

LIGHTOLIER

by @signify

Downlighting

SlimSurface LED

S4S & S6S Square 4" & 6" Apertures



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

Ordering guide

example: S4S830K7AL

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

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 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 4" 650lm	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" 1000lm	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

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 S6S models.
ENERGY STAR® certified.



S4S & S6S SlimSurface LED

Square 4" & 6" Apertures

Compatibility

Installs into standard J-box applications:



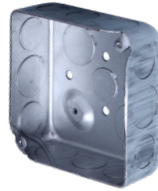
3 1/2" round (plastic)



4" square (plastic)
Not compatible with S5R



4" octagonal (metal)



4" square (metal)
Not compatible with S4S

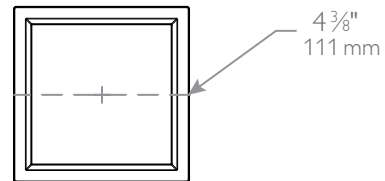
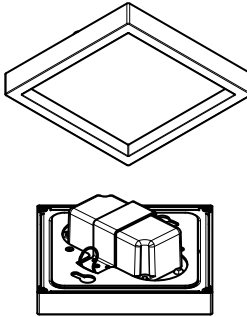
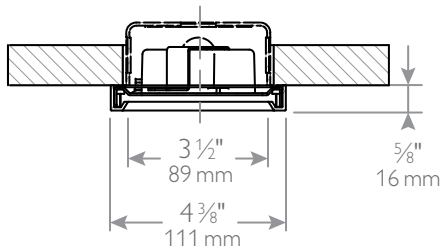


Fire rated J-box
Fire rated classification is per the ceiling and junction box ratings.

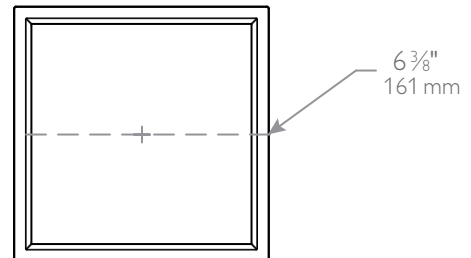
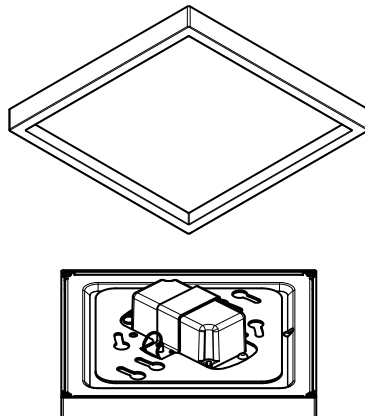
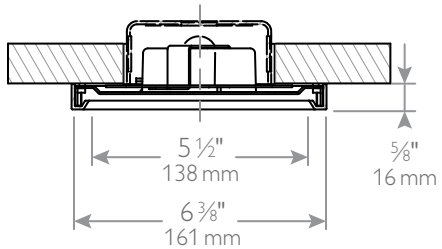
Note: A 2 1/8" deep octagon junction box is recommended for through circuit wiring applications.

Dimensions

SlimSurface LED 4" downlight



SlimSurface LED 6" downlight

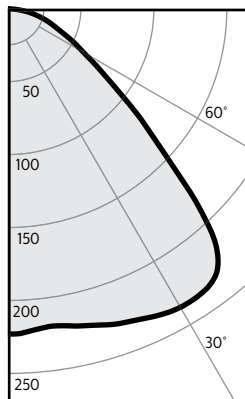


S4S & S6S SlimSurface LED

Square 4" & 6" Apertures

S4S827K7 • 10W LED, 80 CRI, 2700K

Candela Curves



Angle	Mean CP	Lumens
0	223	21
5	221	
10	221	
15	225	64
20	229	
25	233	108
30	237	
35	236	146
40	224	
45	175	133
50	121	
55	83	76
60	60	
65	44	44
70	33	
75	24	25
80	15	
85	5	6
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	9	7.5'
6'	6	9.0'
7'	5	10.5'
8'	3	12.0'
9'	3	13.5'

* 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'	25.9	0.41
6'	17.0	0.27
7'	12.1	0.19
8'	10.1	0.16
9'	8.1	0.13

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%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	110	106	102	99	104	97	100	94	96	91	87
	2	101	94	88	83	92	82	89	80	85	78	74
	3	93	84	76	70	82	70	79	69	77	67	64
	4	86	75	67	61	74	60	71	59	69	59	56
	5	79	67	59	53	66	53	64	52	62	51	49
	6	73	61	52	46	60	46	58	46	57	45	43
	7	68	55	47	41	55	41	53	41	52	41	38
	8	63	51	42	37	50	37	49	37	47	36	34
	9	59	46	38	33	46	33	45	33	44	33	31
10	55	43	35	30	42	30	41	30	40	30	28	

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	192	30.9%
0-40	338	54.4%
0-60	547	88.0%
0-90	622	100.0%

CRI and CCT adjustment factors

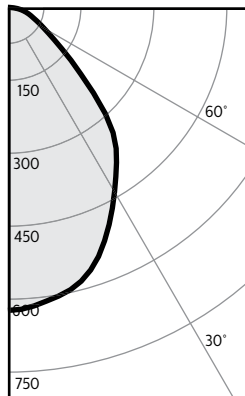
90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report: 944GFR

Output lumens:	622 lms	Efficacy:	67.6 lm/w
Spacing Criterion:	1.5	CCT ³ :	2700K
Beam Angle:	101°	CRI:	80 min
Input Watts ² :	9.2 W		

S6S827K10 • 14W LED, 80 CRI, 2700K

Candela Curves



Angle	Mean CP	Lumens
0	625	59
5	618	
10	604	
15	584	164
20	546	
25	494	227
30	440	
35	390	244
40	337	
45	250	193
50	170	
55	117	108
60	85	
65	65	65
70	51	
75	39	41
80	27	
85	12	13
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	25	5.5'
6'	17	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'	24.2	3.68
6'	15.8	2.42
7'	11.3	1.73
8'	9.5	1.44
9'	7.5	1.15

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%										
Room Cavity Ratio	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	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	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	449	40.4%
0-40	693	62.3%
0-60	994	89.3%
0-90	1113	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: 964GFR

Output lumens:	1113 lms	Efficacy:	83.1 lm/w
Spacing Criterion:	1.1	CCT ³ :	2700K
Beam Angle:	83°	CRI:	80 min
Input Watts ² :	13.4 W		

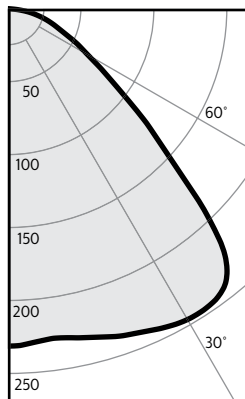
1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
2. Wattage: controlled to within 5%
3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSI C78.377-2008: Specifications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

S4S & S6S SlimSurface LED

Square 4" & 6" Apertures

S4S830K7 • 10W LED, 80 CRI, 3000K

Candela Curves



Angle	Mean CP	Lumens
0	231	22
5	229	
10	230	
15	236	67
20	241	
25	246	113
30	248	
35	247	153
40	237	
45	185	139
50	125	
55	87	80
60	63	
65	47	47
70	34	
75	25	26
80	15	
85	5	6
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	9	7.5'
6'	6	9.0'
7'	5	10.5'
8'	4	12.0'
9'	3	13.5'

* 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'	27.2	0.40
6'	17.9	0.26
7'	12.8	0.19
8'	10.6	0.16
9'	8.5	0.13

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%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	110	106	102	99	104	97	100	94	96	91	87
	2	101	94	88	83	92	82	89	80	85	78	74
	3	93	84	76	70	82	70	79	69	77	67	64
	4	86	75	67	61	74	60	71	59	69	59	56
	5	79	67	59	53	66	52	64	52	62	51	49
	6	73	61	52	46	60	46	58	46	57	45	43
	7	68	55	47	41	55	41	53	41	52	40	38
	8	63	51	42	37	50	37	49	36	47	36	34
	9	59	46	38	33	46	33	45	33	44	33	31
10	55	43	35	30	42	30	41	30	40	30	28	

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	202	30.9%
0-40	355	54.3%
0-60	574	87.9%
0-90	653	100.0%

CRI and CCT adjustment factors

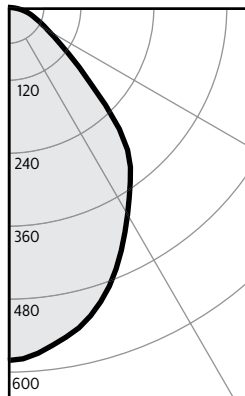
90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report: 945GFR

Output lumens:	653 lms	Efficacy:	71.8 lm/w
Spacing Criterion:	1.5	CCT ³ :	3000 K
Beam Angle:	86°	CRI:	80 min
Input Watts ² :	9.1 W		

S6S830K10 • 14W LED, 80 CRI, 3000K

Candela Curves



Angle	Mean CP	Lumens
0	582	54
5	572	
10	551	
15	526	148
20	489	
25	442	203
30	394	
35	351	220
40	307	
45	227	176
50	153	
55	106	99
60	77	
65	59	60
70	45	
75	34	36
80	22	
85	10	10
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	23	5.5'
6'	16	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	3.33
6'	17.1	2.18
7'	12.2	1.56
8'	10.2	1.30
9'	8.1	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%											
Room Cavity Ratio	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	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	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	405	40.2%
0-40	625	62.1%
0-60	900	89.5%
0-90	1006	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: 958GFR

Output lumens:	1006 lms	Efficacy:	75.1 lm/w
Spacing Criterion:	1.1	CCT ³ :	3000 K
Beam Angle:	82°	CRI:	80 min
Input Watts ² :	13.4 W		

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.