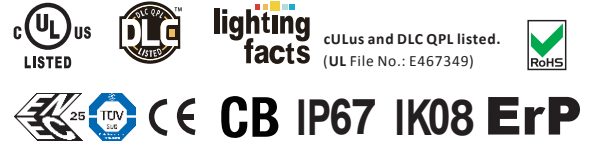


KSL- LED ROADWAY/STREET LIGHT



Certified by TUV-sud according to the following standards:

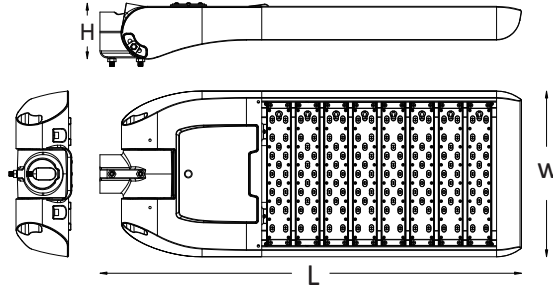
- IEC /EN 60598-1: 2008
- IEC /EN 60598-2-3/A1: 2011
- EN 62493:2010
- IEC62471: 2008
- IEC62471-2:2009
- EN 55015: 2013
- EN61547:2009
- EN61000-3-2/A2:2009
- EN 61000-3-3:2013
- (EU) 1194/2012:2012-12-12
- (EC) 244/2009:2009-03-18

ENEC: No.: U6140888771007 (KSL-[®]-U models)

CB: No. : SG-LE-00951 (KSL-[®]-U models)

IK08 rating, 3G vibration, 1000 hours salt mist test reports are furnished upon request.

DIMENSIONAL DRAWING



FEATURES & BENEFITS

- 1) Based on the most successful product development, manufacturing and application expertise and experience.
- 2) Powered by the worldwide best LED, LED drivers, and other key components.
- 3) cULus, DLC listed, and certified as per CE (lvd, emc, RoHs, Erp directives), CB, ENEC standards.
- 4) Sufficient optics solutions at option to meet almost all roadway/street and area lighting application standards.
- 5) Modular mechanical construction, and the most thoughtful design, make the product the most user friendly and easiest for assembly, maintenance and installation.
- 6) The most competitive in cost performance, and one of the best ownership costs. 10 years limited warranty, free from maintenance for 10 years at least, the most competitive in operating cost, soonest in return on investment (ROI) or payback.
- 7) Environmentally friendly packaging materials (EPE).

APPLICATIONS

Municipal and rural street, roadway, or area lighting.

KSL- LED ROADWAY/STREET LIGHT

ORDERING INFORMATION

Example 1: KSL-30-U-T3L-50K-GR-00
 Example 2: KSL-80-UH-T3L-50K-GR-00

Product ID	Power (W)	Voltage	Or	Product ID	Power (W)	Voltage	Optic Lens	CCT* (ANSI)	Housing Color**	Lighting Control			
KSL	30	U-120-277	Or	KSL	80	UH-480	T1M	30K	GR	BLANK			
	30W				80W		T2M				3045	Grey	Not required
	60				120		T3M				±175K	(RAL:7004)	
	60W				120W		T3L	40K	BK	PC			
	90				160		T4S				3985	Black	Photocell
	90W				160W		T5U	±275K	(RAL:9011)	MS			
	120				200		T5V	50K	WH	Motion Sensor			
	120W				200W		T5W				5028	White	
	150				240		T5S	±283K	(RAL:9010)	PCMS			
	150W				240W		T5M	57K	BZ	Motion Sensor			
	180				280		T5L				5665	Bronze	
	180W				280W		T5D	±355K	(RAL:8017)	DC			
210	320								DM				
210W	320W								1-10V dimming				
240													
240W													
270													
270W													
300													
300W													

Notes:

● CCT*:

- LEDs at 5000k CCT are always in stock largely to support prompt delivery of finished products.
- LEDs at 3000k, 4000k, 5700k CCT are in stock as well, but the quantity is small to meet small needs, and the shipment for the finished products with these LEDs cannot be made sooner than those with LEDs at 5000k CCT.
- LEDs at CCT or wavelength (unit nm) which is not in stock are available upon request, but the lead time for the finished products with these types of LEDs cannot be soon, also the unit price is higher.

● Housing Color**:

- GR (Grey) housings are always in stock largely to support prompt delivery of finished products.
- BK (Black), WH (White), BZ (Bronze) housing are available too, and the unit price of the finished product with these types of housings may be different from that with grey housing, but the lead time is longer relatively.
- Other housing colors which are not mentioned can be customized, but the unit price is higher, the lead time is much longer.

● Optic Lens Options:

- | | |
|-------------------------|------------------------------------|
| 1) T1M: Type I Medium | 7) T5V: 25° |
| 2) T2M: Type II Medium | 8) T5W: 40° |
| 3) T3M: Type III Medium | 9) T5S: 60° |
| 4) T3L: Type III Long | 10) T5M: 90° |
| 5) T4S: Type IV Short | 11) T5L: 120° |
| 6) T5U: 10° | 12) T5D: Glare resistant diffuser. |

- 1, 2, 3, 4, 7, 8: DALI control is not available.
 7, 8: motion sensing is not available.
 Photocell is available based on customization request.
 8: 1-10V dimming and motion sensing are not available.

KSL- LED ROADWAY/STREET LIGHT

BRIEF SPECIFICATIONS

Model No.	KSL-30	KSL-60	KSL-90	KSL-120	KSL-150	KSL-180	KSL-210	KSL-240	KSL-270	KSL-300
Lumens @ 5000K	3585	7214	11132	15513	18502	21988	26528	29475	33197	36610
Nominal Power	30W	60W	90W	120W	150W	180W	210W	240W	270W	300W
Net Weight	6.46kg	7.09kg	8.22kg	8.88kg	9.47kg	10.83kg	11.47kg	12.49kg	13.12kg	13.88kg
EPA (1 Fixture at 0° mount)	0.46sq. ft.	0.5sq. ft.	0.54sq. ft.	0.59sq. ft.	0.63sq. ft.	0.67sq. ft.	0.72sq. ft.	0.76sq. ft.	0.8sq. ft.	0.84sq. ft.
Gross Weight	7.46kg	8.16kg	9.35kg	10.05kg	10.73kg	12.15kg	12.84kg	13.91kg	14.64kg	15.44kg
Dimensions (L x W x H)	463 x 345 x 116(mm)	523 x 345 x 116(mm)	583 x 345 x 116(mm)	643 x 345 x 116(mm)	703 x 345 x 116(mm)	763 x 345 x 116(mm)	823 x 345 x 116(mm)	883 x 345 x 116(mm)	943 x 345 x 116(mm)	1033 x 345 x 116(mm)
Carton Dimensions (L x W x H)	535 x 425 x 160(mm)	595 x 425 x 160(mm)	655 x 425 x 160(mm)	715 x 425 x 160(mm)	775 x 425 x 160(mm)	835 x 425 x 160(mm)	895 x 425 x 160(mm)	955 x 425 x 160(mm)	1015 x 425 x 160(mm)	1075 x 425 x 160(mm)
Input	U - 120V-277V AC 50/60Hz or 220-240V AC 50/60Hz									

Model No.	KSL-80	KSL-120	KSL-160	KSL-200	KSL-240	KSL-280	KSL-320
Lumens @ 5000K	8357	12509	16655	19894	24653	28693	33428
Nominal Power	80W	120W	160W	200W	240W	280W	320W
Net Weight	7.09kg	8.22kg	8.88kg	10kg	10.83kg	11.47kg	12.49kg
EPA (1 Fixture at 0° mount)	0.5sq. ft.	0.54sq. ft.	0.59sq. ft.	0.63sq. ft.	0.67sq. ft.	0.72sq. ft.	0.76sq. ft.
Gross Weight	8.16kg	9.35kg	10.05kg	11kg	12.15kg	12.84kg	13.91kg
Dimensions (L x W x H)	523 x 345 x 116(mm)	583 x 345 x 116(mm)	643 x 345 x 116(mm)	703 x 345 x 116(mm)	763 x 345 x 116(mm)	823 x 345 x 116(mm)	883 x 345 x 116(mm)
Carton Dimensions (L x W x H)	595 x 425 x 160(mm)	655 x 425 x 160(mm)	715 x 425 x 160(mm)	775x 425 x 160(mm)	835 x 425 x 160(mm)	895 x 425 x 160(mm)	955 x 425 x 160(mm)
Input	UH - 347-480V AC 50/60Hz						

Drive current: KSL*-U: 530mA KSL*-UH: 700mA

General specifications for all the above models.

Electrical:

1. Power Factor: >0.95 at full load.
2. Total Harmonic Distortion: <20% at full load.

Lifetime per TM21 and working temperature:

3. Reported L70 Lifetime: >60,000 hours .
Calculated L70 Lifetime: >100,000 hours.
4. Ambient Temperature (Ta):
-40 to 50 degrees celcius (-40 to 122 degrees Fahrenheit).

Typical Luminous Efficacy:

- 5.KSL*-U models: 110 lm/w (5000K CCT, Ra>70).
- 6.KSL*-UH models: 100 lm/w (5000K CCT, Ra>70). System Efficacy and power are customized, e.g. 130 lm/W.

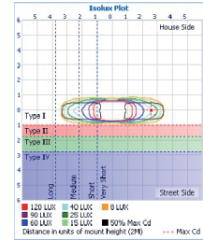
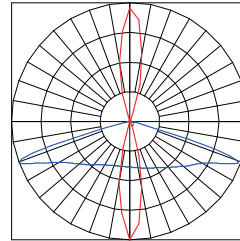
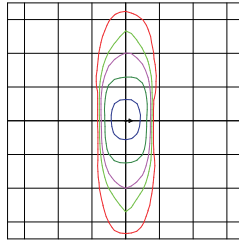
Materials

7. LED option: CREE or PHILIPS Lumileds.
8. LED Driver Origin: PHILIPS or MEANWELL.
9. Optional NEMA photocell with its receptacle, or shorting cap with its receptacle.
10. Optional motion sensing dimmer for future energy saving and intelligent lighting control.
11. Optional bird spike to avoid bird waste pollution
12. Worldwide top brand quick connector for tool-free wiring, and terminal block for easiest wiring, two axis T-shaped bubble level for ease of leveling and tilting angle setup as well.
13. Die cast aluminium LED driver compartment, spigot, and led light bar end cap with corrosion resistant powder coating. Extruded aluminium alloy heat sink with anodized finish. 304 graded stainless steel protective cover to protect UV resistant polycarbonate lenses.

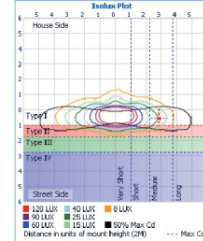
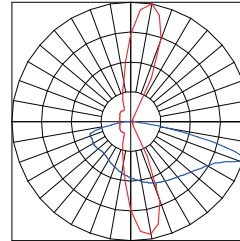
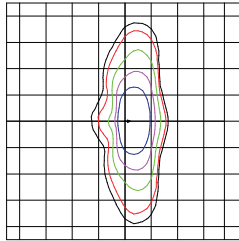
KSL- LED ROADWAY/STREET LIGHT

PHOTOMETRICS

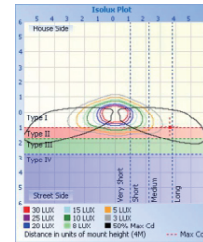
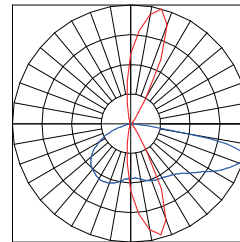
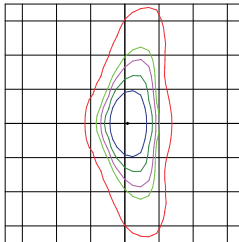
Optic Lens code: T1M
IES Classification: IES Type I Medium



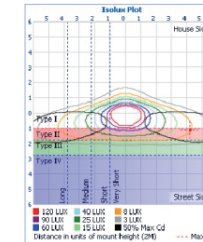
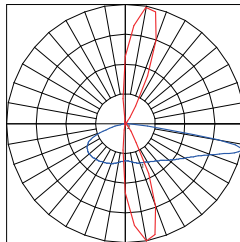
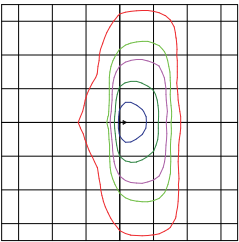
Optic Lens code: T2M
IES Classification: IES Type II Medium



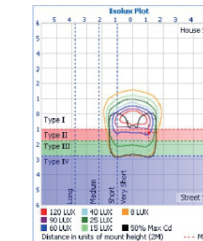
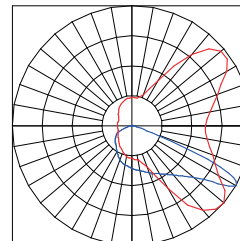
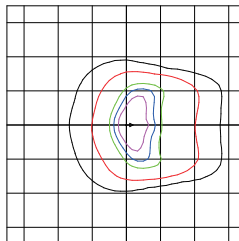
Optic Lens code: T3M
IES Classification: IES Type III Medium



Optic Lens code: T3L
IES Classification: IES Type III Long



Optic Lens code: T4S
IES Classification: IES Type IV Short



KSL- LED ROADWAY/STREET LIGHT

MOUNTING AND OPTIONAL ACCESSORIES

1 Pole-arm (or horizontal tenon), Outer Diameter (O.D.) 42mm(1.660")-60mm(2.375"), insert depth 120mm(4.724").

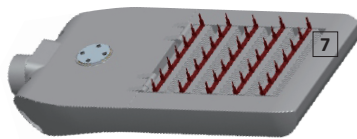
2 Spigot inner diameter 62mm (2.441").

3 Smaller pole-arm in diameter can be fixed to the spigot via an adapter (or spacer).

4 Adapter (spacer): O. D. 60mm(2.375"), inner diameter is 2mm(0.079") bigger than the O. D. of the smaller pole-arm. Length 110mm(4.331"), screw hole diameter 12mm(0.470"). Wall thickness of the adapter is customized.

5 ±20 degrees adjustable spigot. As a standard, the spigot is assembled to the fixture for pole-arm mounting (or horizontal tenon mount / lateral / side-entry mounting).

6 No extra accessories are required for pole top mounting. Just disassemble the spigot, then reversely assemble it. The reversely assembled spigot is adjusted ±20 degrees as well.



7 Optional Field-installed Accessory: Bird Spikes for LED Light Bars.



8 Two axis T-shaped bubble level as a standard configuration for ease of leveling and tilting angle setup as well.

9 An optional receptacle and /or its photocell or shorting cap are furnished if desired. For more details, please consult the specsheet in the following page.

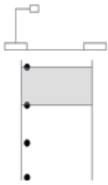
10 An optional external motion sensor based on radar sensing technology for brightness dimming and intelligent wireless lighting control is equipped with the fixture if required.

11 10KA, 20KA at 277v/347v surge protectors are optional.

Easy maintenance and installation tips:

1. Unscrew the led driver compartment cover in the air, and do not worry about the screws may drop off because of the human centered design.
2. Press WAGO branded terminal block to connect or disconnect wire leads (#20-#12 AWG).
3. Use fingers only to release or fix the WAGO branded quick connectors to connect or disconnect wire leads.

KSL- LED ROADWAY/STREET LIGHT



SIMULATION CALCULATION SUMMARY REFERENCE

Pole Arrangement: Single Sided

MH=Mounting Height (unit: m)

Area = Pole Spacing x Road Width (unit: m)

Lav* (cd/sq.m.) and Eav* (lux) are the values based on Dialux simulation calculations for one typical section of street.

Model No.		KSL- 30		KSL- 60		KSL- 90		KSL- 120		KSL- 150	
T2M lens		Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx
MH	Area	cd/m2		cd/m2		cd/m2		cd/m2		cd/m2	
8	35 x 7	0.57	8.03	1.14	16	1.74	24	2.33	33	2.89	41
10	40 x 10.5	0.35	5.02	0.7	10	1.07	15	1.43	20	1.78	25
12	45 x 10.5	0.28	4.01	0.55	7.99	0.84	12	1.12	16	1.4	20

Model No.		KSL- 30		KSL- 60		KSL- 90		KSL- 120		KSL- 150	
T3M lens		Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx
MH	Area	cd/m2		cd/m2		cd/m2		cd/m2		cd/m2	
8	35 x 10.5	0.43	6.53	0.86	13	1.33	20	1.75	26	2.2	33
10	40 x 10.5	0.34	4.74	0.67	9.44	1.03	15	1.36	19	1.71	24
12	45 x 14	0.24	3.57	0.48	7.12	0.74	11	0.98	14	1.23	18

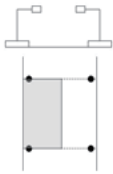
Model No.		KSL- 30		KSL- 60		KSL- 90		KSL- 120		KSL- 150	
T3L lens		Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx
MH	Area	cd/m2		cd/m2		cd/m2		cd/m2		cd/m2	
8	35 x 10.5	0.46	6.02	0.91	12	1.4	18	1.85	24	2.33	31
10	40 x 10.5	0.33	4.15	0.65	8.27	1	13	1.32	17	1.66	21
12	50 x 14	0.22	2.96	0.43	5.9	0.66	9	0.88	12	1.1	15

Model No.		KSL- 180		KSL- 210		KSL- 240		KSL- 270		KSL- 300	
T2M lens		Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx
MH	Area	cd/m2		cd/m2		cd/m2		cd/m2		cd/m2	
8	35 x 7	3.46	49	4.03	57	4.64	65	5.21	73	5.78	81
10	40 x 10.5	2.13	30	2.47	35	2.85	41	3.2	46	3.55	51
12	45 x 10.5	1.67	24	1.94	28	2.24	33	2.51	37	2.79	41

Model No.		KSL- 180		KSL- 210		KSL- 240		KSL- 270		KSL- 300	
T3M lens		Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx
MH	Area	cd/m2		cd/m2		cd/m2		cd/m2		cd/m2	
8	35 x 10.5	2.61	39	3.06	46	3.5	53	3.95	60	4.39	66
10	40 x 10.5	2.03	29	2.38	34	2.72	38	3.08	43	3.42	48
12	45 x 14	1.46	22	1.71	25	1.95	29	2.21	33	2.45	36

Model No.		KSL- 180		KSL- 210		KSL- 240		KSL- 270		KSL- 300	
T3L lens		Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx
MH	Area	cd/m2		cd/m2		cd/m2		cd/m2		cd/m2	
8	35 x 10.5	2.76	36	3.23	43	3.7	49	4.18	55	4.65	61
10	40 x 10.5	1.97	25	2.31	29	2.64	34	2.99	38	3.32	42
12	50 x 14	1.3	18	1.53	21	1.75	24	1.98	27	2.2	30

KSL- LED ROADWAY/STREET LIGHT



SIMULATION CALCULATION SUMMARY REFERENCE

Pole Arrangement: Opposite (double rows opposing)
 MH=Mounting Height (unit: m)
 Area = Pole Spacing x Road Width (unit: m)
 Lav* (cd/sq.m.) and Eav* (lux) are the values based on Dialux simulation calculations for one typical section of street.

Model No.		KSL- 30		KSL- 60		KSL- 90		KSL- 120		KSL- 150	
T2M lens		Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx
MH	Area	cd/m2		cd/m2		cd/m2		cd/m2		cd/m2	
8	35 x 14	0.63	9.03	1.26	18	1.92	27	2.57	37	3.2	46
10	40 x 21	0.42	6.02	0.84	12	1.28	18	1.71	24	2.13	30
12	45 x 21	0.37	5.02	0.73	10	1.12	15	1.49	20	1.85	25

Model No.		KSL- 30		KSL- 60		KSL- 90		KSL- 120		KSL- 150	
T3M lens		Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx
MH	Area	cd/m2		cd/m2		cd/m2		cd/m2		cd/m2	
8	35 x 21	0.51	7.53	1.02	15	1.57	23	2.08	31	2.61	38
10	40 x 21	0.43	6.02	0.85	12	1.31	18	1.73	24	2.17	31
12	45 x 28	0.31	4.21	0.61	8.23	0.94	13	1.24	17	1.56	21

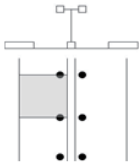
Model No.		KSL- 30		KSL- 60		KSL- 90		KSL- 120		KSL- 150	
T3L lens		Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx
MH	Area	cd/m2		cd/m2		cd/m2		cd/m2		cd/m2	
8	35 x 21	0.5	7.03	1	14	1.54	22	2.04	29	2.56	36
10	45 x 21	0.36	4.98	0.72	9.92	1.11	15	1.47	20	1.84	25
12	50 x 28	0.26	3.59	0.52	7.16	0.8	11	1.06	15	1.33	18

Model No.		KSL- 180		KSL- 210		KSL- 240		KSL- 270		KSL- 300	
T2M lens		Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx
MH	Area	cd/m2		cd/m2		cd/m2		cd/m2		cd/m2	
8	35 x 14	3.83	55	4.45	64	5.13	73	5.76	82	6.39	91
10	40 x 21	2.55	36	2.97	42	3.42	49	3.84	55	4.26	61
12	45 x 21	2.22	30	2.58	35	2.97	41	3.34	46	3.7	51

Model No.		KSL- 180		KSL- 210		KSL- 240		KSL- 270		KSL- 300	
T3M lens		Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx
MH	Area	cd/m2		cd/m2		cd/m2		cd/m2		cd/m2	
8	35 x 21	3.09	46	3.63	53	4.15	61	4.69	69	5.21	77
10	40 x 21	2.58	36	3.02	43	3.46	49	3.91	55	4.34	61
12	45 x 28	1.85	25	2.17	30	2.48	34	2.8	39	3.11	43

Model No.		KSL- 180		KSL- 210		KSL- 240		KSL- 270		KSL- 300	
T3L lens		Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx	Lav*	Eav*/lx
MH	Area	cd/m2		cd/m2		cd/m2		cd/m2		cd/m2	
8	35 x 21	3.03	42	3.55	50	4.07	57	4.6	64	5.11	71
10	45 x 21	2.18	30	2.56	35	2.93	40	3.31	46	3.68	51
12	50 x 28	1.58	22	1.85	25	2.11	29	2.39	33	2.65	37

KSL- LED ROADWAY/STREET LIGHT



Simulation Calculation Summary Reference

Pole Arrangement: Median
 MH=Mounting Height (unit: m)
 Area = Pole Spacing x Road Width (unit: m)
 Lav* (cd/sq.m.) and Eav* (lux) are the values based on Dialux simulation calculations for one typical section of street.

Model No.		KSL- 30		KSL- 60		KSL- 90		KSL- 120	
T2M lens		Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx
MH	Area								
8	35 x 14	0.73	9.54	1.46	19	2.32	29	2.98	39
10	40 x 21	0.4	5.52	0.79	11	1.21	17	1.61	22
12	45 x 21	0.38	5.01	0.75	9.98	1.15	15	1.53	20

Model No.		KSL- 30		KSL- 60		KSL- 90		KSL- 120	
T3M lens		Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx
MH	Area								
8	35 x 21	0.48	7.03	0.95	14	1.46	22	1.93	29
10	40 x 21	0.43	6.02	0.85	12	1.31	18	1.73	24
12	45 x 28	0.25	3.87	0.49	7.7	0.76	12	1	16

Model No.		KSL- 30		KSL- 60		KSL- 90		KSL- 120	
T3L lens		Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx
MH	Area								
8	35 x 21	0.43	6.53	0.85	13	1.31	20	1.73	26
10	45 x 21	0.34	4.91	0.67	9.78	1.03	15	1.36	20
12	50 x 28	0.19	3.08	0.38	6.14	0.59	9.46	0.77	13

KSL- 180		KSL- 210		KSL- 240		KSL- 270		KSL- 300	
Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx
4.44	58	5.16	67	5.95	77	6.67	87	7.4	96
2.4	33	2.79	39	3.22	45	3.61	50	4.01	56
2.28	30	2.65	35	3.06	40	3.43	46	3.8	51

KSL- 180		KSL- 210		KSL- 240		KSL- 270		KSL- 300	
Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx
2.88	42	3.38	50	3.86	57	4.37	64	4.85	71
2.58	36	3.02	43	3.46	49	3.91	55	4.34	61
1.49	23	1.74	27	1.99	31	2.25	35	2.5	39

KSL- 180		KSL- 210		KSL- 240		KSL- 270		KSL- 300	
Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx	Lav* cd/m2	Eav*/lx
2.58	39	3.02	46	3.46	53	3.91	60	4.34	66
2.03	30	2.38	35	2.72	40	3.08	45	3.42	50
1.15	19	1.35	22	1.54	25	1.75	28	1.94	31