

Toshiba **TLS-RTLS** LED Roadway Luminaire

Application – High performance, energy-efficient, solid-state luminaire for roadway lighting applications. Lighting performance equivalent to 70-150 watt HID (high intensity discharge) luminaires with 50%+ energy savings.

Construction – Heavy-duty, corrosion-resistant, low-copper, die cast aluminum housing and stainless steel hardware provide strength and durability. Powder-coated finish and IP66 construction provides durable resistance to outdoor environments.

Mounting – Five cast leveling steps provide a tenon mounting system adjustable from ±5°. 4-bolt mounting system and 3G vibration rating are standard. Mounting system designed for tenon arms with outside diameters of 1 5/8 – 2 3/8". Tool-less entry to the wiring compartment provides easy installation and maintenance.

Optics – Precision-molded, high-impact, optical-grade PMMA (polymethyl methacrylate) lenses provide uniform Type II, Type III, Type IV, and Type V distributions. Keyed lens assemblies ensure consistent photometric performance across a broad range of available levels of lumen output. Proprietary optical design provides zero lumens above the horizontal plane.

LEDs & PCB (Printed Circuit Board) – High efficiency 4000K/5700K, 70CRI LEDs are mounted to a metal core PCB. PCB is mounted to a finned, aluminum heat sink using a patented, zero air gap technology, which maximizes heat transfer and provides long LED operating life.

Terminal Block – Standard tunnel-type compression terminal block provides secure wire attachment and quick installation. Terminals are sized for #6 to #14 AWG wire.

LED Rated Life (L85)* – 100,000 hours or more when operated in a 25°C (77°F) ambient environment. LED rated life is based on 9,000 hours of LED testing per LM-80-08, and projected values per IESNA TM21-11.

LED Drivers – Available at universal 120-277V at 50/60Hz. Feature high power factor (>90%) and low total harmonic distortion (THD, <10%).

Surge Protection – 10kV (ANSI/IEEE C64.41.2) is standard.

Photocontrol Option – Includes a standard NEMA twist-lock receptacle

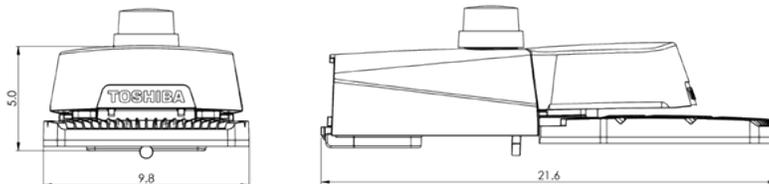
Listing – cETLus listed to applicable UL standards. DLC (DesignLights™ Consortium) qualified, and Lighting Facts® listed. IP66 rated. Suitable for ambient temperatures from -40°C to 40°C (-40°F to 104°F). RoHS (Restriction of Hazardous Substances) compliant. Salt Fog testing conforms to ASTM Designation B117.

Warranty – 5-year limited warranty. Toshiba LED Lighting Systems Division reserves the right to make changes and/or improvements in designs and/or dimensions without notice or obligation. Consult Toshiba for additional terms and conditions. www.toshiba.com/lighting

Example: **TLSRTLS23421SN**

Model Designator	LED Quantity	Drive Current	CCT	Distribution	Voltage	Housing Color ***	Photocell	Options
TLSRTLS	2 = 24 3 = 36	3 = 350mA 7 = 700mA	4 = 4000K 6 = 5700K	2 = Type II 3 = Type III 4 = Type IV 5 = Type V	1 = 120-277V	S = Silver B = Black R = Bronze	N = NEMA Twist Lock Receptacle	H = House-Side Shield B = Bubble Leveler D = Dimming (0-10VDC)

TLS-RTLS:
EPA: 0.85sq ft
Length: 21.6in
Width: 9.8in
Height: 5.0in
Weight: 21lbs



Shown in standard color - Silver. Longer lead times may apply for Black and Bronze.

*L85 LED rated life is the time period at which lumen output has depreciated to 85% of its initial output.

*** Longer lead times may apply for Black and Bronze.

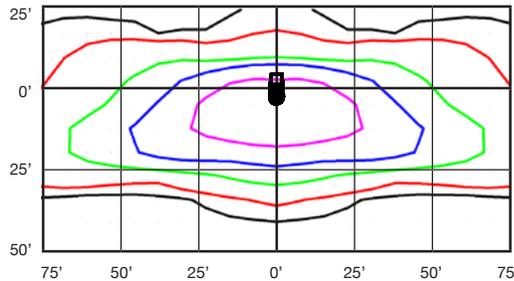
Model	Drive Current (mA)	Input Watts	Input Current (A)			Distribution Type	4000K		5700K	
			120V	240V	277V		Lumens	Efficacy (LPW)	Lumens	Efficacy (LPW)
24 LEDs	350	27	0.23	0.11	0.10	II	2,900	107	3,000	111
						III	2,900	107	2,900	107
						IV	2,850	106	2,900	107
						V	2,800	104	2,900	107
						II	4,900	91	5,200	96
36 LEDs	350	40	0.33	0.17	0.14	II	4,300	108	4,500	113
						III	4,300	108	4,400	110
						IV	4,200	105	4,300	108
						V	4,100	103	4,200	105
						II	7,500	95	7,600	96
36 LEDs	700	79	0.66	0.33	0.29	III	7,200	91	7,400	94
						IV	7,200	91	7,300	92
						V	7,000	89	7,300	92

Type II

Footcandles



(Example: 36 LEDs, 700mA, 4000K)



	LCS Zone	Lumens	% of Luminaire
Forward Low (FL)	0-30°	1195.7	16.0
Forward Medium (FM)	30-60°	2970.7	39.7
Forward High (FH)	60-80°	1293.4	17.3
Forward Very High (FVH)	80-90°	20.3	0.3
Back Low (BL)	0-30°	443.7	5.9
Back Medium (BM)	30-60°	849.5	11.4
Back High (BH)	60-80°	687.1	9.2
Back Very High (BVH)	80-90°	18.5	0.2
Uplight Low (UL)	90-100°	0.0	0.0
Uplight High (UH)	100-180°	0.0	0.0
Total		7478.9	100.0

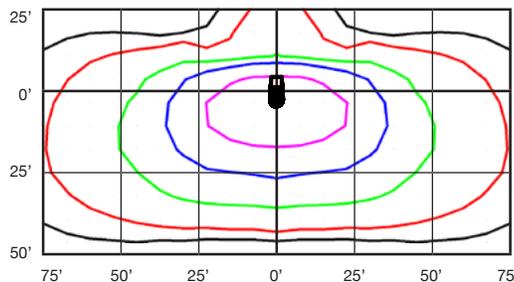
BUG Rating: B2-U0-G2

Type III

Footcandles



(Example: 36 LEDs, 700mA, 4000K)



	LCS Zone	Lumens	% of Luminaire
Forward Low (FL)	0-30°	1076.2	14.9
Forward Medium (FM)	30-60°	3134.8	43.3
Forward High (FH)	60-80°	1495.0	20.7
Forward Very High (FVH)	80-90°	29.3	0.4
Back Low (BL)	0-30°	344.7	4.8
Back Medium (BM)	30-60°	643.0	8.9
Back High (BH)	60-80°	491.3	6.8
Back Very High (BVH)	80-90°	22.0	0.3
Uplight Low (UL)	90-100°	0.0	0.0
Uplight High (UH)	100-180°	0.0	0.0
Total		7236.3	100.0

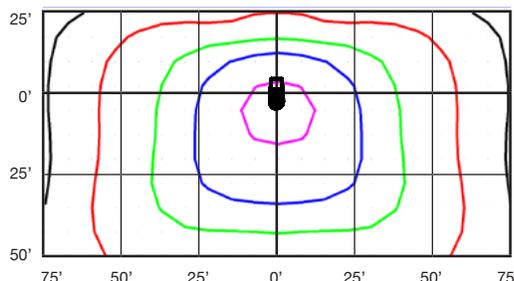
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Type IV

Footcandles



(Example: 36 LEDs, 700mA, 4000K)

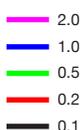


	LCS Zone	Lumens	% of Luminaire
Forward Low (FL)	0-30°	729.0	10.2
Forward Medium (FM)	30-60°	2649.6	37.1
Forward High (FH)	60-80°	1644.4	23.0
Forward Very High (FVH)	80-90°	39.9	0.6
Back Low (BL)	0-30°	518.5	7.3
Back Medium (BM)	30-60°	906.4	12.7
Back High (BH)	60-80°	627.8	8.8
Back Very High (BVH)	80-90°	34.9	0.5
Uplight Low (UL)	90-100°	0.0	0.0
Uplight High (UH)	100-180°	0.0	0.0
Total		7150.5	100.0

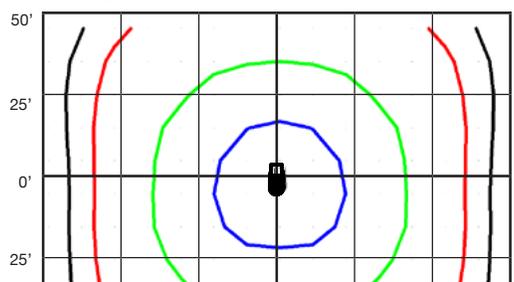
BUG Rating: B2-U0-G2

Type V

Footcandles



(Example: 36 LEDs, 700mA, 4000K)



	LCS Zone	Lumens	% of Luminaire
Forward Low (FL)	0-30°	404.0	5.7
Forward Medium (FM)	30-60°	1893.3	26.8
Forward High (FH)	60-80°	1297.8	18.4
Forward Very High (FVH)	80-90°	15.7	0.2
Back Low (BL)	0-30°	381.6	5.4
Back Medium (BM)	30-60°	1723.7	24.4
Back High (BH)	60-80°	1332.9	18.9
Back Very High (BVH)	80-90°	17.0	0.2
Uplight Low (UL)	90-100°	0.0	0.0
Uplight High (UH)	100-180°	0.0	0.0
Total		7066.0	100.0

BUG Rating: B3-U0-G1

- Notes:**
1. Isofootcandle plots depict initial foot-candles at grade.
 2. Gridlines represent units of mounting height of 25 feet.