

PHILIPS LIGHTOLIER

Downlighting

SlimSurface LED

4" and 6" square 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 square apertures are available as a 4" 650lm & 6" 1000lm fixture.

Ordering guide

example: S4S830K7AL

Family	CRI	CCT	Lumens	Finish	Dimming	UL listing
S4S SlimSurface 4" Square	8 80 9 90 ¹	27K 2700K 30K 3000K 35K 3500K 40K 4000K	7 650lm	blank White AL Aluminum BK Black W White AL Aluminum BK Black	blank Triac (120V) Z10U 0-10V (120V-277V)	blank Wet location
	8 80	30K 3000K	7 650lm	blank White	blank Triac (120V)	-D Damp location
S6S SlimSurface 6" Square	8 80 9 90 ¹	27K 2700K 30K 3000K 35K 3500K 40K 4000K	10 1000lm	blank White AL Aluminum BK Black W White AL Aluminum BK Black	blank Triac (120V) Z10U 0-10V (120V-277V)	blank Wet location
	8 80	30K 3000K	10 1000lm	blank White	blank Triac (120V)	-D Damp location



White



Black



Aluminum

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

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. The 6" square product complies with the requirements of the California Energy Commission regulated under Title 24, and has been listed in the Title 20 database.

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 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 4" 630lm	Triac	120V	50/60Hz	0.08A	9.5W	<15%	>0.9	-20°C
	0-10V	120V	50/60Hz	0.08A	10.0W	<20%	>0.9	-20°C
		277V	50/60Hz	0.04A	10.2W	<20%	>0.9	-20°C
Slim 6" 980lm	Triac	120V	50/60Hz	0.13A	14.2W	<15%	>0.9	-20°C
	0-10V	120V	50/60Hz	0.12A	14.5W	<20%	>0.9	-20°C
		277V	50/60Hz	0.06A	14.7W	<20%	>0.9	-20°C

Labels

cULus listed for damp locations (wall mount applications and wet location - covered ceilings). ENERGY STAR® certified.



S4S & S6S SlimSurface LED

4" and 6" square aperture surface mount downlight

Compatibility

Installs into standard J-box applications:



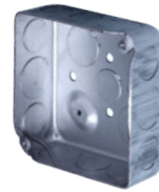
3 1/2" round (plastic)



4" square (plastic)
Not compatible with S5R



4" octagonal (metal)



4" square (metal)
Not compatible with S5R

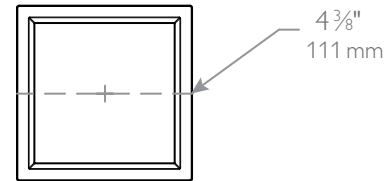
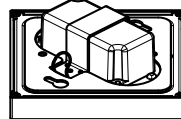
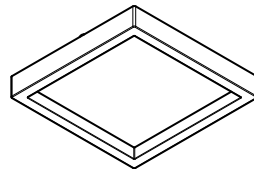
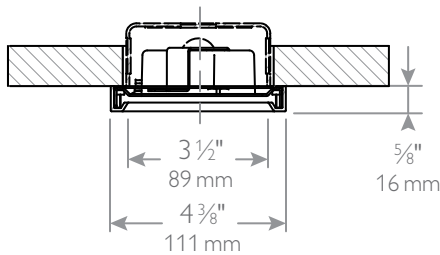


Fire rated J-box
Fire rated classification is per the ceiling and junction box ratings.

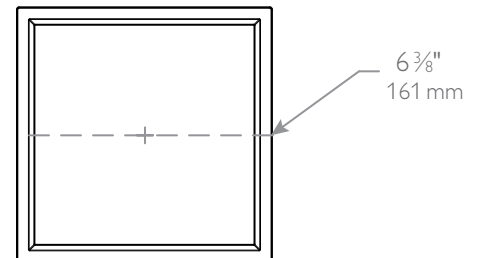
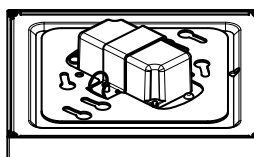
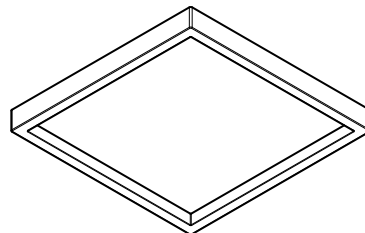
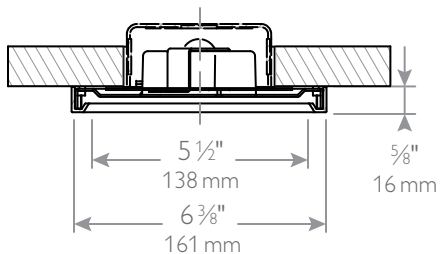
Note: A 2 1/8" deep octagon junction box is recommended for through circuit wiring applications.

Dimensions

SlimSurface LED 4" downlight



SlimSurface LED 6" downlight

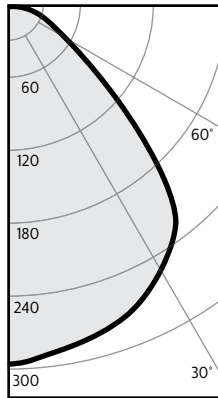


S4S & S6S SlimSurface LED

4" and 6" square aperture surface mount downlight

S4S830K7 • 10W LED, 3000K, 80CRI

Candela Curves



Angle	Mean CP	Lumens
0	296	
5	292	28
10	286	
15	281	79
20	275	
25	264	121
30	252	
35	235	146
40	212	
45	160	123
50	109	
55	76	70
60	54	
65	40	40
70	30	
75	22	22
80	13	
85	4	5
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	12	6.5'
6'	8	7.8'
7'	6	9.1'
8'	5	10.4'
9'	4	11.7'

* 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'	26.6	0.43
6'	17.5	0.28
7'	12.5	0.20
8'	10.4	0.17
9'	8.3	0.13

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

Coefficients of utilization

	80%					70%		50%		30%		0%
	70	50	30	10	50	10	50	10	50	10	0	
Room Cavity Ratio	119	119	119	119	116	116	111	111	106	106	100	
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	95	89	84	93	83	90	82	87	80	76	
3	94	85	78	72	84	72	81	71	78	69	66	
4	87	77	69	63	75	63	73	62	71	61	58	
5	81	69	61	55	68	55	66	55	64	54	52	
6	75	63	55	49	62	49	60	49	59	48	46	
7	70	58	50	44	57	44	55	44	54	43	41	
8	65	53	45	40	52	40	51	39	50	39	37	
9	61	49	41	36	48	36	47	36	46	36	34	
10	58	45	38	33	45	33	44	33	43	33	31	

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	227	35.9%
0-40	373	59.0%
0-60	566	89.5%
0-90	633	100.0%

CRI and CCT adjustment factors

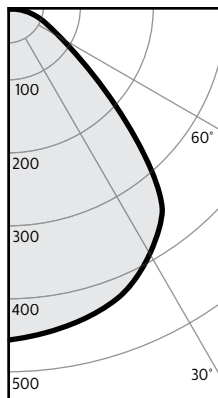
90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report: 437GFR

Output lumens:	633lms	Input Watts ² :	9.6W
Spacing Criterion:	1.3	Efficacy:	65.9lm/w
Field Angle:	141°	CCT ³ :	3000K
Beam Angle:	92°	CRI:	>80

S6S830K10 • 14W LED, 3000K, 80CRI

Candela Curves



Angle	Mean CP	Lumens
0	455	
5	451	43
10	445	
15	439	124
20	429	
25	412	190
30	393	
35	365	226
40	321	
45	239	185
50	166	
55	115	105
60	83	
65	62	62
70	47	
75	35	36
80	23	
85	10	10
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	18	6.5'
6'	13	7.8'
7'	9	9.1'
8'	7	10.4'
9'	6	11.7'

* 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'	41.3	0.63
6'	27.1	0.41
7'	19.3	0.30
8'	16.1	0.25
9'	12.9	0.20

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

Coefficients of utilization

	80%					70%		50%		30%		0%
	70	50	30	10	50	10	50	10	50	10	0	
Room Cavity Ratio	119	119	119	119	116	116	111	111	106	106	100	
0	119	119	119	119	116	116	111	111	106	106	100	
1	110	106	103	100	104	98	100	95	96	92	87	
2	102	95	89	84	93	83	90	81	87	80	76	
3	94	85	78	72	84	72	81	70	78	69	66	
4	87	77	69	63	75	63	73	62	71	61	58	
5	81	69	61	55	68	55	66	55	64	54	52	
6	75	63	55	49	62	49	61	49	59	48	46	
7	70	58	50	44	57	44	55	44	54	43	41	
8	66	53	45	40	52	40	51	39	50	39	37	
9	61	49	41	36	48	36	47	36	46	36	34	
10	58	45	38	33	45	33	44	33	43	33	31	

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	356	36.3%
0-40	583	59.4%
0-60	872	89.0%
0-90	981	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: 435GFR

Output lumens:	981lms	Input Watts ² :	14.2W
Spacing Criterion:	1.3	Efficacy:	69.1lm/w
Field Angle:	142°	CCT ³ :	3000K
Beam Angle:	92°	CRI:	>80

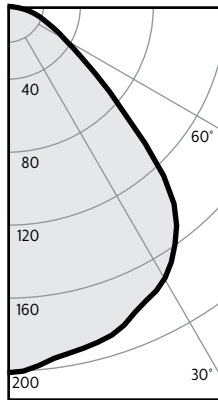
1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
 2. Wattage: controlled to within 5%
 3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSI C78.377-2008: Specifications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

S4S & S6S SlimSurface LED

4" and 6" square aperture surface mount downlight

S4S927K7 • 10 W LED, 2700 K, 90 CRI

Candela Curves



Report#: 684GFR

Output lumens:	428 lms	Input Watts ² :	9.8 W
Spacing Criterion:	1.3	Efficacy:	43.6 lm/w
Field Angle:	142°	CCT ³ :	2700 K
Beam Angle:	92°	CRI:	>90

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	8	6.5'
6'	6	7.8'
7'	4	9.1'
8'	3	10.4'
9'	2	11.7'

* 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'	18.0	0.43
6'	11.8	0.29
7'	8.4	0.20
8'	7.0	0.17
9'	5.6	0.14

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

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
	70	50	30	10	50	10	50	10	50	10	0	
Wall	Zonal cavity method - Effective floor reflectance = 20%											
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	110	106	103	100	104	98	100	95	96	92	87
	2	102	95	89	84	93	83	90	81	87	80	76
	3	94	85	78	72	84	72	81	70	78	69	66
	4	87	77	69	63	75	62	73	62	71	61	58
	5	81	69	61	55	68	55	66	54	64	54	51
	6	75	63	55	49	62	49	60	49	59	48	46
	7	70	58	50	44	57	44	55	44	54	43	41
	8	65	53	45	40	52	40	51	39	50	39	37
	9	61	49	41	36	48	36	47	36	46	36	34
	10	58	45	38	33	45	33	44	33	43	33	31

Zonal lumens & percentages

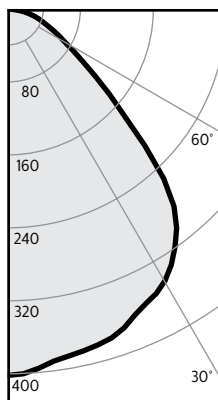
Zone	Lumens	%Luminaire
0-30	154	35.9%
0-40	252	59.0%
0-60	381	89.1%
0-90	428	100.0%

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%

S6S927K10 • 14 W LED, 2700 K, 90 CRI

Candela Curves



Report#: 682GFR

Output lumens:	676 lms	Input Watts ² :	14 W
Spacing Criterion:	1.1	Efficacy:	48.3 lm/w
Field Angle:	131°	CCT ³ :	2700 K
Beam Angle:	83°	CRI:	>90

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	16	5.5'
6'	11	6.6'
7'	8	7.7'
8'	6	8.8'
9'	5	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'	28.7	0.62
6'	18.8	0.41
7'	13.4	0.29
8'	11.2	0.24
9'	9.0	0.19

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

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
	70	50	30	10	50	10	50	10	50	10	0	
Wall	Zonal cavity method - Effective floor reflectance = 20%											
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	111	107	103	100	105	99	100	95	97	93	88
	2	103	96	90	85	94	84	91	82	87	81	77
	3	95	86	79	74	85	73	82	72	79	71	68
	4	88	78	70	65	77	64	74	63	72	63	60
	5	82	71	63	57	70	57	68	56	66	56	53
	6	77	65	57	51	64	51	62	51	61	50	48
	7	72	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	271	40.1%
0-40	420	62.1%
0-60	607	89.7%
0-90	676	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%

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.

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