

# PHILIPS LIGHTOLIER

## Downlighting

### SlimSurface LED

5" and 7" round aperture  
surface mount downlight



Project: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Cat.No: \_\_\_\_\_  
 Type: \_\_\_\_\_  
 Lamps: \_\_\_\_\_ Qty: \_\_\_\_\_  
 Notes: \_\_\_\_\_

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

### Ordering guide

example: S5R830K7AL

Family	CRI	CCT	Lumens	Finish	Dimming
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>S5R</b> SlimSurface 5" Round	<b>8</b> 80 <b>9</b> 90 <sup>1</sup>	<b>27K</b> 2700K <b>30K</b> 3000K <b>35K</b> 3500K <b>40K</b> 4000K	<b>7</b> 650lm	<b>blank</b> White <b>AL</b> Aluminum <b>BK</b> Black  <b>W</b> White <b>AL</b> Aluminum <b>BK</b> Black	<b>blank</b> ELV / Triac (120V)  <b>Z10U</b> 0-10V (120V-277V)
<b>S7R</b> SlimSurface 7" Round	<b>8</b> 80 <b>9</b> 90 <sup>1</sup>	<b>27K</b> 2700K <b>30K</b> 3000K <b>35K</b> 3500K <b>40K</b> 4000K	<b>10</b> 1000lm	<b>blank</b> White <b>AL</b> Aluminum <b>BK</b> Black  <b>W</b> White <b>AL</b> Aluminum <b>BK</b> Black	<b>blank</b> ELV / Triac (120V)  <b>Z10U</b> 0-10V (120V-277V)

1. Configurations using 90 CRI are only available with 2700K and 3000K CCT.



White



Black



Aluminum

### Features

- Flange:** One piece plastic flange. Injection molded white, applied aluminum or black.
- Lens:** High transmittance lens allowing for smooth, comfortable light pattern.
- Power supply:** Integral class 2 driver. Factory wired electronic LED driver (see Electrical section for specifications)
- LED Strip:** Utilizes Philips LEDs.
- Lifetime:** Expected lifetime 50,000 hours and backed by a 5-year warranty (see Philips.com/warranties for details).
- Compliance:** Non-conductive fixture for shower light application.

### Electrical

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

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

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

For more details, please see LED-Dim spec sheet.

### Labels

cULus listed.  
 Wall-mounted: damp location only.  
 Ceiling-mounted: wet location.  
 Title 24 (JA8-2016) on 90CRI S7R models.  
 ENERGY STAR® certified.



# S5R & S7R SlimSurface LED

5" and 7" round aperture surface mount downlight

## Compatibility

Installs into standard J-box applications:



3 1/2" round (plastic)



4" square (plastic)  
Not compatible with S5R



4" octagonal (metal)



4" square (metal)  
Not compatible with S5R

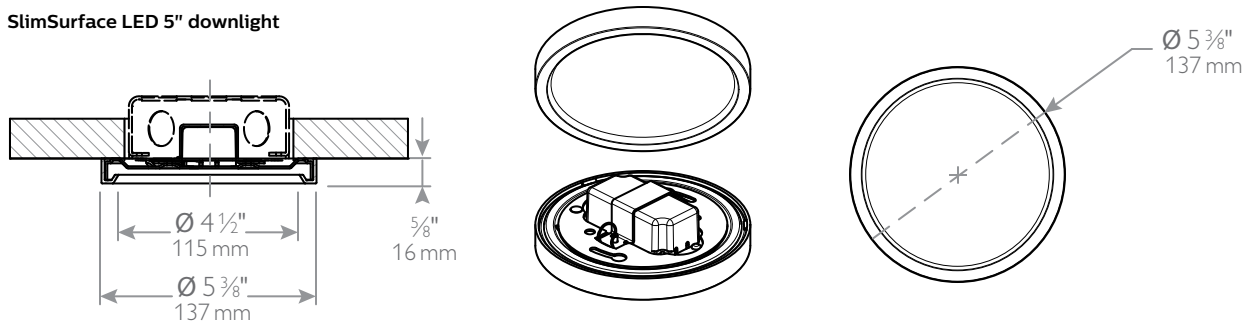


Fire rated J-box  
Fire rated classification is per the ceiling and junction box ratings.

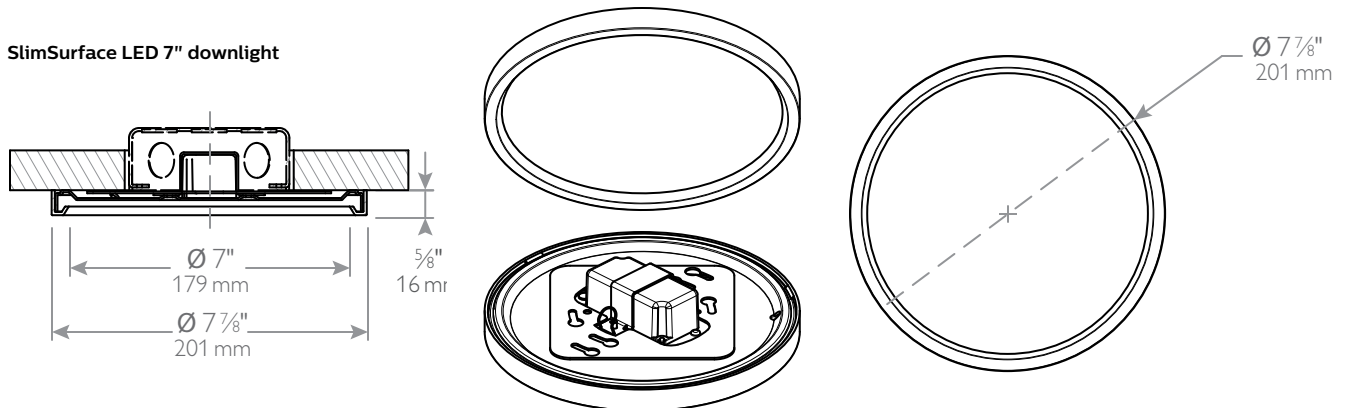
Note: A 2 1/8" deep octagon junction box is recommended for through circuit wiring applications.

## Dimensions

### SlimSurface LED 5" downlight



### SlimSurface LED 7" downlight

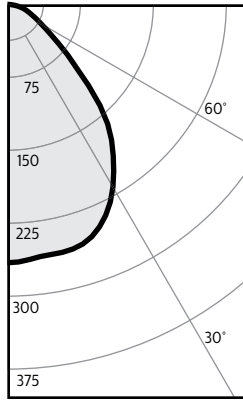


# S5R & S7R SlimSurface LED

5" and 7" round aperture surface mount downlight

## S5R927K7 • 10 W LED, 90CRI, 2700K

Candela Curves



Angle	Mean CP	Lumens
0	266	
5	263	25
10	261	
15	260	736
20	254	
25	239	110
30	217	
35	190	118
40	160	
45	118	91
50	81	
55	55	51
60	40	
65	30	31
70	23	
75	18	18
80	11	
85	4	5
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	11	6.0'
6'	7	7.2'
7'	5	8.4'
8'	4	9.6'
9'	3	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'	21.8	0.40
6'	14.2	0.26
7'	10.2	0.19
8'	8.5	0.16
9'	6.8	0.13

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
	70	50	30	10	50	10	50	10	50	10	0
Wall	70	50	30	10	50	10	50	10	50	10	0

RCR Zonal cavity method - Effective floor reflectance = 20%

Room Cavity Ratio	80%				70%		50%		30%		0%
	70	50	30	10	50	10	50	10	50	10	0
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

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	208	39.8%
0-40	326	62.5%
0-60	469	89.7%
0-90	522	100.0%

CRI and CCT adjustment factors

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

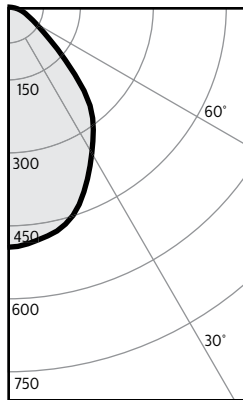
Report: 1053GFR

Output lumens:	523lms	Efficacy:	57.4lm/w
Spacing Criterion:	1.2	CCT <sup>3</sup> :	2700K
Beam Angle:	87°	CRI:	90min
Input Watts <sup>2</sup> :	9.1W		

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

## S7R927K10 • 14 W LED, 90CRI, 2700K

Candela Curves



Angle	Mean CP	Lumens
0	496	
5	490	46
10	479	
15	464	130
20	433	
25	391	180
30	348	
35	309	193
40	265	
45	197	152
50	135	
55	92	85
60	68	
65	51	52
70	40	
75	30	32
80	21	
85	9	10
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	20	5.5'
6'	14	6.6'
7'	10	7.7'
8'	8	8.8'
9'	6	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'	21.8	2.89
6'	14.2	1.90
7'	10.2	1.35
8'	8.5	1.13
9'	6.8	0.90

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
	70	50	30	10	50	10	50	10	50	10	0
Wall	70	50	30	10	50	10	50	10	50	10	0

RCR Zonal cavity method - Effective floor reflectance = 20%

Room Cavity Ratio	80%				70%		50%		30%		0%
	70	50	30	10	50	10	50	10	50	10	0
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

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	356	40.5%
0-40	549	62.4%
0-60	786	89.3%
0-90	880	100.0%

CRI and CCT adjustment factors

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

Report: 962GFR

Output lumens:	880lms	Efficacy:	65.2lm/w
Spacing Criterion:	1.1	CCT <sup>3</sup> :	2700K
Beam Angle:	83°	CRI:	90min
Input Watts <sup>2</sup> :	13.5W		

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

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\_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.