LIGHTOLIER
by signify

# Downlighting

## SlimSurface

### S5R, S7R & S10R Round 5", 7" & 10"

**SlimSurface** is a 5/8" thick LED surface mounted luminaire with the appearance of a recessed downlight. Easy to install into most standard j-boxes, the SlimSurface round apertures are available as a 5" 650lm, 7" 1000lm and 10" 2200lm fixture.

## Ordering guide

example: S5R830K7AL

| Series | CRI | CCT | Lumens | Finish | Dimming |
|---|---|---|---|---|---|
| **S5R** SlimSurface 5" Round | **8** 80<br>**9** 90[1] | **27K** 2700K<br>**30K** 3000K<br>**35K** 3500K<br>**40K** 4000K | **7** 650lm | **—** White<br>**AL** Aluminum<br>**BK** Black | **blank** ELV / Triac (120V) |
| | | | | **W** White<br>**AL** Aluminum<br>**BK** Black | **Z10U** 0-10V (120V-277V) |
| **S7R** SlimSurface 7" Round | **8** 80<br>**9** 90[1] | **27K** 2700K<br>**30K** 3000K<br>**35K** 3500K<br>**40K** 4000K | **10** 1000lm | **—** White<br>**AL** Aluminum<br>**BK** Black | **blank** ELV / Triac (120V) |
| | | | | **W** White<br>**AL** Aluminum<br>**BK** Black | **Z10U** 0-10V (120V-277V) |
| **S10R** SlimSurface 10" Round[2] | **8** 80<br>**9** 90[1] | **27K** 2700K<br>**30K** 3000K<br>**35K** 3500K<br>**40K** 4000K | **22** 2200lm | **W** White<br>**AL** Aluminum<br>**BK** Black | **blank** ELV / Triac (120V)<br>**Z10U** 0-10V (120V-277V) |

1. Configurations using 90 CRI are only available with 2700K & 3000K CCT.
**2. IMPORTANT: SlimSurface LED 10" round installs into 4-11/16" J-box (not wet location listed).**

White

Aluminum

Black

## Features

1. **Flange:** One piece plastic flange. Injection molded white, applied aluminum or black.
2. **Lens:** High transmittance lens allowing for smooth, comfortable light pattern.
3. **Power supply:** Integral class 2 driver. Factory wired electronic LED driver (see Electrical section for specifications)
4. **LED Strip:** Utilizes LEDs.
5. Lifetime: Expected lifetime 50,000 hours and backed by a 5-year warranty*
6. **Compliance:** Non-conductive fixture for shower light application (not applicable to metal trim model).

## Dimming

Intended for ELV/Triac (120V) or 0-10V dimming (120V-277V) based on the configuration. Min 90°C supply conductors.

## Electrical

**Electronic power supply:** RoHS compliant. Class 2 power unit. Unit tolerates sustained open and short circuit output conditions without damage.

## Labels

cULus listed. ENERGY STAR® certified. All models are damp location rated for walls or ceilings. The 5" & 7" are suitable for ceiling mount wet locations when installed per instructions.

| Electrical specifications | Dimming | Input volts | Input frequency | Input current | Input Power | THD Factor | Power Factor | Minimum Operating Temp. |
|---|---|---|---|---|---|---|---|---|
| Slim 5" 650lm | Triac | 120V | 50/60Hz | 0.08A | 9.5W | <15% | >0.9 | -20°C |
| | 0-10V | 120V | 50/60Hz | 0.09A | 10.1W | <20% | >0.9 | -20°C |
| | | 277V | 50/60Hz | 0.04A | 10.2W | <20% | >0.9 | -20°C |
| Slim 7" 1000lm | Triac | 120V | 50/60Hz | 0.13A | 14.2W | <15% | >0.9 | -20°C |
| | 0-10V | 120V | 50/60Hz | 0.12A | 14.4W | <20% | >0.9 | -20°C |
| | | 277V | 50/60Hz | 0.06A | 14.7W | <20% | >0.9 | -20°C |
| Slim 10" 2200lm | Triac | 120V | 50/60Hz | 0.20A | 23.2W | <20% | >0.9 | -20°C |
| | 0-10V | 120V | 50/60Hz | 0.20A | 23.2W | <10% | >0.95 | -20°C |
| | | 277V | 50/60Hz | 0.09A | 24.6W | <15% | >0.95 | -20°C |

Fore more details, please see LED-DIM-DL spec sheet.
* See Philips.com/warranties for warranty details.

# S5R, S7R & S10R SlimSurface LED

## Round 5", 7" & 10" apertures

### Compatibility (10" Round)

Install into 4-11/16" J-box:

4 11/16" square (metal)

Compatible with S10R only

### Compatibility (5" & 7" Round)

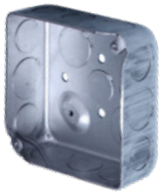
Installs into standard J-box applications for 5" & 7" models:

3½" round (plastic)

4" square (plastic)

Not compatible with S5R

4" octagonal (metal)



4" square (metal)

Not compatible with S5R

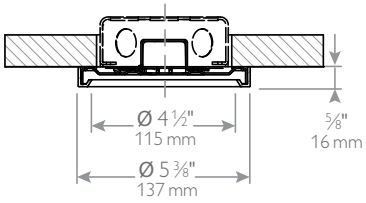
Fire rated J-box

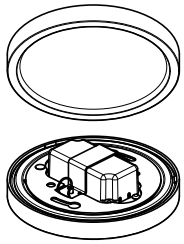
Fire rated classification is per the ceiling and junction box ratings.

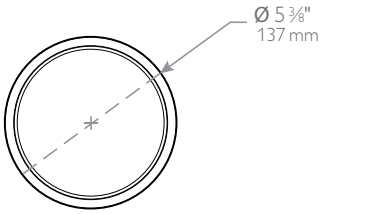
Note: A 2 1/8" deep octagon junction box is recommended for through circuit wiring applications.

## Dimensions

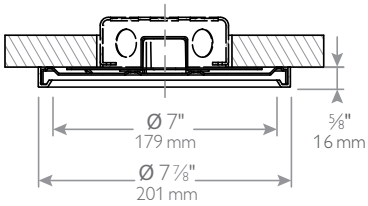
**SlimSurface LED 5" downlight**

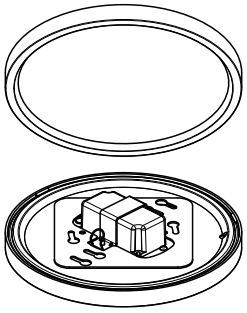


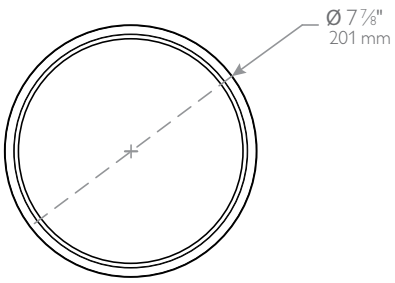





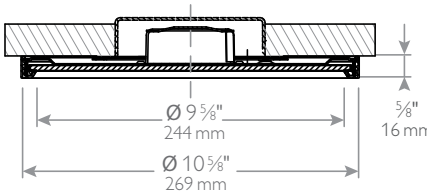

**SlimSurface LED 7" downlight**

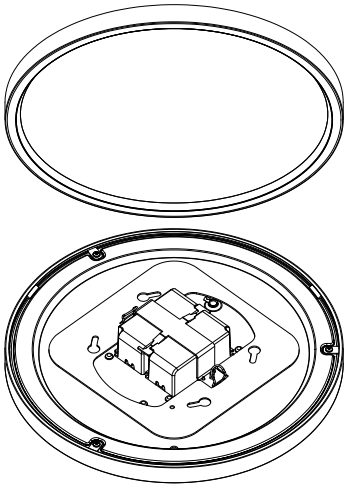


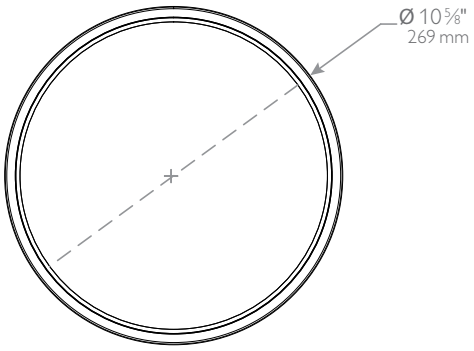






**SlimSurface LED 10" downlight**



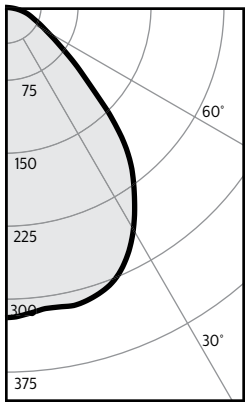


# S5R, S7R & S10R SlimSurface LED

## Round 5", 7" & 10" apertures

### S5R830K7 • 10W LED, 80CRI, 3000K

**Candela Curves**




| Angle | Mean CP | Lumens |
|---|---|---|
| 0 | 319 | |
| 5 | 315 | 30 |
| 10 | 313 | |
| 15 | 313 | 88 |
| 20 | 306 | |
| 25 | 290 | 131 |
| 30 | 264 | |
| 35 | 231 | 142 |
| 40 | 197 | |
| 45 | 146 | 109 |
| 50 | 100 | |
| 55 | 69 | 62 |
| 60 | 50 | |
| 65 | 38 | 37 |
| 70 | 29 | |
| 75 | 22 | 22 |
| 80 | 15 | |
| 85 | 6 | 6 |
| 90 | 0 | |

**Report[1]: 1055GFR**

| | | | |
|---|---|---|---|
| Output lumens: | 628lms | Efficacy: | 69.0lm/w |
| Spacing Criterion: | 1.2 | CCT[3]: | 3000K |
| Beam Angle: | 87° | CRI: | 80min |
| Input Watts[2]: | 9.1W | | |

**Single unit data**

| Height to Lighted Plane | Initial center beam foot-candles | Beam dia. (ft)* |
|---|---|---|
| 5' | 13 | 6.0' |
| 6' | 9 | 7.2' |
| 7' | 7 | 8.4' |
| 8' | 5 | 9.6' |
| 9' | 4 | 10.8' |

* Beam diameter is where foot-candles drop to 50% of maximum.

**Multiple unit data - RCR 2**

| Spacing on center | Initial center beam foot-candles | Watts per sq.ft. |
|---|---|---|
| 5' | 26.2 | 3.06 |
| 6' | 17.1 | 2.01 |
| 7' | 12.2 | 1.43 |
| 8' | 10.2 | 1.19 |
| 9' | 8.1 | 0.96 |

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

**Coefficients of utilization**

| Ceiling | 80% | | | | 70% | | 50% | | 30% | | 0% |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Wall | 70 | 50 | 30 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 0 |
| RCR | Zonal cavity method - Effective floor reflectance = 20% | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 111 | 111 | 106 | 106 | 100 |
| 1 | 111 | 107 | 103 | 100 | 105 | 98 | 100 | 95 | 97 | 92 | 88 |
| 2 | 102 | 96 | 90 | 85 | 94 | 84 | 90 | 82 | 87 | 80 | 77 |
| 3 | 95 | 86 | 79 | 73 | 84 | 73 | 82 | 72 | 79 | 70 | 67 |
| 4 | 88 | 78 | 70 | 64 | 76 | 64 | 74 | 63 | 72 | 62 | 60 |
| 5 | 82 | 71 | 63 | 57 | 70 | 57 | 68 | 56 | 66 | 56 | 53 |
| 6 | 76 | 64 | 57 | 51 | 64 | 51 | 62 | 50 | 60 | 50 | 48 |
| 7 | 71 | 59 | 51 | 46 | 58 | 46 | 57 | 45 | 56 | 45 | 43 |
| 8 | 67 | 54 | 47 | 42 | 54 | 41 | 53 | 41 | 51 | 41 | 39 |
| 9 | 63 | 50 | 43 | 38 | 50 | 38 | 49 | 38 | 48 | 37 | 36 |
| 10 | 59 | 47 | 40 | 35 | 46 | 35 | 45 | 34 | 44 | 34 | 33 |

Room Cavity Ratio

**Zonal lumens & percentages**

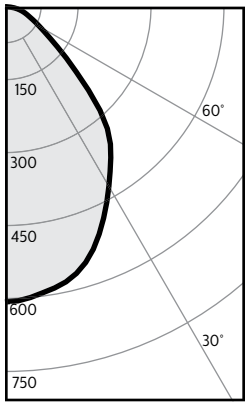
| Zone | Lumens | %Luminaire |
|---|---|---|
| 0-30 | 249 | 39.7% |
| 0-40 | 391 | 62.3% |
| 0-60 | 562 | 89.6% |
| 0-90 | 628 | 100.0% |

**CRI and CCT adjustment factors**

90CRI 2700K = 84%
80CRI 2700K = 100%
80CRI 3000K = 100%
80CRI 3500K = 105%
80CRI 4000K = 109%

### S7R830K10 • 14W LED , 80CRI, 3000K

**Candela Curves**




| Angle | Mean CP | Lumens |
|---|---|---|
| 0 | 607 | |
| 5 | 601 | 57 |
| 10 | 588 | |
| 15 | 568 | 159 |
| 20 | 531 | |
| 25 | 480 | 221 |
| 30 | 427 | |
| 35 | 379 | 237 |
| 40 | 328 | |
| 45 | 243 | 187 |
| 50 | 165 | |
| 55 | 113 | 105 |
| 60 | 83 | |
| 65 | 63 | 63 |
| 70 | 49 | |
| 75 | 37 | 39 |
| 80 | 26 | |
| 85 | 12 | 13 |
| 90 | 0 | |

**Report[1]: 961GFR**

| | | | |
|---|---|---|---|
| Output lumens: | 1081lms | Efficacy: | 80.0lm/w |
| Spacing Criterion: | 1.1 | CCT[3]: | 3000K |
| Beam Angle: | 83° | CRI: | 80min |
| Input Watts[2]: | 13.5W | | |

**Single unit data**

| Height to Lighted Plane | Initial center beam foot-candles | Beam dia. (ft)* |
|---|---|---|
| 5' | 24 | 5.5' |
| 6' | 17 | 6.6' |
| 7' | 12 | 7.7' |
| 8' | 9 | 8.8' |
| 9' | 7 | 9.9' |

* Beam diameter is where foot-candles drop to 50% of maximum.

**Multiple unit data - RCR 2**

| Spacing on center | Initial center beam foot-candles | Watts per sq.ft. |
|---|---|---|
| 5' | 26.2 | 3.55 |
| 6' | 17.1 | 2.33 |
| 7' | 12.2 | 1.66 |
| 8' | 10.2 | 1.39 |
| 9' | 8.1 | 1.11 |

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

**Coefficients of utilization**

| Ceiling | 80% | | | | 70% | | 50% | | 30% | | 0% |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Wall | 70 | 50 | 30 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 0 |
| RCR | Zonal cavity method - Effective floor reflectance = 20% | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 111 | 111 | 106 | 106 | 100 |
| 1 | 111 | 107 | 103 | 100 | 104 | 98 | 100 | 95 | 96 | 92 | 88 |
| 2 | 102 | 96 | 90 | 85 | 94 | 84 | 90 | 82 | 87 | 80 | 77 |
| 3 | 95 | 86 | 79 | 74 | 85 | 73 | 82 | 72 | 79 | 71 | 67 |
| 4 | 88 | 78 | 70 | 65 | 77 | 64 | 74 | 63 | 72 | 62 | 60 |
| 5 | 82 | 71 | 63 | 57 | 70 | 57 | 68 | 56 | 66 | 56 | 53 |
| 6 | 76 | 65 | 57 | 51 | 64 | 51 | 62 | 51 | 61 | 50 | 48 |
| 7 | 71 | 59 | 52 | 46 | 59 | 46 | 57 | 46 | 56 | 45 | 43 |
| 8 | 67 | 55 | 47 | 42 | 54 | 42 | 53 | 42 | 52 | 41 | 39 |
| 9 | 63 | 51 | 43 | 38 | 50 | 38 | 49 | 38 | 48 | 38 | 36 |
| 10 | 59 | 47 | 40 | 35 | 47 | 35 | 46 | 35 | 45 | 35 | 33 |

Room Cavity Ratio

**Zonal lumens & percentages**

| Zone | Lumens | %Luminaire |
|---|---|---|
| 0-30 | 437 | 40.4% |
| 0-40 | 674 | 62.3% |
| 0-60 | 966 | 89.4% |
| 0-90 | 1081 | 100.0% |

**CRI and CCT adjustment factors**

90CRI 2700K = 84%
80CRI 2700K = 100%
80CRI 3000K = 100%
80CRI 3500K = 105%
80CRI 4000K = 109%

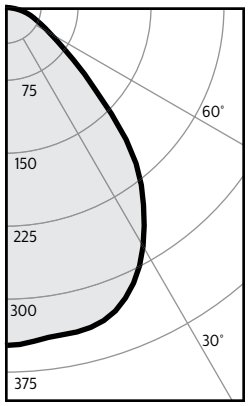
1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
2. Wattage: controlled to within 5%
3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

# S5R, S7R & S10R SlimSurface LED

## Round 5", 7" & 10" apertures

### S5R835K7 • 10W LED, 80CRI, 3500K

**Candela Curves**




| Angle | Mean CP | Lumens |
|---|---|---|
| 0 | 347 | |
| 5 | 344 | 33 |
| 10 | 341 | |
| 15 | 340 | 96 |
| 20 | 332 | |
| 25 | 312 | 143 |
| 30 | 283 | |
| 35 | 248 | 155 |
| 40 | 209 | |
| 45 | 154 | 119 |
| 50 | 107 | |
| 55 | 74 | 68 |
| 60 | 53 | |
| 65 | 41 | 41 |
| 70 | 31 | |
| 75 | 23 | 25 |
| 80 | 15 | |
| 85 | 5 | 7 |
| 90 | 0 | |

**Report[1]: 1056GFR**

| | | | |
|---|---|---|---|
| Output lumens: | 685lms | Efficacy: | 75.3lm/w |
| Spacing Criterion: | 1.2 | CCT[3]: | 3500K |
| Beam Angle: | 87° | CRI: | 80min |
| Input Watts[2]: | 9.1W | | |

**Single unit data**

| Height to Lighted Plane | Initial center beam foot-candles | Beam dia. (ft)* |
|---|---|---|
| 5' | 14 | 6.0' |
| 6' | 10 | 7.2' |
| 7' | 7 | 8.4' |
| 8' | 5 | 9.6' |
| 9' | 4 | 10.8' |

* Beam diameter is where foot-candles drop to 50% of maximum.

**Multiple unit data - RCR 2**

| Spacing on center | Initial center beam foot-candles | Watts per sq.ft. |
|---|---|---|
| 5' | 28.6 | 3.34 |
| 6' | 18.7 | 2.19 |
| 7' | 13.3 | 1.56 |
| 8' | 11.2 | 1.30 |
| 9' | 8.9 | 1.04 |

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

**Coefficients of utilization**

| Ceiling | 80% | | | | 70% | | 50% | | 30% | | 0% |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Wall | 70 | 50 | 30 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 0 |
| RCR | Zonal cavity method - Effective floor reflectance = 20% | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 111 | 111 | 111 | 106 | 100 |
| 1 | 111 | 107 | 103 | 100 | 105 | 98 | 100 | 95 | 95 | 92 | 88 |
| 2 | 102 | 96 | 90 | 85 | 94 | 84 | 90 | 82 | 82 | 80 | 77 |
| 3 | 95 | 86 | 79 | 73 | 84 | 73 | 82 | 72 | 72 | 70 | 67 |
| 4 | 88 | 78 | 70 | 64 | 76 | 64 | 74 | 63 | 63 | 62 | 60 |
| 5 | 82 | 71 | 63 | 57 | 70 | 57 | 68 | 56 | 56 | 56 | 53 |
| 6 | 76 | 64 | 57 | 51 | 64 | 51 | 62 | 50 | 50 | 50 | 48 |
| 7 | 71 | 59 | 51 | 46 | 58 | 46 | 57 | 45 | 45 | 45 | 43 |
| 8 | 67 | 54 | 47 | 42 | 54 | 41 | 53 | 41 | 41 | 41 | 39 |
| 9 | 63 | 50 | 43 | 38 | 50 | 38 | 49 | 38 | 38 | 37 | 36 |
| 10 | 59 | 47 | 40 | 35 | 46 | 35 | 45 | 34 | 34 | 34 | 33 |

Room Cavity Ratio

**Zonal lumens & percentages**

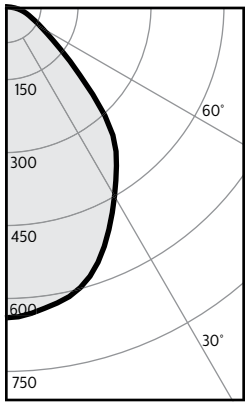
| Zone | Lumens | %Luminaire |
|---|---|---|
| 0-30 | 272 | 39.6% |
| 0-40 | 426 | 62.2% |
| 0-60 | 613 | 89.5% |
| 0-90 | 685 | 100.0% |

**CRI and CCT adjustment factors**

90CRI 2700K = 84%
80CRI 2700K = 100%
80CRI 3000K = 100%
80CRI 3500K = 105%
80CRI 4000K = 109%

### S7R835K10 • 14W LED, 80CRI, 3500K

**Candela Curves**




| Angle | Mean CP | Lumens |
|---|---|---|
| 0 | 639 | |
| 5 | 632 | 60 |
| 10 | 618 | |
| 15 | 597 | 167 |
| 20 | 558 | |
| 25 | 505 | 232 |
| 30 | 449 | |
| 35 | 399 | 249 |
| 40 | 345 | |
| 45 | 255 | 197 |
| 50 | 174 | |
| 55 | 120 | 111 |
| 60 | 88 | |
| 65 | 67 | 67 |
| 70 | 52 | |
| 75 | 40 | 42 |
| 80 | 28 | |
| 85 | 12 | 13 |
| 90 | 0 | |

**Report[1]: 965GFR**

| | | | |
|---|---|---|---|
| Output lumens: | 1139lms | Efficacy: | 84.4lm/w |
| Spacing Criterion: | 1.1 | CCT[3]: | 3500K |
| Beam Angle: | 83° | CRI: | 80min |
| Input Watts[2]: | 13.5W | | |

**Single unit data**

| Height to Lighted Plane | Initial center beam foot-candles | Beam dia. (ft)* |
|---|---|---|
| 5' | 26 | 5.5' |
| 6' | 18 | 6.6' |
| 7' | 13 | 7.7' |
| 8' | 10 | 8.8' |
| 9' | 8 | 9.9' |

* Beam diameter is where foot-candles drop to 50% of maximum.

**Multiple unit data - RCR 2**

| Spacing on center | Initial center beam foot-candles | Watts per sq.ft. |
|---|---|---|
| 5' | 28.6 | 3.74 |
| 6' | 18.7 | 2.45 |
| 7' | 13.3 | 1.75 |
| 8' | 11.2 | 1.46 |
| 9' | 8.9 | 1.17 |

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

**Coefficients of utilization**

| Ceiling | 80% | | | | 70% | | 50% | | 30% | | 0% |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Wall | 70 | 50 | 30 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 0 |
| RCR | Zonal cavity method - Effective floor reflectance = 20% | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 111 | 111 | 106 | 106 | 100 |
| 1 | 111 | 107 | 103 | 100 | 104 | 98 | 100 | 95 | 96 | 92 | 88 |
| 2 | 102 | 96 | 90 | 85 | 94 | 84 | 90 | 82 | 87 | 80 | 77 |
| 3 | 95 | 86 | 79 | 74 | 85 | 73 | 82 | 72 | 79 | 71 | 67 |
| 4 | 88 | 78 | 70 | 65 | 77 | 64 | 74 | 63 | 72 | 62 | 60 |
| 5 | 82 | 71 | 63 | 57 | 70 | 57 | 68 | 56 | 66 | 56 | 53 |
| 6 | 76 | 65 | 57 | 51 | 64 | 51 | 62 | 51 | 61 | 50 | 48 |
| 7 | 71 | 59 | 52 | 46 | 59 | 46 | 57 | 46 | 56 | 45 | 43 |
| 8 | 67 | 55 | 47 | 42 | 54 | 42 | 53 | 42 | 52 | 41 | 39 |
| 9 | 63 | 51 | 43 | 38 | 50 | 38 | 49 | 38 | 48 | 38 | 36 |
| 10 | 59 | 47 | 40 | 35 | 47 | 35 | 46 | 35 | 45 | 35 | 33 |

Room Cavity Ratio

**Zonal lumens & percentages**

| Zone | Lumens | %Luminaire |
|---|---|---|
| 0-30 | 459 | 40.3% |
| 0-40 | 708 | 62.2% |
| 0-60 | 1016 | 89.2% |
| 0-90 | 1139 | 100.0% |

**CRI and CCT adjustment factors**

90CRI 2700K = 84%
80CRI 2700K = 100%
80CRI 3000K = 100%
80CRI 3500K = 105%
80CRI 4000K = 109%

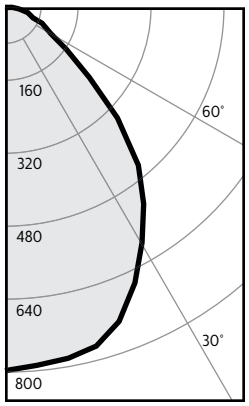
1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
2. Wattage: controlled to within 5%
3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

# S5R, S7R & S10R SlimSurface LED

## Round 5", 7" & 10" apertures

### S10R927K22 • 23W LED, 90CRI, 2700K

**Candela Curves**




| Angle | Mean CP | Lumens |
|---|---|---|
| 0 | 794 | |
| 5 | 788 | 75 |
| 10 | 781 | |
| 15 | 769 | 216 |
| 20 | 732 | |
| 25 | 669 | 307 |
| 30 | 595 | |
| 35 | 525 | 328 |
| 40 | 453 | |
| 45 | 344 | 265 |
| 50 | 238 | |
| 55 | 162 | 149 |
| 60 | 116 | |
| 65 | 87 | 87 |
| 70 | 66 | |
| 75 | 49 | 52 |
| 80 | 32 | |
| 85 | 13 | 15 |
| 90 | 0 | |

**Report[1]: S10R927K22BK**

| | | | |
|---|---|---|---|
| Output lumens: | 1493lms | Efficacy: | 65.5lm/w |
| Spacing Criterion: | 1.1 | CCT[3]: | 2700K |
| Beam Angle: | 86° | CRI: | 90min |
| Input Watts[2]: | 22.8W | | |

**Single unit data**

| Height to Lighted Plane | Initial center beam foot-candles | Beam dia. (ft)* |
|---|---|---|
| 5' | 32 | 5.5' |
| 6' | 22 | 6.6' |
| 7' | 16 | 7.7' |
| 8' | 12 | 8.8' |
| 9' | 10 | 9.9' |

* Beam diameter is where foot-candles drop to 50% of maximum.

**Multiple unit data - RCR 2**

| Spacing on center | Initial center beam foot-candles | Watts per sq.ft. |
|---|---|---|
| 5' | 63.3 | 1.01 |
| 6' | 41.5 | 0.66 |
| 7' | 29.7 | 0.47 |
| 8' | 24.7 | 0.39 |
| 9' | 19.8 | 0.32 |

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

**Coefficients of utilization**

| Ceiling | 80% | | | | 70% | | 50% | | 30% | | 0% |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Wall | 70 | 50 | 30 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 0 |
| RCR | Zonal cavity method - Effective floor reflectance = 20% | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 111 | 111 | 106 | 106 | 100 |
| 1 | 111 | 107 | 103 | 100 | 105 | 98 | 100 | 95 | 97 | 93 | 88 |
| 2 | 103 | 96 | 90 | 85 | 94 | 84 | 90 | 82 | 87 | 80 | 77 |
| 3 | 95 | 86 | 79 | 74 | 85 | 73 | 82 | 72 | 79 | 70 | 67 |
| 4 | 88 | 78 | 70 | 64 | 77 | 64 | 74 | 63 | 72 | 62 | 60 |
| 5 | 82 | 71 | 63 | 57 | 70 | 57 | 68 | 56 | 66 | 56 | 53 |
| 6 | 76 | 65 | 57 | 51 | 64 | 51 | 62 | 50 | 60 | 50 | 48 |
| 7 | 71 | 59 | 51 | 46 | 58 | 46 | 57 | 45 | 56 | 45 | 43 |
| 8 | 67 | 55 | 47 | 42 | 54 | 42 | 53 | 41 | 52 | 41 | 39 |
| 9 | 63 | 51 | 43 | 38 | 50 | 38 | 49 | 38 | 48 | 38 | 36 |
| 10 | 59 | 47 | 40 | 35 | 46 | 35 | 46 | 35 | 45 | 35 | 33 |

Room Cavity Ratio

**Zonal lumens & percentages**

| Zone | Lumens | %Luminaire |
|---|---|---|
| 0-30 | 598 | 40.0% |
| 0-40 | 925 | 62.0% |
| 0-60 | 1339 | 89.7% |
| 0-90 | 1493 | 100.0% |

**CRI and CCT adjustment factors**

| | |
|---|---|
| 90CRI 2700K | = 84% |
| 80CRI 2700K | = 100% |
| 80CRI 3000K | = 100% |
| 80CRI 3500K | = 105% |
| 80CRI 4000K | = 109% |

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