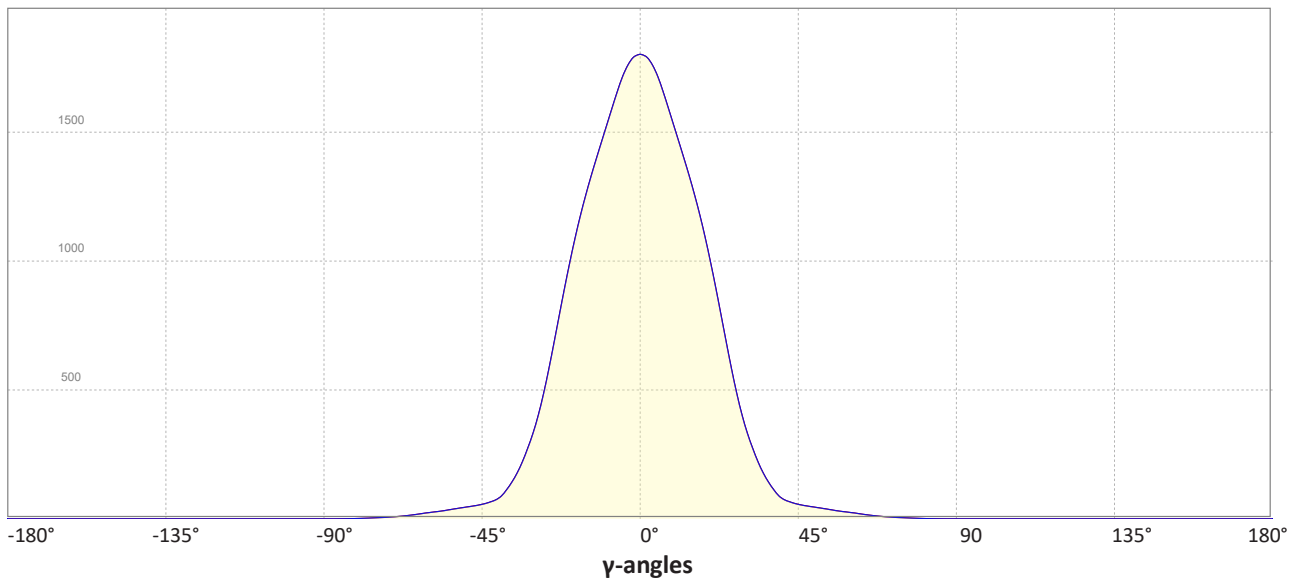
Average 10%	69.9°
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## Intensity Ratio

In 120° cone	98.0%
In 90° cone	93.0%

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

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



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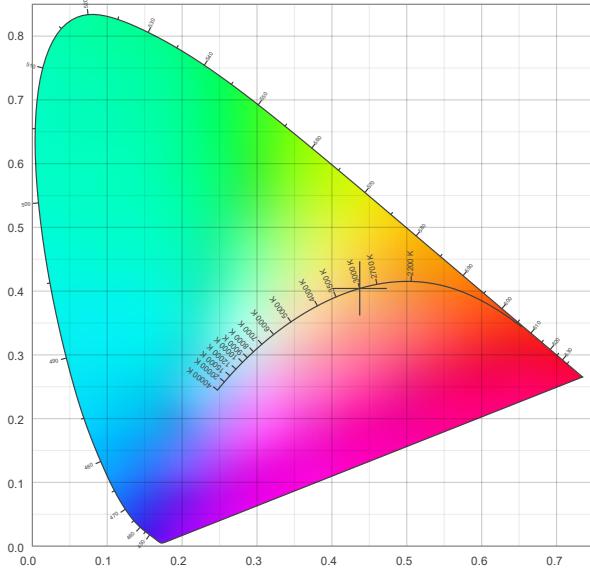
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## Color details

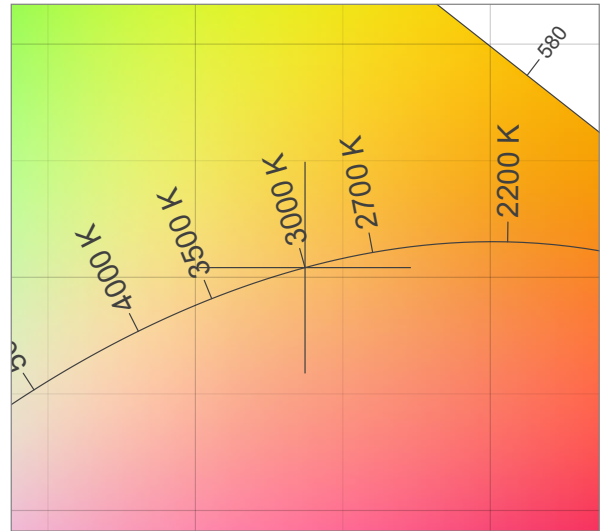
Correlated Color Temperature, Target CCT = 3000 K  
 Correlated Color Temperature, Measured CCT = 3046 K  
 Color Rendering Index CRI 94.0  
 Color Rendering Index, R9 (red component) R9 = 61.8  
 Color Rendering TM30-18 R<sub>f</sub> 90.9 – R<sub>g</sub> 96.4  
 Color Quality Scale CQS = 92.1

MacAdam Steps SDCM = 1.9  
 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 = 0.0014  
 Color coordinate CIEs 1976 (CIELUV) (u'';v'') = (0.251;0.251)

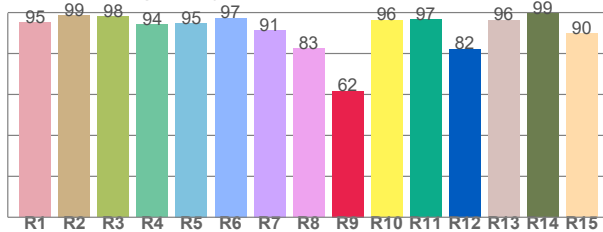
CIE 1931



CIE 1931 – zoomed on Planckian locus



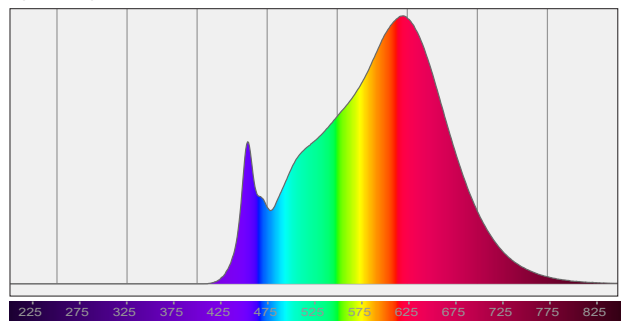
Color Rendering Index per reference color (CIE 1995)



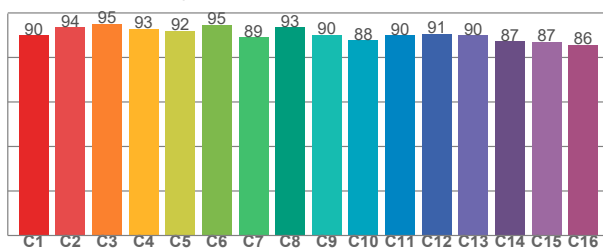
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
95.0	98.7	98.1	94.1	94.8	97.4	91.4	82.5	61.8	96.4	96.6	82.3	96.4	99.5	89.8

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



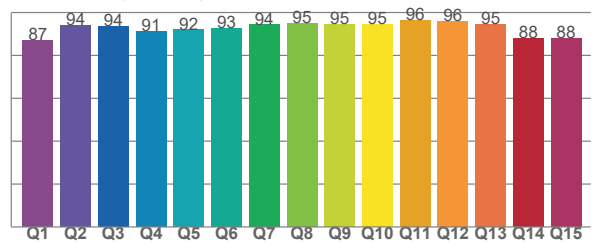
TM30-18 Rf-values per hue bin



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
89.9	93.6	95.1	93.0	92.0	94.7	89.1	93.5	90.1	87.8	90.1	90.7	89.9	87.3	87.2	85.7

Color Quality Scale by reference color



CQS Q values

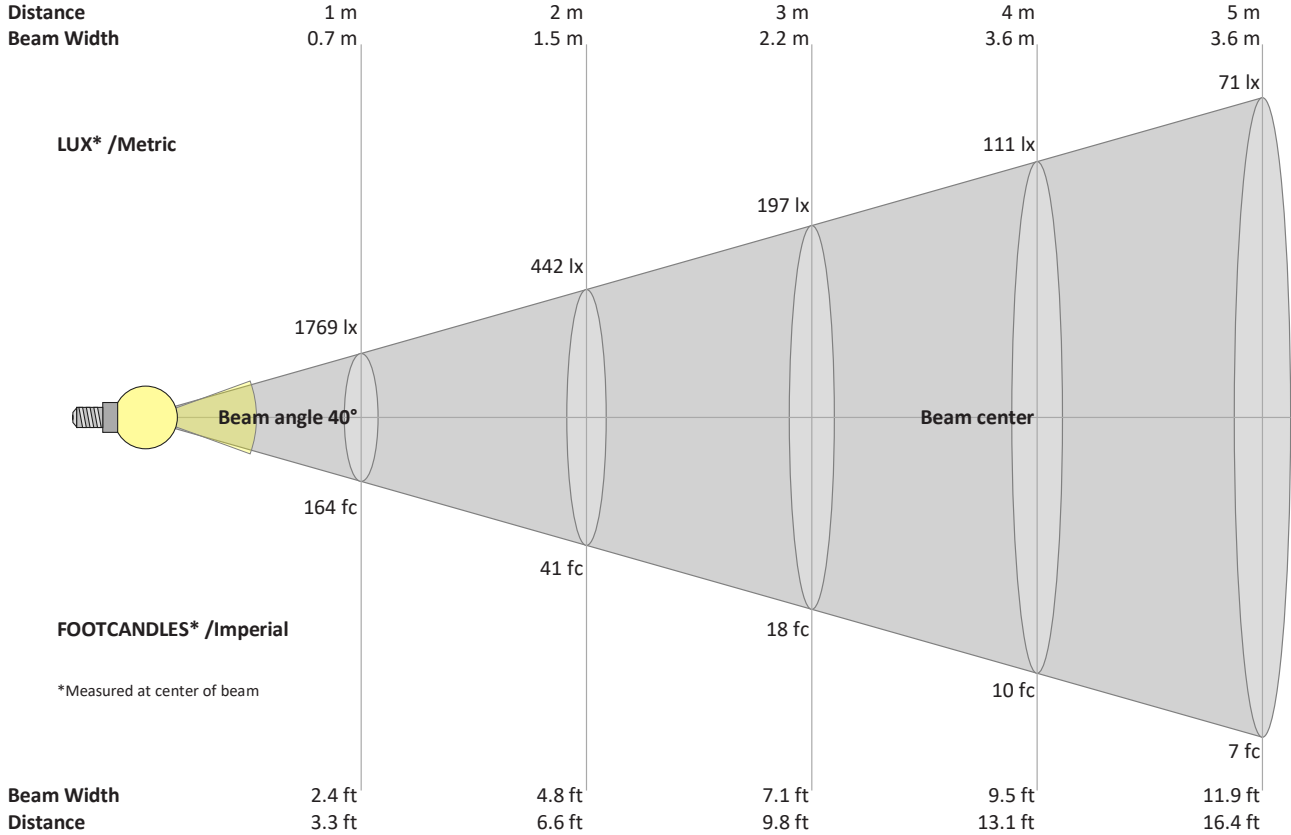
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
86.9	94.1	93.6	91.4	91.9	92.7	94.3	94.9	94.6	94.6	96.3	95.8	94.6	88.0	88.0

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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
1769	442	197	111	71	49	36	28	22	18	15	12	10	9	8	7	6	5	5	4	lux
164.4	41.1	18.3	10.3	6.6	4.6	3.4	2.6	2	1.6	1.4	1.1	1	0.8	0.7	0.6	0.6	0.5	0.5	0.4	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°	y
1769	1758	1715	1648	1566	1480	1394	1305	1208	1100	979	847	708	571	450	349	270	204	152	111	cd
100%	99%	97%	93%	89%	84%	79%	74%	68%	62%	55%	48%	40%	32%	25%	20%	15%	12%	9%	6%	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°	y
1769	1758	1715	1648	1566	1480	1394	1305	1208	1100	979	847	708	571	450	349	270	204	152	111	cd
100%	99%	97%	93%	89%	84%	79%	74%	68%	62%	55%	48%	40%	32%	25%	20%	15%	12%	9%	6%	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°	y
1769	1758	1715	1648	1566	1480	1394	1305	1208	1100	979	847	708	571	450	349	270	204	152	111	cd
100%	99%	97%	93%	89%	84%	79%	74%	68%	62%	55%	48%	40%	32%	25%	20%	15%	12%	9%	6%	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°	y
1769	1758	1715	1648	1566	1480	1394	1305	1208	1100	979	847	708	571	450	349	270	204	152	111	cd
100%	99%	97%	93%	89%	84%	79%	74%	68%	62%	55%	48%	40%	32%	25%	20%	15%	12%	9%	6%	of 0°val