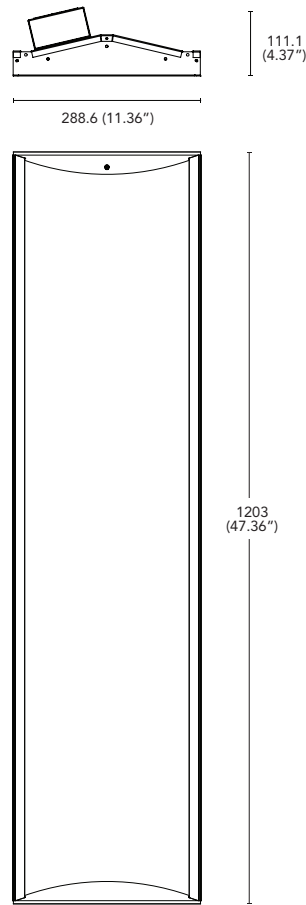


# 1' x 4' LED Troffer

# SORAA® barrel

Recessed LED troffer with a beautiful barrel shaped luminous lens providing ambient illumination from Soraa's unparalleled Vivid Color™ and Natural White™ accurate color and white rendering full spectrum LED with 95 CRI / 95 R9 and White Rendering Index of 100.



### Soraa LED

The highest possible quality ambient light is provided by Soraa LEDs, available in 3000K, 3500K, and 4000K with 95 CRI / 95 R9. Lumen maintenance is 50,000 hours at 70% lumen output.

### Soraa Optics

Precision formed optical assembly provides beautiful, even light distribution.

### Construction

Injection molded endplates and extruded aluminum frame provide strength, rigidity and tight tolerances. Gridlock features are built into the endplates for additional safety and convenience. Four suspension points and seismic clips are provided. Large access plate is designed in to enable supply connection. Drivers can be accessed via plenum.

### Finish

Durable frame has high reflectance baked matte white enamel finish for luminous uniformity.

### Weight

Luminaire: max. 7756gm; additional battery backup & hardware 1814gm.

### Emergency Battery Pack

Optional 120V-277V integral emergency battery pack is available in 7 or 14 watts to meet critical life-safety lighting requirements. 90-minute batteries provide constant power to the LED system, ensuring code compliance.

### Compliance

Luminaire cULus listed and IC rated. Rated for damp locations. Chicago plenum rated.

### Operating Temperature

Minimum -40°C, 25°C typical.

### Warranty

Five year warranty.



## Build Your Luminaire Sample Part Number: BL14 - 33 - 935- UNV - DM1

| Series | Delivered Lumens | CCT/CRI      | Voltage                | Driver                                    | Options                                   | Accessories (Order Separately)  |
|--------|------------------|--------------|------------------------|---|---|---|
| BL14   | 24 2400 lm       | 930 3000K/95 | UNV 120-277V Universal | DM1 0-10V (1% min)                        | Blank None                                | AMB-W3 3 wire whip for non-dimming option                             |
|        | 33 3300 lm       | 935 3500K/95 |                        | LU1 Lutron L3DAE Hi-lume 1% EcoSystem LED | EM7 7W Emergency Battery Pack Installed   | AMB-W4 4 wire whip for non-dimming with emergency battery pack option |
|        |                  | 940 4000K/95 |                        | LU2 Lutron L3DA3W Hi-lume 1% 3-wire LED   | EM14 14W Emergency Battery Pack Installed | AMB-W5 5 wire whip for 0-10V dimming option                           |
|        |                  |              |                        | EL1 eldoLED Solo-Drive 0% Dim             |   |   |
|        |                  |              |                        | EL2 eldoLED Eco-Drive 1% Dim              |   |   |

# Photometrics: Soraa Barrel 1 x 4

## BL14-33 (3300 lm)

### Coefficients Of Utilization - Zonal Cavity Method Effective Floor Cavity Reflectance 0.20

| rc  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |     | 30  |     |     |     | 10  |     |    |    | 0 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|
| rw  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 | 0 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |   |
| 1   | 109 | 105 | 101 | 97  | 107 | 102 | 99  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 89  | 87  | 85  |    |    |   |
| 2   | 100 | 92  | 85  | 80  | 97  | 90  | 84  | 79  | 86  | 81  | 77  | 83  | 79  | 75  | 80  | 77  | 74  | 71  |    |    |   |
| 3   | 91  | 81  | 73  | 67  | 89  | 80  | 72  | 66  | 77  | 70  | 65  | 74  | 69  | 64  | 71  | 67  | 63  | 61  |    |    |   |
| 4   | 84  | 72  | 64  | 57  | 82  | 71  | 63  | 57  | 68  | 62  | 56  | 66  | 60  | 55  | 64  | 59  | 55  | 52  |    |    |   |
| 5   | 77  | 65  | 56  | 50  | 75  | 64  | 55  | 49  | 62  | 54  | 49  | 60  | 53  | 48  | 58  | 52  | 48  | 46  |    |    |   |
| 6   | 72  | 59  | 50  | 44  | 70  | 58  | 49  | 43  | 56  | 48  | 43  | 54  | 48  | 43  | 53  | 47  | 42  | 40  |    |    |   |
| 7   | 66  | 53  | 45  | 39  | 65  | 52  | 44  | 39  | 51  | 44  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 36  |    |    |   |
| 8   | 62  | 49  | 40  | 35  | 60  | 48  | 40  | 34  | 47  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 32  |    |    |   |
| 9   | 58  | 45  | 37  | 31  | 57  | 44  | 36  | 31  | 43  | 36  | 31  | 42  | 35  | 31  | 41  | 35  | 31  | 29  |    |    |   |
| 10  | 54  | 41  | 34  | 28  | 53  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  | 26  |    |    |   |

### Spacing Criteria

(||) 1.36 x mounting height,  
(⊥) 1.28 x mounting height

### UGR

<19

### Zonal Lumen Summary

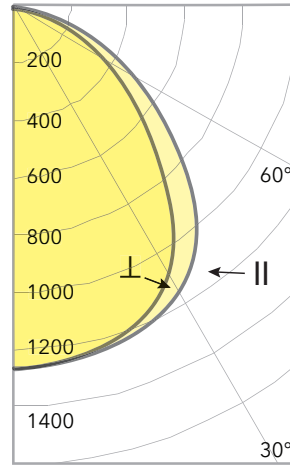
| Zone  | Lumens | % Fixt |
|-------|--------|--------|
| 0-30  | 993    | 30.1   |
| 0-40  | 1626   | 49.2   |
| 0-60  | 2708   | 82.0   |
| 0-90  | 3300   | 100.0  |
| 0-180 | 3300   | 100.0  |

### Base Configuration

Driver: LPL  
CCT: 3500K

### Scaling

|                |       |
|----------------|-------|
| 3000K          | 0.95  |
| 4000K          | 1.03  |
| EldoLed Driver | 0.975 |
| Lutron Driver  | 1.025 |



### Candlepower

|    | Along | 45°  | Across ⊥ |
|----|-------|------|----------|
| 0  | 1239  | 1239 | 1239     |
| 5  | 1236  | 1236 | 1236     |
| 10 | 1235  | 1231 | 1225     |
| 15 | 1227  | 1218 | 1206     |
| 20 | 1208  | 1196 | 1181     |
| 25 | 1179  | 1158 | 1137     |
| 30 | 1132  | 1102 | 1072     |
| 35 | 1067  | 1022 | 975      |
| 40 | 981   | 916  | 847      |
| 45 | 871   | 790  | 705      |
| 50 | 754   | 656  | 567      |
| 55 | 627   | 530  | 453      |
| 60 | 506   | 422  | 362      |
| 65 | 400   | 331  | 288      |
| 70 | 307   | 255  | 221      |
| 75 | 227   | 186  | 160      |
| 80 | 151   | 117  | 96       |
| 85 | 80    | 50   | 30       |
| 90 | 0     | 0    | 0        |

## BL14-24 (2400 lm)

### Coefficients Of Utilization - Zonal Cavity Method Effective Floor Cavity Reflectance 0.20

| rc  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |     | 30  |     |     |     | 10  |     |    |    | 0 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|
| rw  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 | 0 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |   |
| 1   | 109 | 105 | 101 | 97  | 107 | 102 | 99  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 89  | 87  | 85  |    |    |   |
| 2   | 100 | 92  | 85  | 80  | 97  | 90  | 84  | 79  | 86  | 81  | 77  | 83  | 79  | 75  | 80  | 77  | 74  | 71  |    |    |   |
| 3   | 91  | 81  | 73  | 67  | 89  | 80  | 72  | 66  | 77  | 70  | 65  | 74  | 69  | 64  | 71  | 67  | 63  | 61  |    |    |   |
| 4   | 84  | 72  | 64  | 57  | 82  | 71  | 63  | 57  | 68  | 62  | 56  | 66  | 60  | 55  | 64  | 59  | 55  | 52  |    |    |   |
| 5   | 77  | 65  | 56  | 50  | 75  | 64  | 55  | 49  | 62  | 54  | 49  | 60  | 53  | 48  | 58  | 52  | 48  | 46  |    |    |   |
| 6   | 72  | 59  | 50  | 44  | 70  | 58  | 49  | 43  | 56  | 48  | 43  | 54  | 48  | 43  | 53  | 47  | 42  | 40  |    |    |   |
| 7   | 66  | 53  | 45  | 39  | 65  | 52  | 44  | 39  | 51  | 44  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 36  |    |    |   |
| 8   | 62  | 49  | 40  | 35  | 60  | 48  | 40  | 34  | 47  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 32  |    |    |   |
| 9   | 58  | 45  | 37  | 31  | 57  | 44  | 36  | 31  | 43  | 36  | 31  | 42  | 35  | 31  | 41  | 35  | 31  | 29  |    |    |   |
| 10  | 54  | 41  | 34  | 28  | 53  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  | 26  |    |    |   |

### Spacing Criteria

(||) 1.36 x mounting height,  
(⊥) 1.28 x mounting height

### UGR

<19

### Zonal Lumen Summary

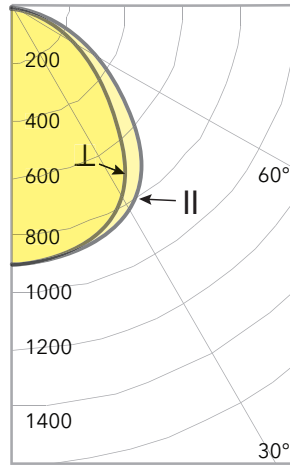
| Zone  | Lumens | % Fixt |
|-------|--------|--------|
| 0-30  | 722    | 30.1   |
| 0-40  | 1183   | 49.2   |
| 0-60  | 1969   | 82.0   |
| 0-90  | 2400   | 100.0  |
| 0-180 | 2400   | 100.0  |

### Base Configuration

Driver: LPL  
CCT: 3500K

### Scaling

|                |       |
|----------------|-------|
| 3000K          | 0.95  |
| 4000K          | 1.03  |
| EldoLed Driver | 0.975 |
| Lutron Driver  | 1.025 |



### Candlepower

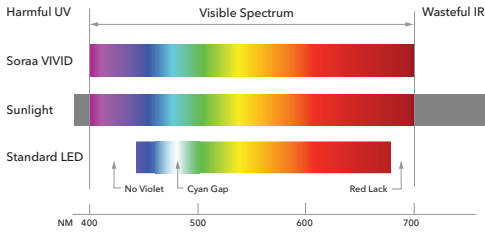
|    | Along | 45° | Across ⊥ |
|----|-------|-----|----------|
| 0  | 901   | 901 | 901      |
| 5  | 899   | 899 | 899      |
| 10 | 898   | 895 | 891      |
| 15 | 893   | 886 | 877      |
| 20 | 878   | 870 | 859      |
| 25 | 858   | 842 | 827      |
| 30 | 823   | 802 | 779      |
| 35 | 776   | 743 | 709      |
| 40 | 713   | 666 | 616      |
| 45 | 634   | 575 | 513      |
| 50 | 548   | 477 | 412      |
| 55 | 456   | 385 | 330      |
| 60 | 368   | 307 | 263      |
| 65 | 291   | 241 | 209      |
| 70 | 223   | 185 | 161      |
| 75 | 165   | 135 | 116      |
| 80 | 110   | 85  | 70       |
| 85 | 58    | 36  | 22       |
| 90 | 0     | 0   | 0        |

## Efficacy

| SKU                 | CCT  | Driver                                       | Delivered Lumens | Power (W) | Lm/W | SKU                 | CCT  | Driver                                       | Delivered Lumens | Power (W) | Lm/W |
|---------------------|------|--|------------------|-----------|------|---------------------|------|--|------------------|-----------|------|
| BL14-24-930-UNV-DM1 | 3000 | 0-10V, 1% Minimum                            | 2300             | 39        | 60   | BL14-33-935-UNV-DM1 | 3500 | 0-10V, 1% Minimum                            | 3300             | 53        | 63   |
| BL14-24-930-UNV-LU1 | 3000 | Lutron L3DAE Hi-lume 1% EcoSystem LED driver | 2300             | 40        | 59   | BL14-33-935-UNV-LU1 | 3500 | Lutron L3DAE Hi-lume 1% EcoSystem LED driver | 3300             | 54        | 62   |
| BL14-24-930-UNV-LU2 | 3000 | Lutron L3DA3W Hi-lume 1% 3-wire LED driver   | 2300             | 40        | 59   | BL14-33-935-UNV-LU2 | 3500 | Lutron L3DA3W Hi-lume 1% 3-wire LED driver   | 3300             | 54        | 62   |
| BL14-24-930-UNV-EL1 | 3000 | eldoLED Solo-Drive 0% Dim                    | 2300             | 38        | 62   | BL14-33-935-UNV-EL1 | 3500 | eldoLED Solo-Drive 0% Dim                    | 3300             | 52        | 65   |
| BL14-24-930-UNV-EL2 | 3000 | eldoLED Eco-Drive 1% Dim                     | 2300             | 38        | 62   | BL14-33-935-UNV-EL2 | 3500 | eldoLED Eco-Drive 1% Dim                     | 3300             | 52        | 65   |
| BL14-33-930-UNV-DM1 | 3000 | 0-10V, 1% Minimum                            | 3100             | 53        | 60   | BL14-24-940-UNV-DM1 | 4000 | 0-10V, 1% Minimum                            | 2500             | 39        | 66   |
| BL14-33-930-UNV-LU1 | 3000 | Lutron L3DAE Hi-lume 1% EcoSystem LED driver | 3100             | 54        | 59   | BL14-24-940-UNV-LU1 | 4000 | Lutron L3DAE Hi-lume 1% EcoSystem LED driver | 2500             | 40        | 64   |
| BL14-33-930-UNV-LU2 | 3000 | Lutron L3DA3W Hi-lume 1% 3-wire LED driver   | 3100             | 54        | 59   | BL14-24-940-UNV-LU2 | 4000 | Lutron L3DA3W Hi-lume 1% 3-wire LED driver   | 2500             | 40        | 64   |
| BL14-33-930-UNV-EL1 | 3000 | eldoLED Solo-Drive 0% Dim                    | 3100             | 52        | 62   | BL14-24-940-UNV-EL1 | 4000 | eldoLED Solo-Drive 0% Dim                    | 2500             | 38        | 67   |
| BL14-33-930-UNV-EL2 | 3000 | eldoLED Eco-Drive 1% Dim                     | 3100             | 52        | 62   | BL14-24-940-UNV-EL2 | 4000 | eldoLED Eco-Drive 1% Dim                     | 2500             | 38        | 67   |
| BL14-24-935-UNV-DM1 | 3500 | 0-10V, 1% Minimum                            | 2400             | 39        | 64   | BL14-33-940-UNV-DM1 | 4000 | 0-10V, 1% Minimum                            | 3400             | 53        | 65   |
| BL14-24-935-UNV-LU1 | 3500 | Lutron L3DAE Hi-lume 1% EcoSystem LED driver | 2400             | 40        | 62   | BL14-33-940-UNV-LU1 | 4000 | Lutron L3DAE Hi-lume 1% EcoSystem LED driver | 3400             | 54        | 64   |
| BL14-24-935-UNV-LU2 | 3500 | Lutron L3DA3W Hi-lume 1% 3-wire LED driver   | 2400             | 40        | 62   | BL14-33-940-UNV-LU2 | 4000 | Lutron L3DA3W Hi-lume 1% 3-wire LED driver   | 3400             | 54        | 64   |
| BL14-24-935-UNV-EL1 | 3500 | eldoLED Solo-Drive 0% Dim                    | 2400             | 38        | 65   | BL14-33-940-UNV-EL1 | 4000 | eldoLED Solo-Drive 0% Dim                    | 3400             | 52        | 67   |
| BL14-24-935-UNV-EL2 | 3500 | eldoLED Eco-Drive 1% Dim                     | 2400             | 38        | 65   | BL14-33-940-UNV-EL2 | 4000 | eldoLED Eco-Drive 1% Dim                     | 3400             | 52        | 67   |

# Soraa Ambient Color and Whiteness Rendering

| CCT  | CRI | R9 | Rf | Rg  | Rfh1 | Rw  | McA |
|------|-----|----|----|-----|------|-----|-----|
| 3000 | 95  | 95 | 90 | 100 | 90   | 100 | 3   |
| 3500 | 95  | 95 | 90 | 100 | 90   | 100 | 3   |
| 4000 | 95  | 95 | 90 | 100 | 90   | 70  | 4   |



Soraa has engineered the perfect balance between color rendering and white rendering. Soraa's core technology uses a violet LED emitter as the basis for full spectrum light. This allows both Vivid™ color rendering and Natural White™ white rendering, which creates whiteness by exciting fluorescing agents with violet radiation, without the harmful effect of UV.

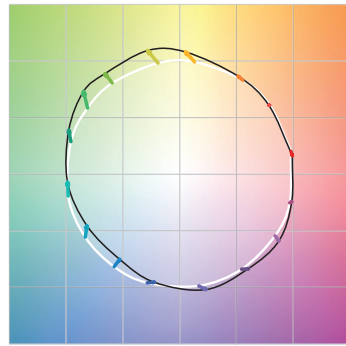
**Rf:** The TM-30 metric for color fidelity (similarity to colors under natural light), a more accurate version of the CRI Ra. Rf is 100 for natural light.

**Rg:** The TM-30 metric for color gamut (whether colors are more saturated than under natural light). Rg is 100 for natural light.

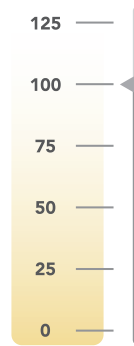
**Rfh1:** The TM-30 metric for color fidelity for red tones. Rfh1 is a more accurate version of the CRI R9. Rfh1 is 100 for natural light.

**Rw:** The Soraa-developed metric for white fidelity. Rw measures the magnitude of excitation of whitening agents within white materials. Rw is 100 for natural light.

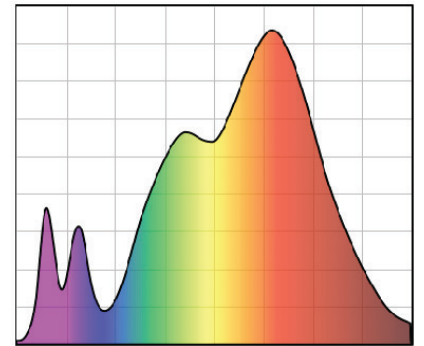
## 3000K



Rf: 90, Rg: 100, Rfh1: 90

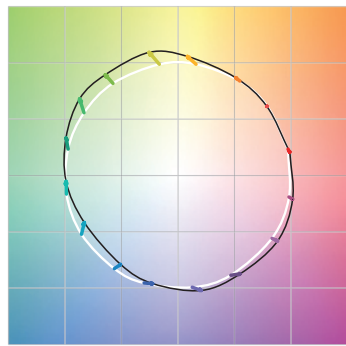


Rw: 100

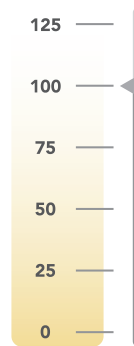


CRI: 95, R9: 95

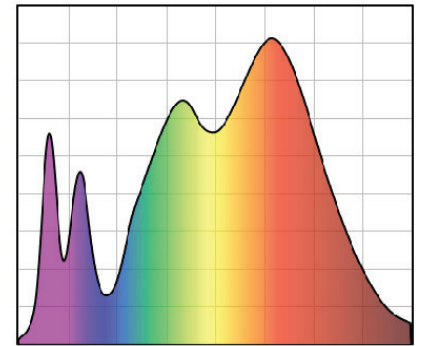
## 3500K



Rf: 90, Rg: 100, Rfh1: 90

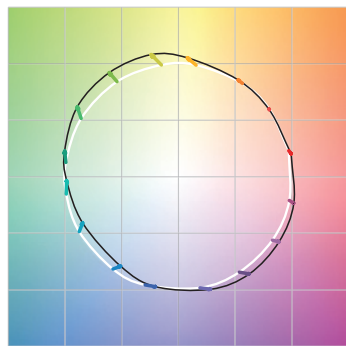


Rw: 100

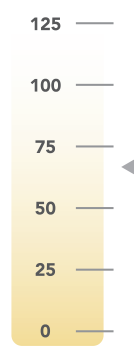


CRI: 95, R9: 95

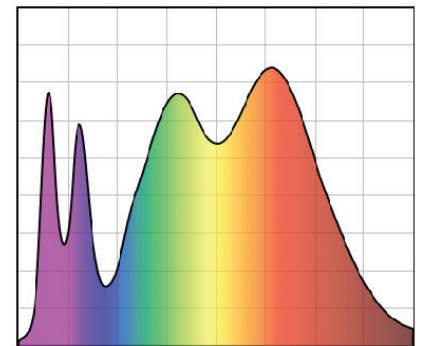
## 4000K



Rf: 90, Rg: 100, Rfh1: 90



Rw: 70



CRI: 95, R9: 95