

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 in a 4" 650lm and 6" 1000lm fixture.

Ordering information

example: S4S830K7AL

Series	Size	Shape	CRI	CCT	Lumens	Finish	UL listing
S		S					
S SlimSurface	4 4"	S Square	8 80 9 90 ¹	27K 2700K 30K 3000K 35K 3500K 40K 4000K	7 650lm	blank White AL Aluminum BK Black	blank Wet location
	4 4"	S Square	8 80	30K 3000K	7 650lm	blank White	-D Damp location
	6 6"	S Square	8 80 9 90 ¹	27K 2700K 30K 3000K 35K 3500K 40K 4000K	10 1000lm	blank White AL Aluminum BK Black	blank Wet location
	6 6"	S Square	8 80	30K 3000K	10 1000lm	blank White	-D Damp location



1. 90 CRI is only available with 2700K

Note: Lumen output is calculated based on 80 CRI and 3000K CCT. Please consult adjustment factors table on page 3 for other lumen outputs.

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. This 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: All luminaires are intended for use with incandescent standard type dimmers (TRIAC). 10%-100% dimming range.

Lumen Output	Max. Input Current	Max. Input Power
630lm	0.08A	9.5W
980lm	0.13A	14.2W


Input Voltage 120V
 Input Frequency 50/60Hz
 Power Factor > 0.9
 Max. THD < 15%
 Minimum Operating Temperature -20°C

Labels

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

Compatibility

Installs into standard J-box applications:

-  3 1/2" round (plastic)
-  4" square (plastic)
Not compatible with S4S
-  4" octagonal (metal)
-  4" square (metal)
Not compatible with S4S

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

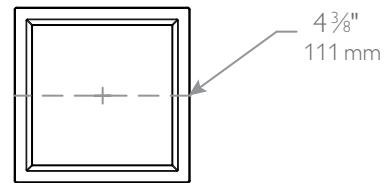
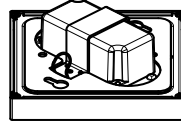
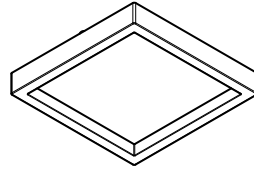
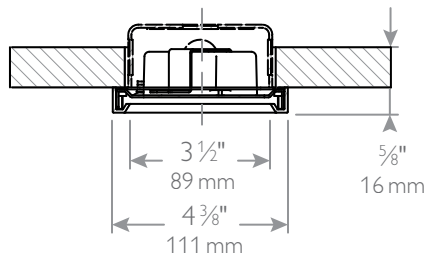


S4S & S6S SlimSurface LED

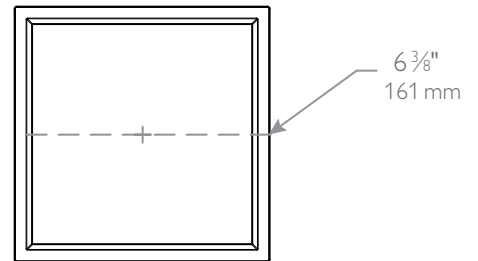
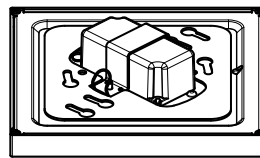
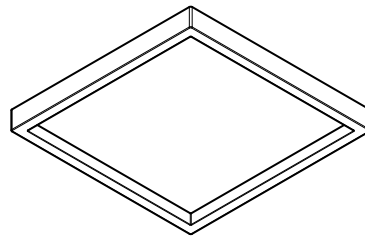
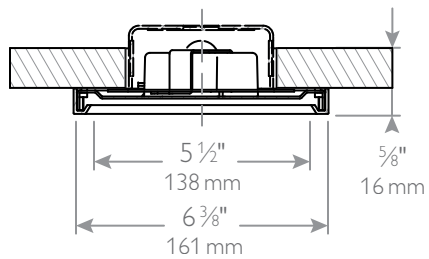
4" and 6" square aperture surface mount downlight

Dimensions

SlimSurface LED 4" downlight



SlimSurface LED 6" downlight

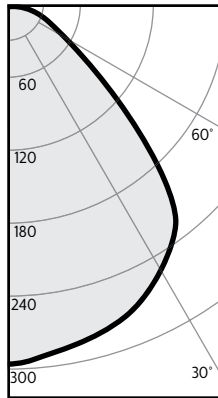


S4S & S6S SlimSurface LED

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

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	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

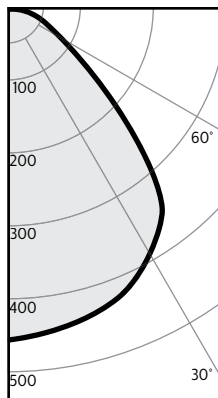
90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

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

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	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

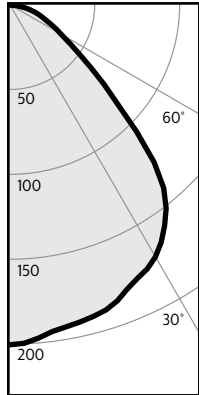
1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
 2. Wattage: controlled to within 5%
 3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSI C78.377-2008: Specifications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



Angle	Mean CP	Lumens
0	200	
5	197	19
10	193	
15	190	53
20	186	
25	178	82
30	171	
35	159	99
40	141	
45	106	82
50	72	
55	50	46
60	36	
65	27	27
70	21	
75	15	16
80	10	
85	3	4
90	0	

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

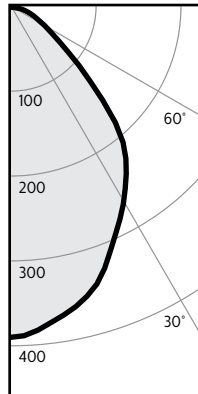
90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

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

S6S927K10 • 14 W LED, 2700 K, 90 CRI

Candela Curves



Angle	Mean CP	Lumens
0	389	
5	381	36
10	368	
15	352	99
20	327	
25	295	136
30	266	
35	237	148
40	208	
45	155	120
50	105	
55	71	67
60	51	
65	39	39
70	30	
75	22	23
80	15	
85	6	7
90	0	

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%

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

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.

© 2015 Koninklijke Philips N.V. All rights reserved.
 Philips reserves the right to make changes in specifications and/or to discontinue any product at any time without notice or obligation and will not be liable for any consequences resulting from the use of this publication.
philips.com/luminaires



Philips Lighting, North America Corporation
 200 Franklin Square Drive, Somerset, NJ 08873
 Tel. 855-486-2216

Philips Lighting Canada Ltd.
 A division of Philips Electronics Ltd.
 281 Hillmount Rd, Markham, ON, Canada L6C 2S3
 Tel. 800-668-9008