Dialight





Patent Pending

StreetSense™ Series LED Street Light

for roadway and area illumination

Meets Buy American

DESIGNLIGHTS CONSORTIUM

GSA Schedule Contract GS-07F-0664X

StreetSense™ LED Street Light

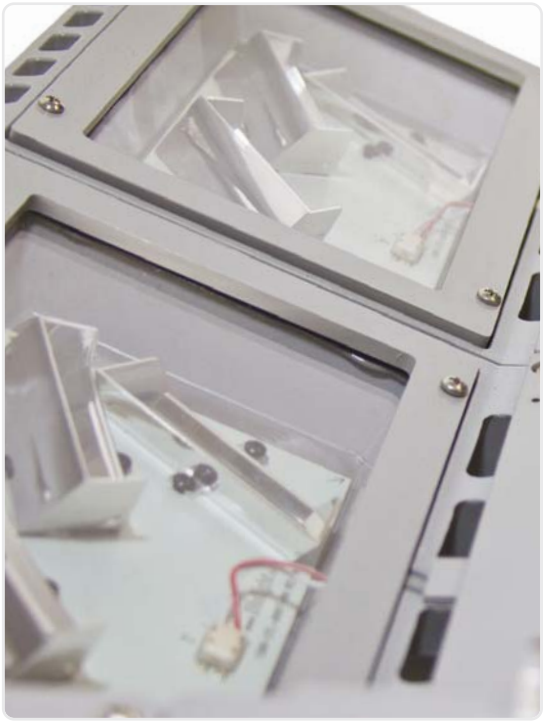
Features and Benefits

Patented Optics

Exclusive precision optics and unique angled mechanical design for precise light that provides minimal light while providing uniform illumination



- Uniform light distribution while delivering sharp cut-off, zero up-light
- Reflectors are precision manufactured via injection molding and coated with a highly specular optical coating via vacuum-metalization
- Precision engineered reflectors and LEDs are coupled to metal clad printed circuit board. Light engine is sealed in an optically optimized premium glass lens



- Dedicated IP66 optical cavities for LED arrays maximizes the efficacy and control of distribution from each light engine module
- Optical light engines are optimally aimed to maximize light collection and directional distribution onto the application area
- High brightness output LEDs deliver exceptional fixture efficacy (up to 92 lm/W) in a choice of three superior quality color temperatures; Cool (5000K ± 300), Neutral (4300K ± 300), Warm (3300K ± 300) with a minimum CRI of 70
- Scotopic to photopic (S/P ratio) of LED is 1:1.6 for 4000K



- Lens also available in UV and abrasion resistant polycarbonate clear and frosted lens
- No UV or IR emissions
- Optional house-side shield is available to further reduce back-side light trespass in residential areas
- Anti-reflective coating on the house-side shield prevents the introduction of unwanted glair to the roadway

StreetSense™ LED Street Light
Features and Benefits

Innovative Design
Designed for new construction and easily retrofits with existing HID fixtures.

- High grade aluminum alloy A360 construction for superior strength and durability
- In contrast with horizontal or planer heat sinking systems, the deep troughs between heat sink fins are wide and angled to achieve a self-cleaning design and prevent debris build-up
- Exclusive physical design gives rise to an exceptional passive thermal management system
- Vent openings in light engine casting paired with fins are optimized for increased air flow velocity and thermal plume assureing a minimum operating temperature of the LEDs and driver

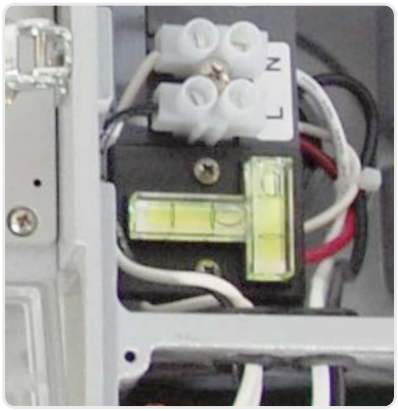




- Metal clad PCBs used in light engine are secured directly to the cast aluminum housing for superior thermal transfer and low in-situ temperature (board level temperature)
- Thermal overload protection circuitry prevent internal temperatures from reaching high levels thereby increasing long term reliability and allowing operation up to 74°C
- Rugged cast aluminum housing is subjected to a multistage (cleaning and sealing) per process AAMA 2604 and top coated with a super durable, polyester powder coated finish that is available in 5 standard colors
- Finish is resistant to blistering, excessive fading or corrosion during warranty period

- Rugged heavy gauge, 4 bolt, aluminum clamp with stainless steel hardware secures fixture to pole arm
- Adjustable pole mount connection can accommodate a 2" IP (2.375" OD) pipe with provision for adjustment of ± 5° at 2.5° increments
- Unique hinged polycarbonate bottom cover provides tool-less access to terminal blocks and pole arm via a single trigger-latch for quick and easy luminaire mounting





- Terminal block sized to allow for wire gauges from #14 AWG to #6 AWG and is accessible from under side of fixture
- Salt spray tested for corrosion - 3,000 hours per ASTM B117-97
- Withstands shock & vibration to Caltrans 611 levels – 3.0G peak-to-peak, 2 million cycles
- Stainless steel, SAE, captive hardware
- Large, easy to read two axis bubble level allow installer to quickly and efficiently level fixture during installation

StreetSense™ LED Street Light
Features and Benefits

Electrical
Ruggedized driver design and thermal management system ensure maximum energy efficiency and reliability



- Dialight's custom LED drivers are constant current sources well suited for the load and the particular lighting application
- Field replaceable, primary fused, output isolated drivers are fully potted and encased in an aluminum extrusion for EMI noise immunity and thermal protection
- Offering high efficiency and power factor with ultra low THD, the LED drivers incorporate overload and no load protection circuitry
- Universal inputs 100-277V AC, 50/60Hz and 347-480V AC, 50/60Hz
- LED Driver MTBF per Telcordia SR-332 – 5,10,040 hrs at 13.8C (average yearly temperature of five major cities)

- Safety grommets in casting through-holes prevent abrasions to electrical wire insulation
- Robust, integrated 6kV/6kVA or 10kV/10kVA surge protection circuitry incorporate MOVs designed to actively clamp line voltages to safe levels per ANSI/IEEE C62.41.2-2002 Cat C
- IP65 rated LED drivers



Lifetime
L70 / TM-21 Lifetime Report at 500mA – Calculated lifetime = 914,000 hrs; Reported lifetime = 60,500 hrs



- 7 year full performance warranty with option for 10 years
- Factory burn-in (24 hr to avoid infant fatality)

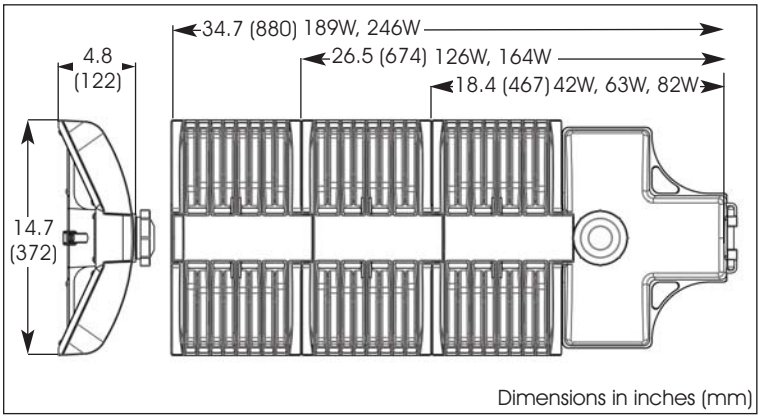
Meets Buy American

DESIGNLIGHTS CONSORTIUM

GSA Schedule Contract GS-07F-0664X



StreetSense™ Series LED Street Light



Dimensions in inches (mm)

Certifications and Ratings:

- UL 1598 (Suitable for Wet Locations)
- UL 8750
- UL 1012
- UL 1449
- CE
- CSA C22.2 No. 250.0-08
- IP66

Compliances:

- RP-8-00 (R2005)
- IEC 60529 (IP 66)
- ANSI 1012
- ANSI C 136.15-2011
- ANSI/IEEE C62.41.2-2002
- ANSI/NEMA/ANSLG C78.377-2008
- ANSI C136.2-2004 (R2009)
- ANSI C136.3-2005
- ANSI C136.10-2006
- ANSI C136.21-2004
- ANSI C136.25-2009/IEC 60529
- ANSI C136.31-2001
- ANSI C136.32-2006
- ANSI C136.37-2011
- ASTM B117-97
- ASTM B117 - salt spray (3000 hours)
- Conforms with CALTRANS vibration test 611 – 3G vibration (2,000,000 cycles)
- Meets ARRA requirements (must be specified when ordering)
- IDA Dark Sky
- RoHS

Test Reports:

- LM-79
- LM-80
- RP-8-00
- TM21

Accessories (ordered separately):

- Photo Controller - part number - SL-PC01R
- House side shield - part number - SL-SHIELD-KIT
- LUMITROL™ Streetlight control module (consult factory)
- ANSI Label (consult factory)

Mechanical Information

Fixture Weight:	16lbs (42W, 63W, 82W) 25lbs (126W, 164W) 34lbs (189W, 246W)
EPA (Sq. ft):	0.60 (42W, 63W, 82W) 0.87 (126W, 164W) 1.13 (189W, 246W)
Mounting:	Accommodates 1.25" (1.66" OD) - 2" (2.375" OD) 31.75mm (42.16mm OD) - 50.8mm (60.32mm OD) pipe. Provision for adjustment of +/- 5° at 2.5° increments

Electrical Specifications

Operating Voltage:	Universal inputs 100-277VAC, 50/60Hz 347-480VAC 50/60Hz
Total System Power Consumption:	See ordering info on pg. 6
Operating Temp:	-40°F to 165°F (-40°C to 74°C) ambient
Terminal Block:	#14 AWG (1.6mm) to #6 AWG (4.1mm) wire and accessible via hinged tool less entry
Noise Requirements / EMC:	FCC Title 47, Subpart B, Section 15, class A device. RF Immunity; 10V/m, 80MHz-1GHz
Transient Protection 100-277VAC, 50/60Hz: 347-480VAC 50/60Hz:	Open circuit surge protection 6kV standard per ANSI/IEEE C62.41. 2.2002 cat C low or Open circuit surge protection 10kV standard per ANSI/IEEE C62.41. 2.2002 cat C high Open circuit surge protection 10kV standard per ANSI/IEEE C62.41. 2.2002 cat C high
THD:	<15% (100 - 240VAC) <20% (277VAC) <20% (347-480VAC)
Power Factor:	>0.90

Material

Housing:	Die cast aluminum alloy A360 Polymeric materials UL94 V0 flame retardant materials
Finish:	Polyester powder coat for superior corrosion resistance Gray - RAL 7040 Bronze - RAL 7022 Green - RAL 6020 Black - RAL 9005 White - RAL 9010
Lens:	Abrasion and UV resistant polycarbonate Optically optimized, tempered glass
Photo controller Socket:	Standard NEMA three prong twist lock, socket with shorting cap, as per ANSI C136.10

Photometric Information

CRI:	>70
CCT:	5,000K (cool white) 4,300K (neutral white) 3,300K (warm white)
Optics:	IES Type II, III, IV, V

All values typical unless otherwise stated
All lumen values are typical (tolerance +/- 10%)

StreetSense™ Series LED Street Light

Ordering Information

S L - 3	C	4	C	L	G	G	_
IES Type	CCT[1]	Voltage	Wattage	Controller	Housing Color	Lens	Certification
2 - II	C - 5,000K	4 - 120-277V AC 6kV surge protection	B - 42W	N - No photo controller receptacle	G - Gray	G - Glass	Blank - UL
3 - III	N - 4,300K	5 - 120-277V AC 10kV surge protection	C - 63W	R - Photo controller receptacle only	B - Bronze	H - Polycarbonate	EU - CE
4 - IV	W - 3,300K	7 - 347-480V AC 10kV surge protection	D - 82W	L - Shorting cap	R - Green		
5 - V			H - 126W	I - LUMITROL™ Streetlight control module	K - Black		
			I - 164W		W - White		
			R - 189W				
			S - 246W				

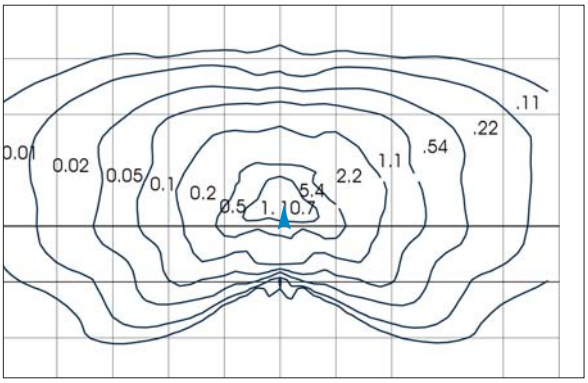
Part Number	Initial Fixture Lumens[1]	Total System Power Consumption	Lumen Per Watt	Color	BUG Rating	EPA (SQ. ft)	Number of Light Engines
SL3C4BLGH	3,800	42	90	Cool White	B1U1G1	0.60	1
SL3C4CLGH	5,700	63	90	Cool White	B1U2G1	0.60	1
SL3C4DLGH	6,900	82	84	Cool White	B2U3G2	0.60	1
SL3C4HLGH	11,500	126	91	Cool White	B2U3G2	0.87	2
SL3C4ILGH	13,750	164	84	Cool White	B3U3G3	0.87	2
SL3C4RLGH	17,000	189	90	Cool White	B3U3G3	1.13	3
SL3C4SLGH	20,750	246	84	Cool White	B3U3G3	1.13	3
SL3N4BLGH	3,800	42	90	Neutral White	B1U1G1	0.60	1
SL3N4CLGH	5,700	63	90	Neutral White	B1U2G1	0.60	1
SL3N4DLGH	6,900	82	84	Neutral White	B2U3G2	0.60	1
SL3N4HLGH	11,500	126	91	Neutral White	B2U3G2	0.87	2
SL3N4ILGH	13,750	164	84	Neutral White	B3U3G3	0.87	2
SL3N4RLGH	17,000	189	90	Neutral White	B3U3G3	1.13	3
SL3N4SLGH	20,750	246	84	Neutral White	B3U3G3	1.13	3
SL3W4BLGH	3,100	42	74	Warm White	B1U1G1	0.60	1
SL3W4CLGH	4,700	63	75	Warm White	B1U2G1	0.60	1
SL3W4DLGH	5,700	82	70	Warm White	B2U2G2	0.60	1
SL3W4HLGH	9,250	126	73	Warm White	B2U3G2	0.87	2
SL3W4ILGH	11,500	164	70	Warm White	B3U3G3	0.87	2
SL3W4RLGH	14,000	189	74	Warm White	B3U3G3	1.13	3
SL3W4SLGH	17,000	246	69	Warm White	B3U3G3	1.13	3

[1]Polycarbonate lens option will decrease lumen values by 8%

Measurement Data - IES Type III

40 Watt

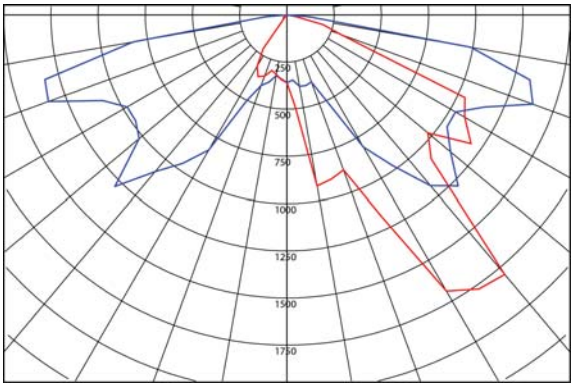
Iso-Illuminance Chart
← FC - Lux →



Mounting height - 25′ (7.6m)

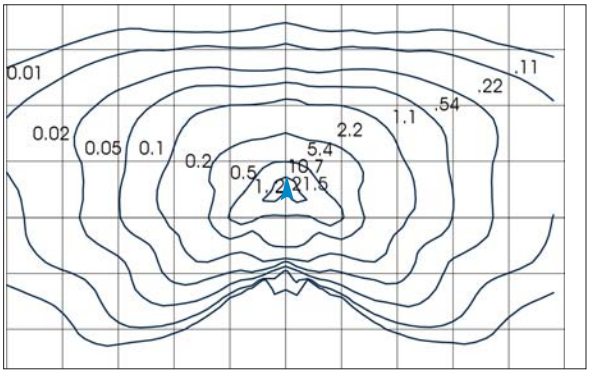
Mounting Height	Multiplier
10′ (3.0m)	6.25
15′ (4.6m)	2.778
20′ (6.1m)	1.563
25′ (7.6m)	1
30′ (9.1m)	0.694
35′ (10.7m)	0.51
40′ (12.7m)	0.391
45′ (13.4m)	0.309
50′ (15.2m)	0.25

Intensity Distribution Curve (cd)



60 Watt

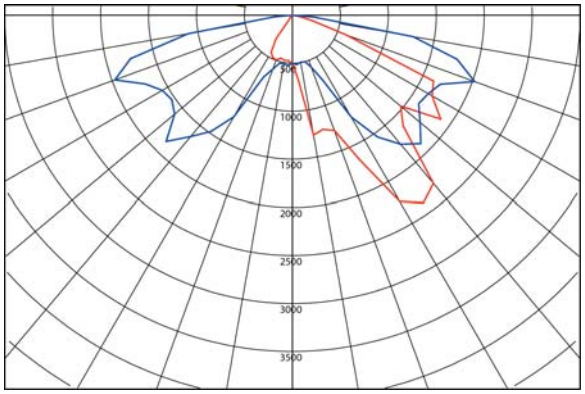
Iso-Illuminance Chart



Mounting height - 25′ (7.6m)

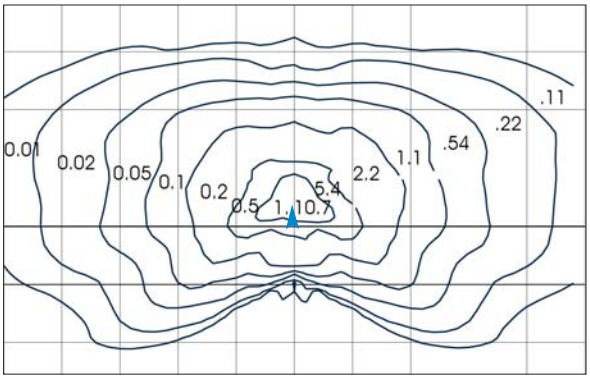
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20′ (6.1m)	1.563
25′ (7.6m)	1
30′ (9.1m)	0.694
35′ (10.7m)	0.51
40′ (12.7m)	0.391
45′ (13.4m)	0.309
50′ (15.2m)	0.25

Intensity Distribution Curve (cd)



80 Watt

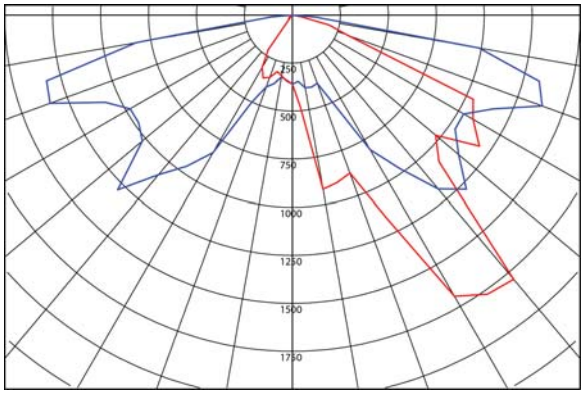
Iso-Illuminance Chart



Mounting height - 25′ (7.6m)

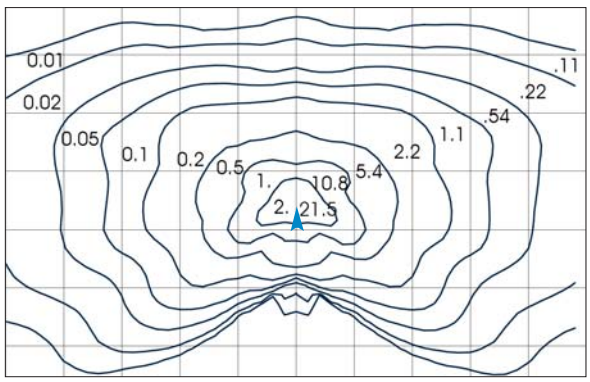
Mounting Height	Multiplier
10′ (3.0m)	6.25
15′ (4.6m)	2.778
20′ (6.1m)	1.563
25′ (7.6m)	1
30′ (9.1m)	0.694
35′ (10.7m)	0.51
40′ (12.7m)	0.391
45′ (13.4m)	0.309
50′ (15.2m)	0.25

Intensity Distribution Curve (cd)



120 Watt

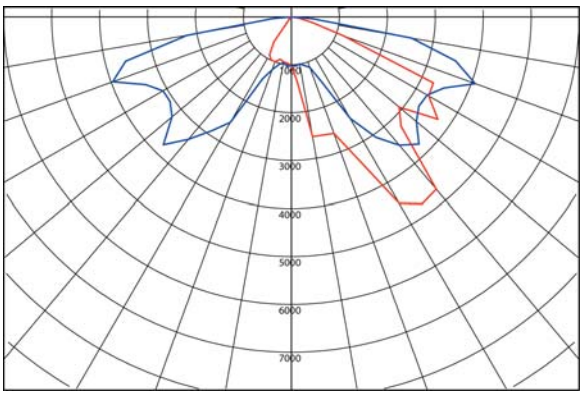
Iso-Illuminance Chart



Mounting height - 30′ (9.1m)

Mounting Height	Foot Candle Multiplier
10′ (3.0m)	9
15′ (4.6m)	4
20′ (6.1m)	2.25
25′ (7.6m)	1.44
30′ (9.1m)	1
35′ (10.7m)	0.735
40′ (12.7m)	0.563
45′ (13.4m)	0.444
50′ (15.2m)	0.36

Intensity Distribution Curve (cd)

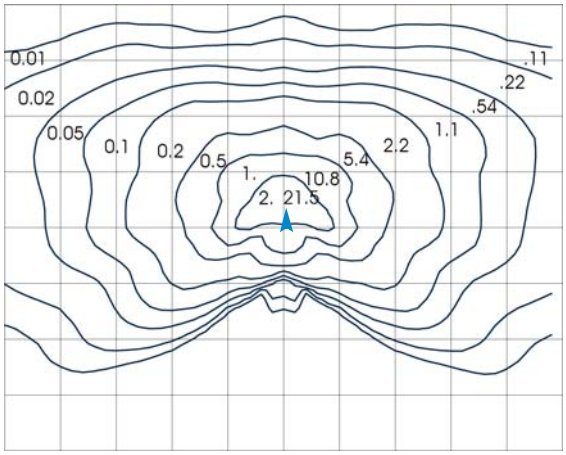


▲- Location of streetlight
Spacing of each box is equal to mounting height in feet (meters).
Ex: 40′ (12.2m) mounting height = each box is 40′ (12.2m), 30′ (9.1m) mounting height = each box is 30′ (9.1m)
Values shown are for cool white and neutral white units, for warm white multiply the Fc or Lux value by .82

Measurement Data - IES Type III

160 Watt

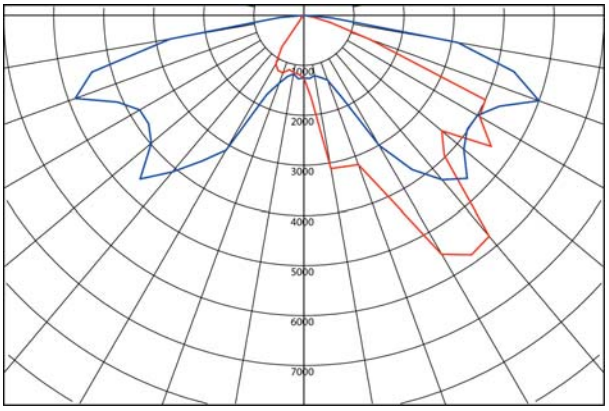
Iso-Illuminance Chart
← FC - Lux →



Mounting height - 30′ (9.1m)

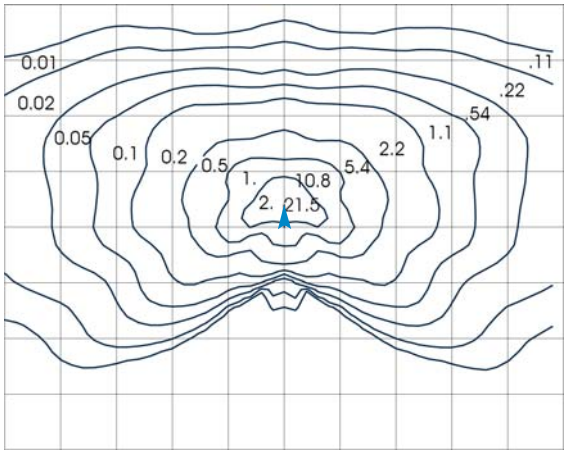
Mounting Height	Multiplier
10′ (3.0m)	9
15′ (4.6m)	4
20′ (6.1m)	2.25
25′ (7.6m)	1.44
30′ (9.1m)	1
35′ (10.7m)	0.735
40′ (12.7m)	0.563
45′ (13.4m)	0.444
50′ (15.2m)	0.250

Intensity Distribution Curve (cd)



180 Watt

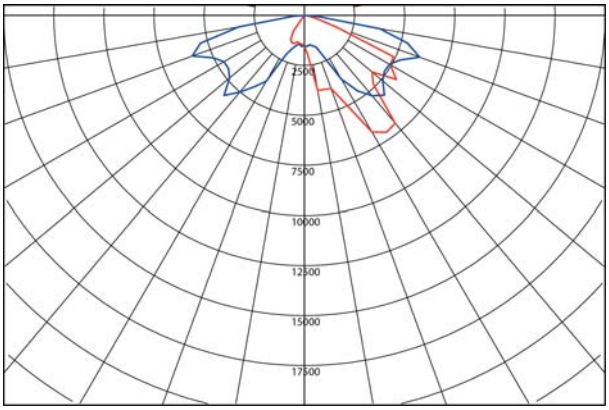
Iso-Illuminance Chart



Mounting height - 35′ (9.1m)

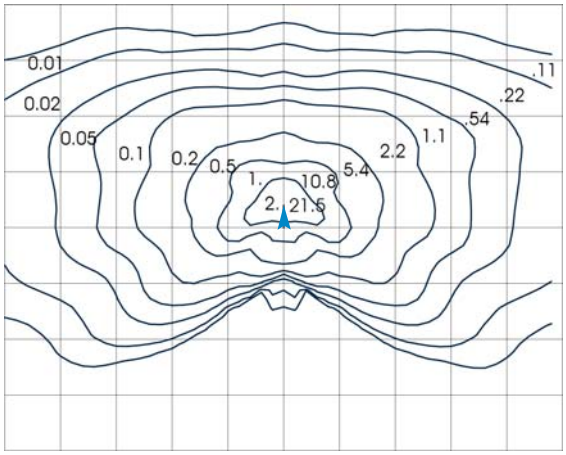
Mounting Height	Multiplier
10′ (3.0m)	9
15′ (4.6m)	4
20′ (6.1m)	2.25
25′ (7.6m)	1.44
30′ (9.1m)	1
35′ (10.7m)	0.735
40′ (12.7m)	0.563
45′ (13.4m)	0.444
50′ (15.2m)	0.250

Intensity Distribution Curve (cd)



240 Watt

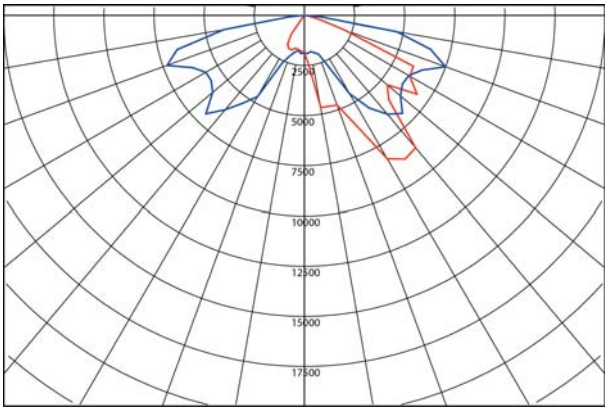
Iso-Illuminance Chart



Mounting height - 40′ (12.1m)

Mounting Height	Multiplier
10′ (3.0m)	12.250
15′ (4.6m)	5.444
20′ (6.1m)	3.063
25′ (7.6m)	1.960
30′ (9.1m)	1.361
35′ (10.7m)	1.000
40′ (12.7m)	0.766
45′ (13.4m)	0.309
50′ (15.2m)	0.605

Intensity Distribution Curve (cd)



▲- Location of streetlight
Spacing of each box is equal to mounting height in feet (meters).
Ex: 40′ (12.2m) mounting height = each box is 40′ (12.2m), 30′ (9.1m) mounting height = each box is 30′ (9.1m)
Values shown are for cool white and neutral white units, for warm white multiply the Fc or Lux value by .82

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