

# VEROBOARD®

Name: \_\_\_\_\_  
 Quantity: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Email: \_\_\_\_\_

## 4" LED Commercial Downlight Reflector Square Trim

### SPECIFICATIONS



|                                      |  |                     |                        |                    |
|--------------------------------------|--|---------------------|------------------------|--------------------|
| <b>Model No.*</b>                    | VBD-COM-4-XXXX-4S  |                     |                        |                    |
| <b>Voltage</b>                       | 120-347V AC  |                     |                        |                    |
| <b>Frequency</b>                     | 50/60Hz  |                     |                        |                    |
| <b>Wattage</b>                       | 20W  |                     |                        |                    |
| <b>Input Current</b>                 | 0.2A   |                     |                        |                    |
| <b>Available Colour Temperatures</b> | <table border="1"> <tr> <td>WARM WHITE<br/>3000K</td> <td>NATURAL WHITE<br/>4000K</td> <td>DAY LIGHT<br/>5000K</td> </tr> </table> | WARM WHITE<br>3000K | NATURAL WHITE<br>4000K | DAY LIGHT<br>5000K |
| WARM WHITE<br>3000K                  | NATURAL WHITE<br>4000K   | DAY LIGHT<br>5000K  |                        |                    |
| <b>Brightness</b>                    | 1560Lm   |                     |                        |                    |
| <b>Trim Type</b>                     | Open Reflector Trim  |                     |                        |                    |
| <b>Beam Angle</b>                    | 75°  |                     |                        |                    |
| <b>Colour</b>                        | White  |                     |                        |                    |
| <b>Lifespan</b>                      | 50,000 Hours   |                     |                        |                    |
| <b>Dimmable</b>                      | Yes (0-10 Dimming)   |                     |                        |                    |
| <b>Package Content</b>               | J Box structured engine, Reflector trim  |                     |                        |                    |
| <b>Dimensions (Reflector)</b>        | Width & Length: 162mm (6.37")<br>Overall Depth: 133.35mm (5.25")   |                     |                        |                    |
| <b>Dimensions (Cut Size)</b>         | 131.25mm (5.16")   |                     |                        |                    |

\* Please see the "Ordering Guide" table at the bottom of this page for how to place your order.



### Features

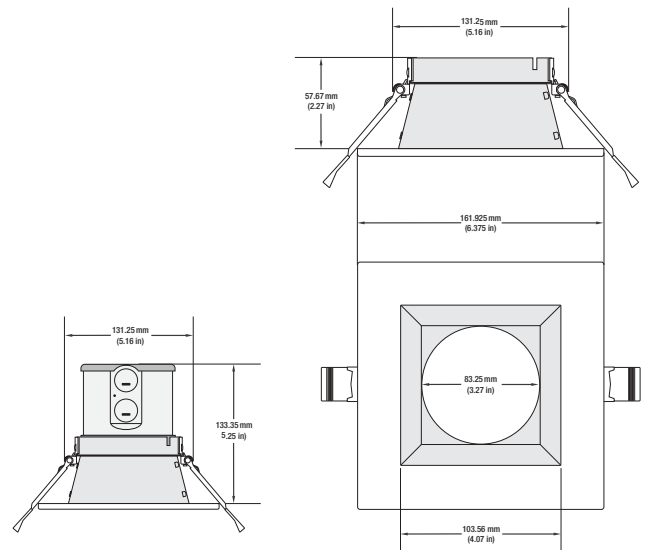
- Comes with a 20W engine that has an inbuilt LED Driver, J-Box structured with good heat dissipation.
- Choose the options which best suits you. Warm White (3000K), Natural White (4000K), and Daylight (5000K).
- The 20W engine is compatible with all commercial lighting reflector trims (CPS series Model).
- Applicable for Indoor use only (dry and damp locations).
- Has a lifespan of 50,000 hours.
- It can be dimmed using a 0-10v dimmer.
- These commercial downlights come in 4 inches, 6 inches, in different shapes (Round, Square).
- We also carry this engine downlight for sloped ceilings in wall wash trims.
- Easy for installation with push springs.
- The J-Box engine has an anti-UV Frosted Polycarbonate Lens that helps in even light transmission, prevents discoloration.
- It is suitable for recessed lighting of commercial and public places and elegantly decorate the ambiance, in shopping malls, hospital, airport, hotel lobbies, and similar places.
- It is a highly efficient product with an Energy Star logo.

AVAILABLE COLOR TEMPERATURE  
3000K • 4000K • 5000K

**ORDERING GUIDE**

Example part number: **VBD - COM - 4 - XXXX - 4S**

| MODEL | SERIES | DIAMETER       | COLOUR                  | REFLECTOR SHAPE                    |
|-------|--------|----------------|-------------------------|------------------------------------|
| VBD   | COM    | XXX            | XXXX                    | XXXX                               |
|       |        | 4"<br>6"<br>8" | 3000K<br>4000K<br>5000K | 6R 4S 4SLR 4SLR<br>8R 6S 6SLR 6SLR |



### Safety and Warning

The fixture must be wired in accordance with local electrical codes. All the installation must be done by a certified electrician. Do not modify the product, any modification may render the product unsafe and void the warranty.

  
**SKU: 666561419943**

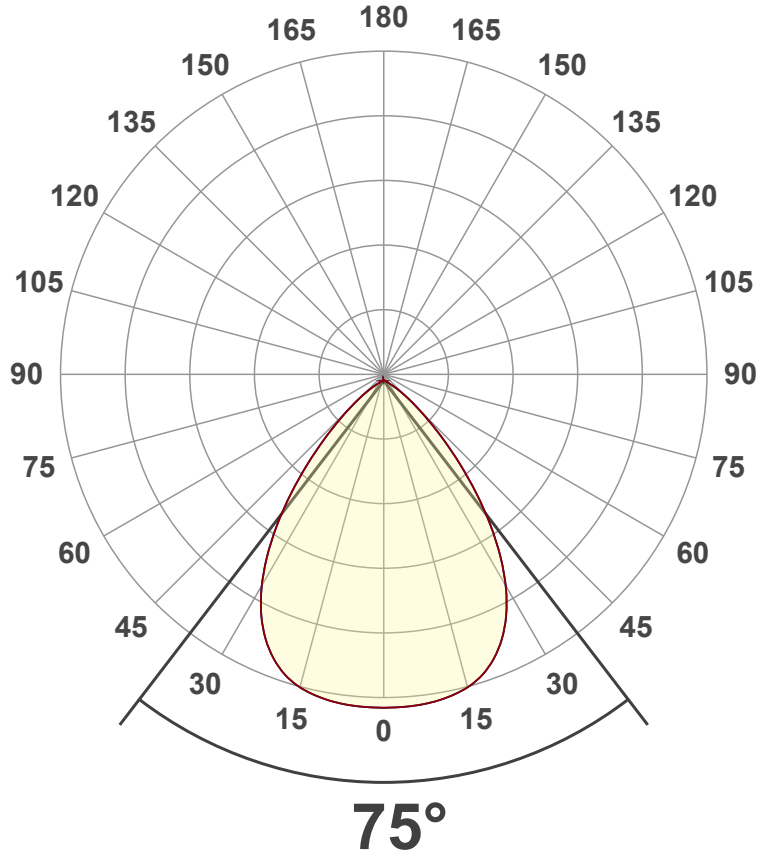
# Light Measurement Report

Print date: 2023-01-26

Measurement date and time: 2023-01-26 9:56:54 AM – Measurement no. VFR-230126-0005-MS

## Luminous Intensity diagram

Unit: 0-100% of peak intensity



### Main Values

|                      |                |
|----------------------|----------------|
| Output (total Lumen) | 1560 lm        |
| Lumen Up% / Down%    | 0.08% / 99.92% |
| Peak Intensity       | 1049 cd        |
| Beam Angle (50%)     | 75°            |
| Beam Angle (90%)     | 76.9°          |
| Beam Angle (10%)     | 76.9°          |

### Cut-off Angle

|              |        |
|--------------|--------|
| Average 2,5% | 126.7° |
|--------------|--------|

### Field Angle

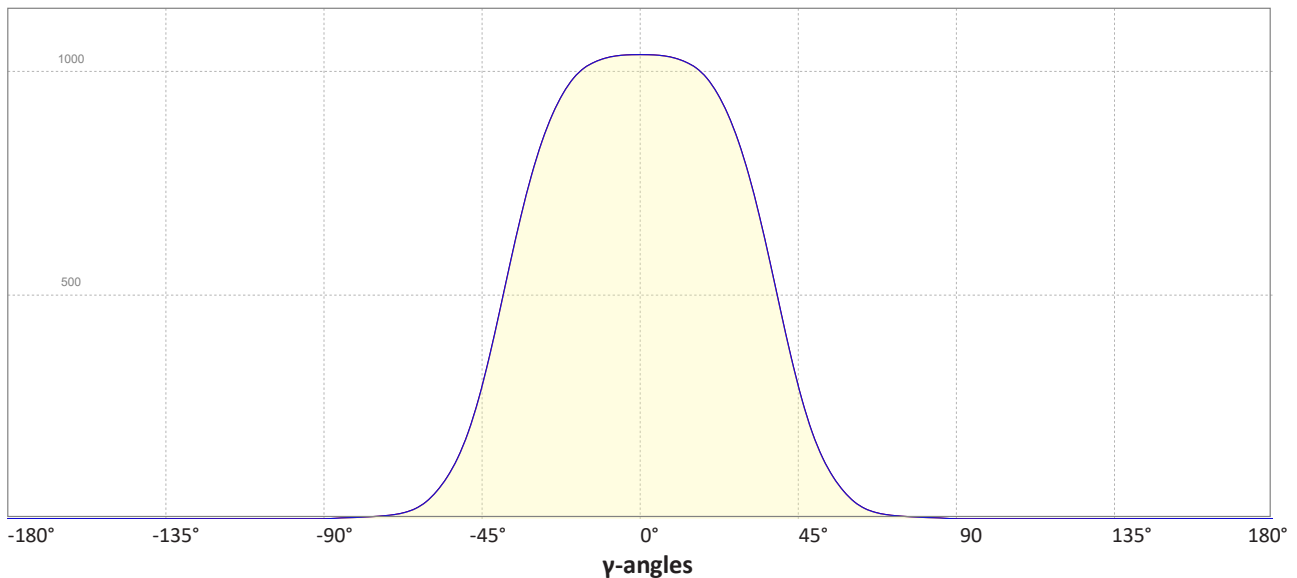
|             |        |
|-------------|--------|
| Average 10% | 108.4° |
|-------------|--------|

### Intensity Ratio

|              |       |
|--------------|-------|
| In 120° cone | 98.0% |
| In 90° cone  | 86.3% |

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

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



# Light Measurement Report

Print date: 2023-01-26

Measurement date and time: 2023-01-26 9:56:54 AM – Measurement no. VFR-230126-0005-MS

## Color details

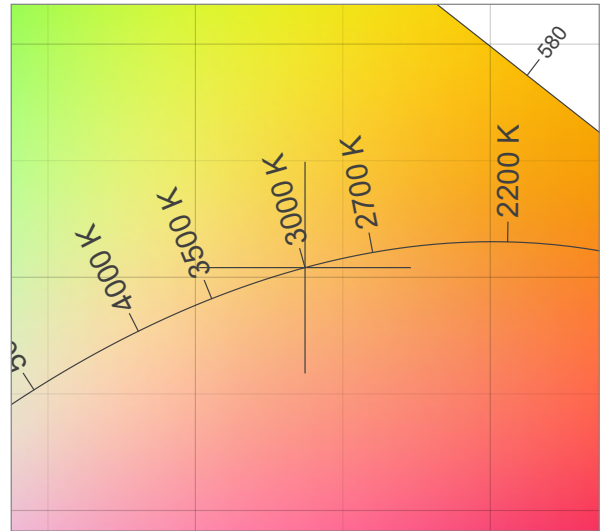
Correlated Color Temperature, Target CCT = 3000 K  
 Correlated Color Temperature, Measured CCT = 2917 K  
 Color Rendering Index CRI 82.6  
 Color Rendering Index, R9 (red component) R9 = 6.5  
 Color Rendering TM30-18 R<sub>f</sub> 84.5 – R<sub>g</sub> 93.9  
 Color Quality Scale CQS = 82.0

MacAdam Steps SDCM = 3.3  
 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 = -0.0022  
 Color coordinate CIEs 1976 (CIELUV) (u'';v'') = (0.251;0.251)

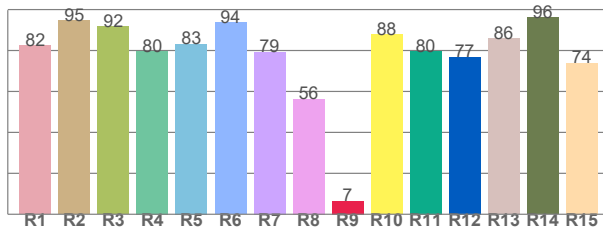
### CIE 1931



### CIE 1931 – zoomed on Planckian locus



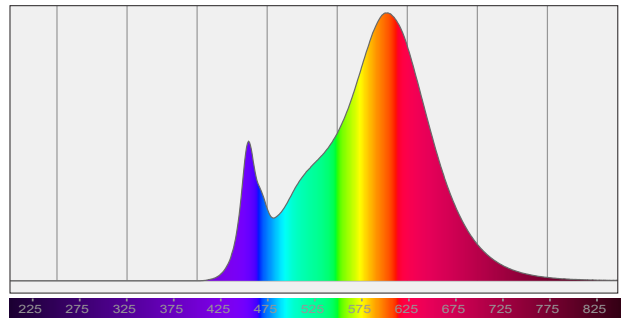
### Color Rendering Index per reference color (CIE 1995)



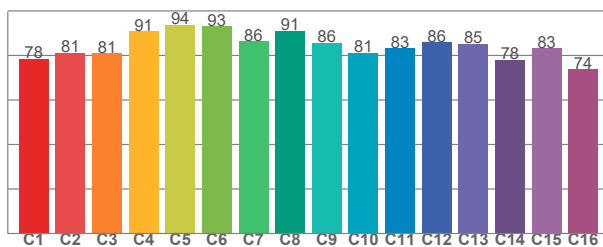
CRI R values, only R1-R8 are used to calculate final CRI value

|      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|
| R1   | R2   | R3   | R4   | R5   | R6   | R7   | R8   | R9  | R10  | R11  | R12  | R13  | R14  | R15  |
| 82.5 | 94.6 | 91.7 | 79.7 | 83.2 | 93.6 | 79.3 | 56.4 | 6.5 | 87.9 | 79.6 | 76.9 | 85.9 | 96.2 | 73.9 |

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



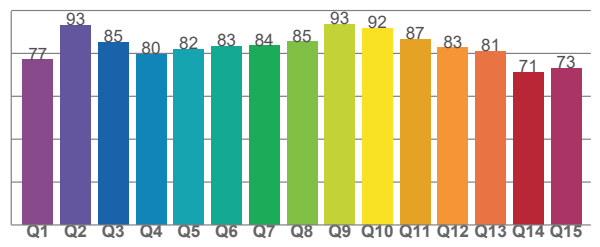
### TM30-18 Rf-values per hue bin



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  |
| 78.4 | 81.2 | 80.9 | 91.0 | 93.8 | 93.0 | 86.4 | 91.0 | 85.6 | 81.2 | 83.3 | 85.9 | 85.3 | 78.0 | 83.3 | 73.7 |

### Color Quality Scale by reference color



CQS Q values

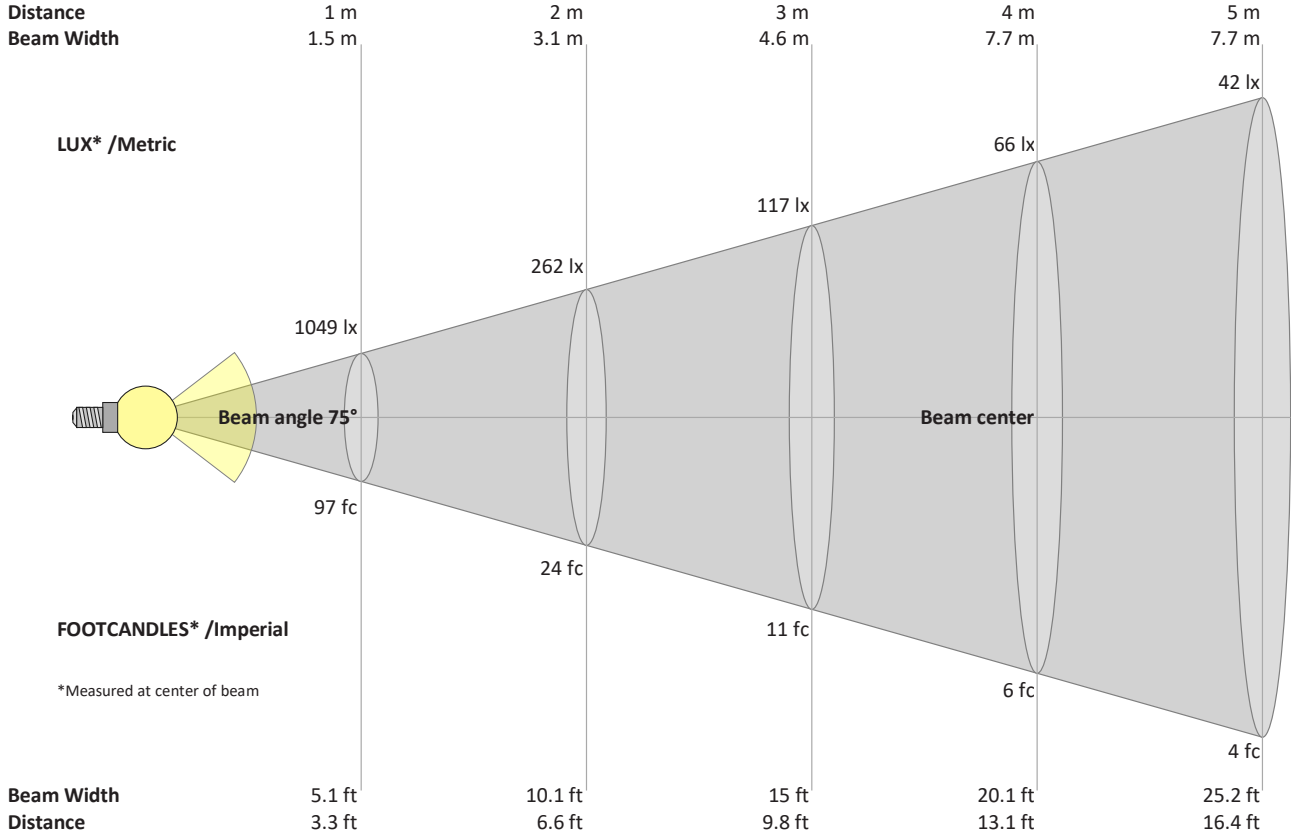
|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Q1   | Q2   | Q3   | Q4   | Q5   | Q6   | Q7   | Q8   | Q9   | Q10  | Q11  | Q12  | Q13  | Q14  | Q15  |
| 77.1 | 93.2 | 85.3 | 79.6 | 81.9 | 83.4 | 83.6 | 85.4 | 93.5 | 91.6 | 86.7 | 82.6 | 81.1 | 71.2 | 73.1 |

# Light Measurement Report

Print date: 2023-01-26

Measurement date and time: 2023-01-26 9:56:54 AM – Measurement no. VFR-230126-0005-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  |
| 1049 | 262  | 117  | 66   | 42   | 29   | 21 | 16   | 13   | 10   | 9    | 7    | 6    | 5    | 5    | 4    | 4    | 3    | 3    | 3    | lux |
| 97.5 | 24.4 | 10.8 | 6.1  | 3.9  | 2.7  | 2  | 1.5  | 1.2  | 1    | 0.8  | 0.7  | 0.6  | 0.5  | 0.4  | 0.4  | 0.3  | 0.3  | 0.3  | 0.2  | 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        |
|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|
| 1049 | 1048 | 1041 | 1024 | 984 | 914 | 801 | 648 | 469 | 302 | 175 | 94  | 46  | 20  | 10  | 6   | 4   | 2   | 0   | 0   | cd       |
| 100% | 100% | 99%  | 98%  | 94% | 87% | 76% | 62% | 45% | 29% | 17% | 9%  | 4%  | 2%  | 1%  | 1%  | 0%  | 0%  | 0%  | 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        |
|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|
| 1049 | 1048 | 1041 | 1024 | 984 | 914 | 801 | 648 | 469 | 302 | 175 | 94  | 46  | 20  | 10  | 6   | 4   | 2   | 0   | 0   | cd       |
| 100% | 100% | 99%  | 98%  | 94% | 87% | 76% | 62% | 45% | 29% | 17% | 9%  | 4%  | 2%  | 1%  | 1%  | 0%  | 0%  | 0%  | 0%  | of 0°val |

### Intensities in 180° c-plane

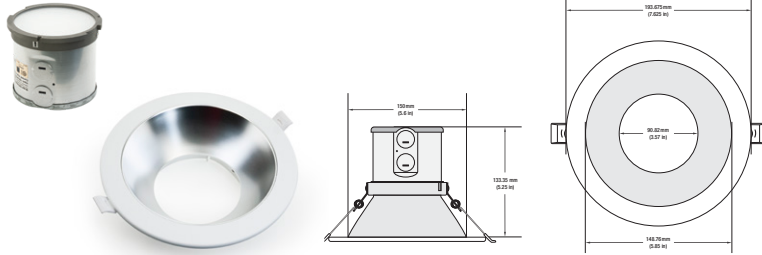
| 0°   | 5°   | 10°  | 15°  | 20° | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° | y        |
|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|
| 1049 | 1048 | 1041 | 1024 | 984 | 914 | 801 | 648 | 469 | 302 | 175 | 94  | 46  | 20  | 10  | 6   | 4   | 2   | 0   | 0   | cd       |
| 100% | 100% | 99%  | 98%  | 94% | 87% | 76% | 62% | 45% | 29% | 17% | 9%  | 4%  | 2%  | 1%  | 1%  | 0%  | 0%  | 0%  | 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        |
|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|
| 1049 | 1048 | 1041 | 1024 | 984 | 914 | 801 | 648 | 469 | 302 | 175 | 94  | 46  | 20  | 10  | 6   | 4   | 2   | 0   | 0   | cd       |
| 100% | 100% | 99%  | 98%  | 94% | 87% | 76% | 62% | 45% | 29% | 17% | 9%  | 4%  | 2%  | 1%  | 1%  | 0%  | 0%  | 0%  | 0%  | of 0°val |

# AVAILABLE OTHER TRIM MODELS

## 6" LED Commercial Downlight Reflector Round Trim

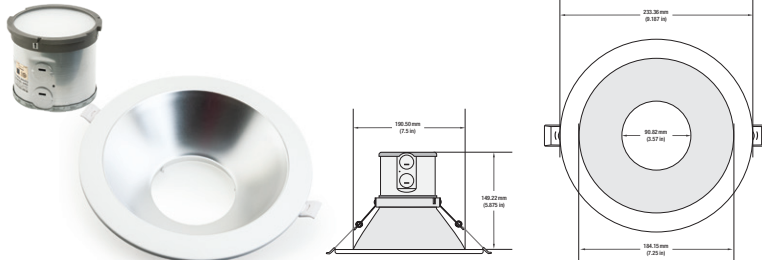


SKU: 66651415914



MODEL No. **VBD-COM-6-XXXX-6R**

## 8" LED Commercial Downlight Reflector Round Trim

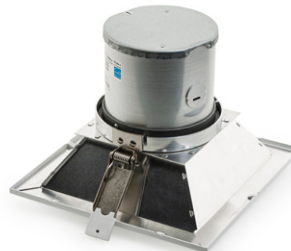
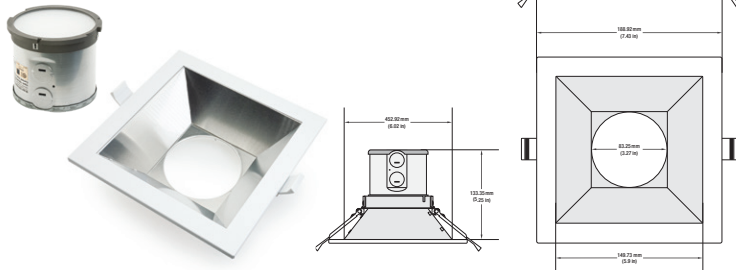


SKU: 66651415921



MODEL No. **VBD-COM-8-XXXX-8R**

## 6" LED Commercial Downlight Reflector Square Trim

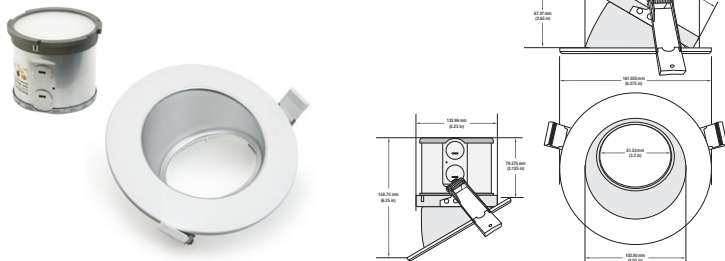


SKU: 666561419950



MODEL No. **VBD-COM-6-XXXX-6S**

## 4" LED Commercial Downlight Sloped Ceiling Reflector Round Trim



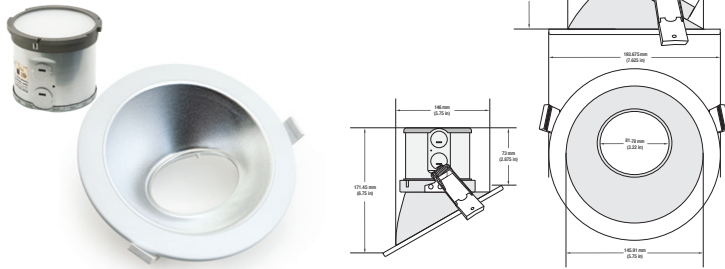
SKU: 666561419929



MODEL No. **VBD-COM-4-XXXX-4SLR**

# AVAILABLE OTHER TRIM MODELS

## 6" LED Commercial Downlight Sloped Ceiling Reflector Round Trim

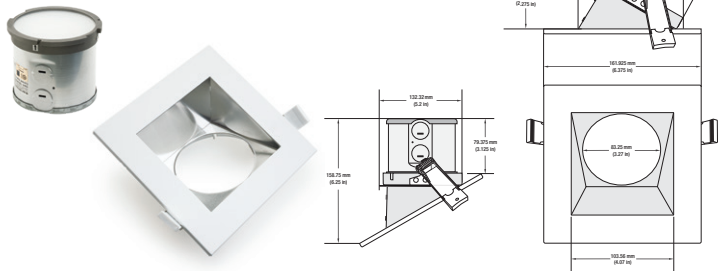


SKU: 666561419936



MODEL No. **VBD-COM-6-XXXX-6SLR**

## 4" LED Commercial Downlight Sloped Ceiling Reflector Square Trim

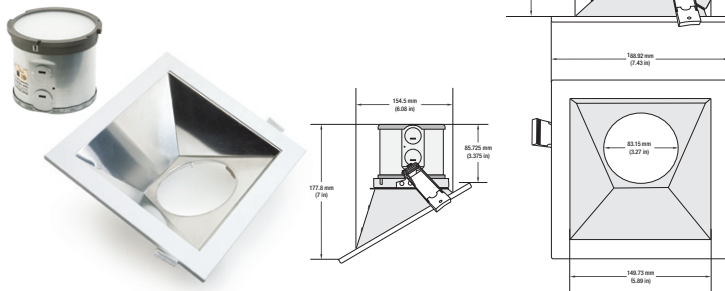


SKU: 666561419967



MODEL No. **VBD-COM-4-XXXX-4SLS**

## 6" LED Commercial Downlight Sloped Ceiling Reflector Square Trim



SKU: 666561419974



MODEL No. **VBD-COM-6-XXXX-6SLS**

### 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.

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