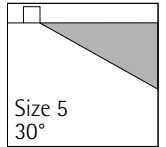
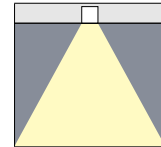
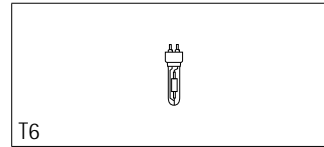
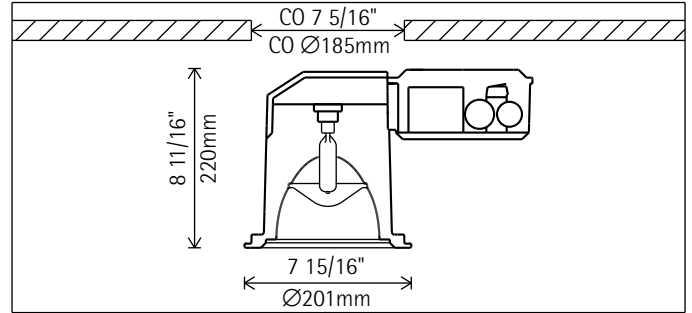


## APPENDIX

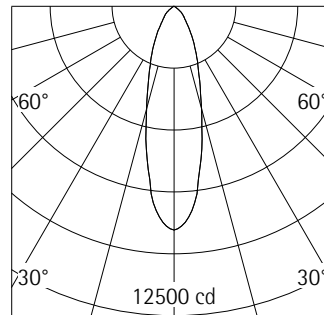
# LUMINAIRE CUT SHEETS



**81030.023**  
 Reflector color Silver  
 T6 70W G12 6600lm  
 ECG

**Product description**

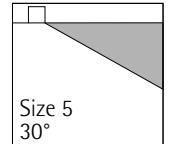
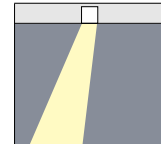
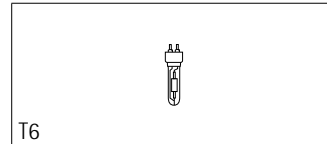
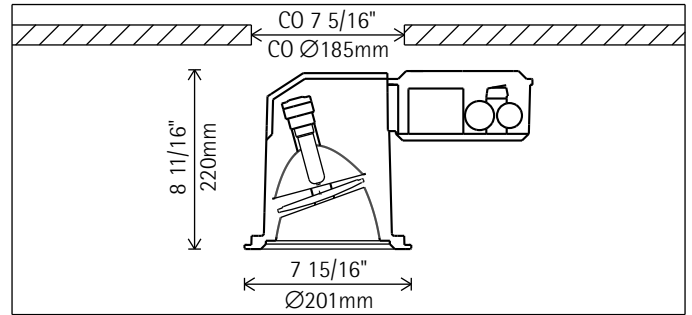
Housing: cast aluminum, silver powder-coated. Mounting with 3-point support and screw-tightening. Side-mounted control gear: cast aluminum, black powder-coated.  
 Electronic control gear 120V, 60Hz. Through-wiring possible.  
 Low brightness reflector: aluminum, specular anodized. Cut-off angle 30° from horizontal. Diffuser as lamp cover: glass, frosted.  
 Screw mounted cover frame with safety glass: corrosion-resistant, cast aluminum, No-rinse surface treatment. Silver, double powder-coated. To be removed together with low-brightness reflector for lamp replacement.  
 Suitable for wet location (IP65): dust-proof and water jet-proof.  
 Weight: 9.26 lbs / 4.20 kg



T6 70W G12 6600lm

h(ft)	E(fc)	D(ft)
		29°
3	1005	1'7"
6	251	3'1"
9	112	4'8"
12	63	6'2"
15	40	7'9"

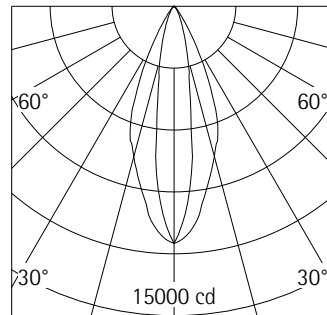
for metal halide lamps



**81031.023**  
 Reflector color Silver  
 T6 70W G12 6600lm  
 ECG

**Product description**

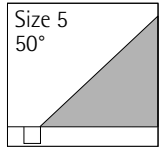
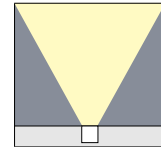
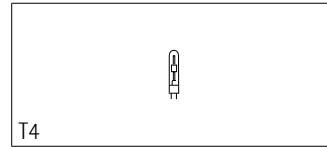
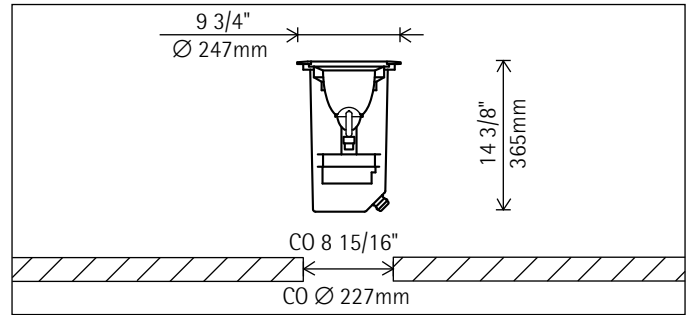
Housing: cast aluminum, silver powder-coated. Lampholder carrier 0°-15° tilt. Mounting with 3-point support and screw-tightening. Side-mounted control gear: cast aluminum, black powder-coated. Electronic control gear 120V, 60Hz. Through-wiring possible. Low brightness reflector: aluminum, specular anodized. Cut-off angle 30° from horizontal. Spot reflector: aluminum, silver, specular anodized. Sculpture lens. Screw mounted cover frame with safety glass: corrosion-resistant, cast aluminum, No-rinse surface treatment. Silver, double powder-coated. To be removed together with low-brightness reflector for lamp replacement. Suitable for wet location (IP65): dust-proof and water jet-proof. Weight: 9.92 lbs / 4.50 kg



T6 70W G12 6600lm

h(ft)	E(fc)	D(ft)	
		C0	C90
3	1278	0'11"	2'4"
6	320	1'10"	4'7"
9	142	2'8"	6'11"
12	80	3'7"	9'3"
15	51	4'6"	11'6"

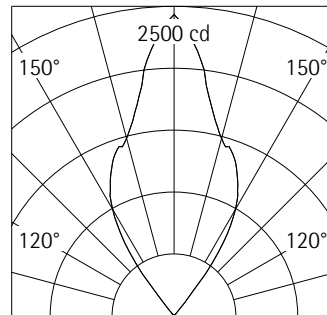
Uplight for metal halide lamps



**33713.023**  
 Reflector color Silver  
 T4 39W G8.5 3300lm  
 ECG

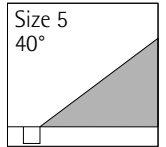
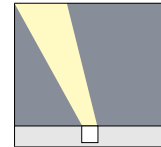
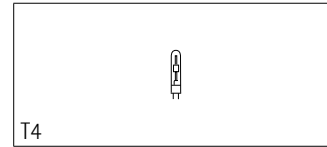
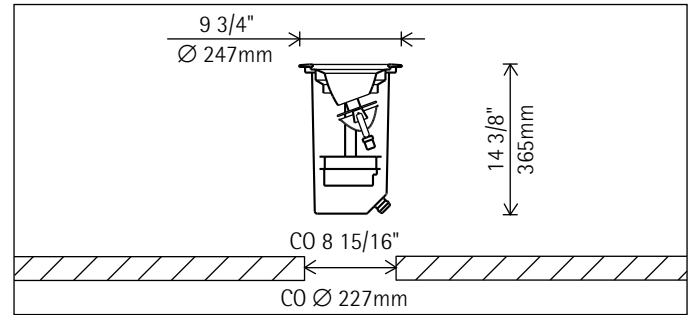
**Product description**

Housing: corrosion-resistant, cast aluminum, No-rinse surface treatment. Black double powder-coated. Mounting by means of an adjustable bar. Clamp extension up to 1 3/8" / 35mm. Electronic control gear 120V, 60Hz. Cable, L 39" / 1m. Low brightness reflector: aluminum, silver, specular anodized. Cut-off angle 50° from horizontal. Diffuser: glass, frosted. Without spill light. Screw-mounted cover ring with flush safety glass: corrosion resistant stainless steel. Safety glass: 1/2" / 12mm, clear. Surface temperature 158°F / 70°C. Can be driven over by vehicles with pneumatic tyres. Load 9890lb.wt / 44kN. Suitable for wet location (IP68): dust-proof. Weight: 13.23 lbs / 6.00 kg



T4 39W G8.5 3300lm

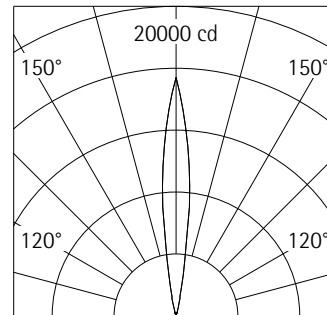
Directional luminaire for metal halide lamps



**33717.023**  
 Reflector color Silver  
 T4 39W G8.5 3300lm  
 ECG

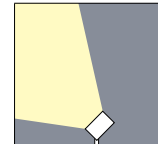
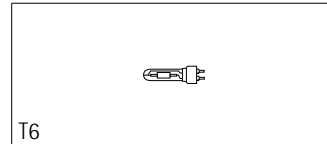
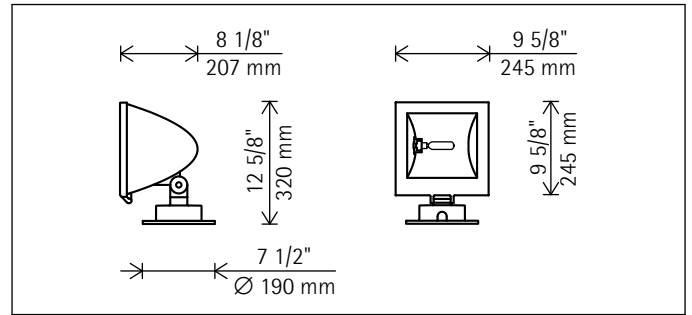
**Product description**

Housing: corrosion-resistant, cast aluminum, No-rinse surface treatment. Black double powder-coated. Lampholder carrier 0°-20° tilt. Mounting by means of an adjustable bar. Clamp extension up to 1 3/8" / 35mm. Electronic control gear 120V, 60Hz. Cable, L 39" / 1m. Low brightness reflector: aluminum, silver anodized. Cut-off angle 40° from horizontal. Without spill light. Screw-mounted cover ring with flush safety glass: corrosion resistant stainless steel. Safety glass: 1/2" / 12mm, clear. Can be driven over by vehicles with pneumatic tyres. Load 9890lb.wt / 44kN. Spot reflector: aluminum, silver anodized. Glass with anti-glare cylinder. Surface temperature 158°F / 70°C. Suitable for wet location (IP68): dust-proof. Weighth: 13.89 lbs / 6.30 kg



T4 39W G8.5 3300lm

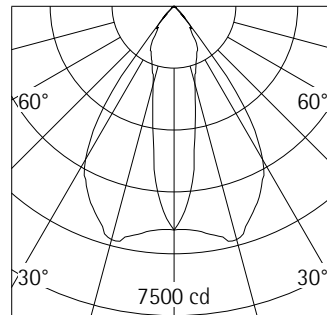
with mounting plate for metal halide lamps



34105.023 Graphit m  
T6 70W G12 6600lm  
ECG

**Product description**

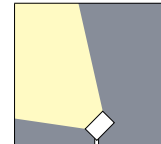
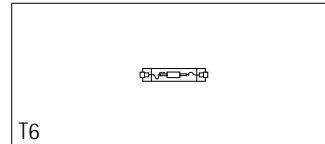
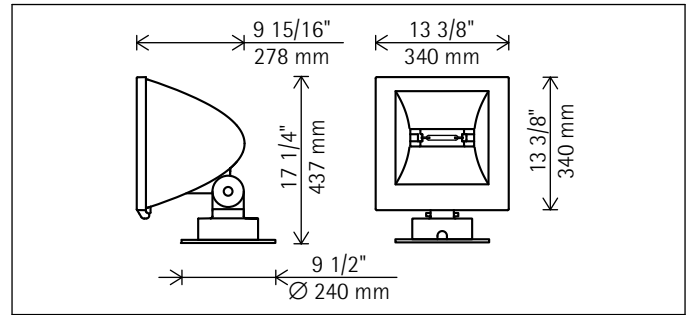
Housing and hinge: corrosion-resistant, cast aluminum, No-rinse surface treatment. Double powder-coated. Optimized surface for reduced accumulation of dirt. Hinge with internal wiring, 0-90° tilt. Graduated disc: stainless steel. Luminaire rotatable through 240°. Mounting plate: corrosion-resistant aluminum.  
Electronic control gear 120V, 60Hz. 2 cable entries. Through-wiring possible. 3-pole terminal block. Flood reflector with focal emphasis in beam direction: Aluminum, silver, specular anodized. Side reflectors to increase the visual comfort along the lamp axis, specular anodized. Cut-off angle 50° along the main axes. Without spill light.  
Screw-mounted cover with safety glass: corrosion-resistant cast aluminum, double powder-coated. Hinge open for lamp replacement. Suitable for wet location (IP65): dust-proof and water jet-proof.  
Weight: 11.46 lbs / 5.20 kg  
Surface exposed to the wind 0.75 ft<sup>2</sup> / 0,07 m<sup>2</sup>



T6 70W G12 6600lm

h(ft)	E(fc)	D(ft)	
		C0	C90
3	603	1'2"	4'3"
6	151	2'4"	8'7"
9	67	3'6"	12'10"
12	38	4'8"	17'1"
15	24	5'10"	21'5"

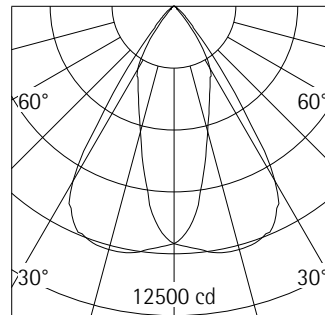
with mounting plate for metal halide lamps



**34109.023** Graphit m  
T6 150W RSC 14000lm  
ECG

**Product description**

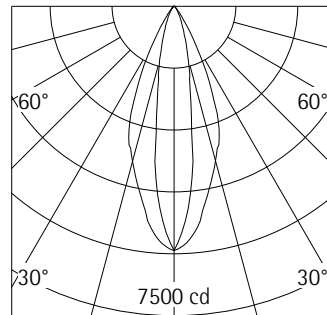
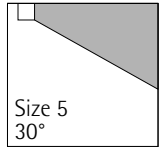
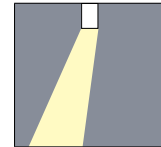
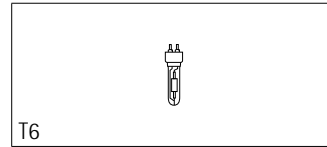
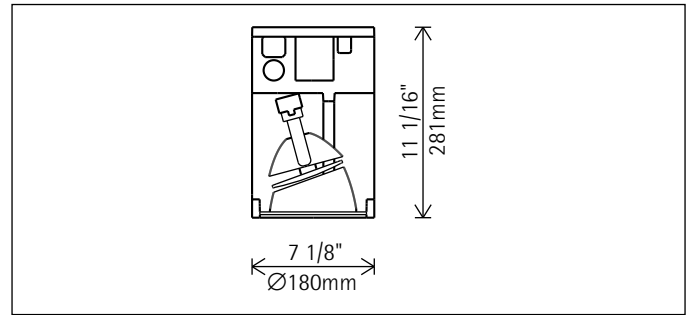
Housing and hinge: corrosion-resistant, cast aluminum, No-rinse surface treatment. Double powder-coated. Optimized surface for reduced accumulation of dirt. Hinge with internal wiring, 0-90° tilt. Graduated disc: stainless steel. Luminaire rotatable through 240°. Mounting plate: corrosion-resistant aluminum.  
Electronic control gear 120V, 60Hz. 2 cable entries. Through-wiring possible. 3-pole terminal block. Flood reflector with focal emphasis in beam direction: Aluminum, silver, specular anodized. Side reflectors to increase the visual comfort along the lamp axis, specular anodized. Cut-off angle 50° along the main axes. Without spill light.  
Screw-mounted cover with safety glass: corrosion-resistant cast aluminum, double powder-coated. Hinge open for lamp replacement. Suitable for wet location (IP65): dust-proof and water jet-proof.  
Weight: 24.25 lbs / 11.00 kg  
Surface exposed to the wind 1.40 ft<sup>2</sup> / 0,13 m<sup>2</sup>



T6 150W RSC 14000lm

h(ft)	E(fc)	D(ft)	
		C0	C90
3	1067	1'10"	4'1"
6	267	3'8"	8'3"
9	119	5'6"	12'4"
12	67	7'4"	16'6"
15	43	9'2"	20'7"





85085.023 Graphit m  
T6 39W G12 3400lm  
ECG

**Product description**

Cylinder and ceiling fixture: corrosion-resistant, cast aluminum, No-rinse surface treatment. Double powder-coated. Lampholder carrier tiltable 0°-15°.

Electronic control gear 120V, 60Hz. 1 cable entry. Through-wiring possible. 2-pole terminal block.

Low brightness reflector: aluminum, silver, specular anodized. Cut-off angle 30° from horizontal.

Spot reflector: aluminum, silver, specular anodized. Sculpture lens.

Fixing ring with safety glass: corrosion-resistant cast aluminum, double powder-coated. To be removed together with low brightness reflector for lamp replacement. Securing screw.

Suitable for wet location (IP65): dust-proof and water jet-proof.

Weight: 9.59 lbs / 4.35 kg

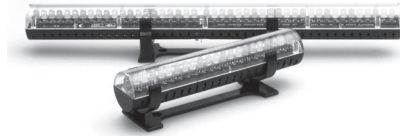
T6 39W G12 3400lm

h(ft)	E(fc)	D(ft)	
		C0	C90
3	658	0'11"	2'4"
6	165	1'10"	4'7"
9	73	2'8"	6'11"
12	41	3'7"	9'3"
15	26	4'6"	11'6"



## iCOLOR COVE

POWERED BY CHROMACORE®



Color Kinetics® iColor® Cove is an award-winning digital color-changing cove light. It brings color changing light and lighting effects to alcoves, task areas, accent areas and other tight spaces without the drawbacks, expense or constraints of conventional colored lighting methods.

iColor Cove is modular in design, and projects a soft-edge strip of light at a 110° beam angle. Each length of iColor Cove in an installation can be individually controlled either by the on-board controller or by an external controller. Using an external controller, a run of multiple iColor Cove units can be set to dynamic sequences such as the Chasing Rainbow, or synchronized to produce a soothing, uniform visual effect.

iColor Cove is available in fixed lengths of six (6) and twelve (12) inches. Each segment is cased in a low-profile, vented, molded plastic housing. The housing snaps directly into a one-piece mounting clip; there is no need to open the case to mount the segment. The mounting clips are indexed to lock the iColor Cove into place, allowing for the uniform alignment of multiple fixtures as well as the easy rotation of fixtures.

To connect to power and data, each segment is equipped with a three-pin header that attaches to a master cable, making installations with curves or complicated geometry easy to install. Each master cable is designed to be hardwired to a PDS-150e, which supplies power and data to all connected lights.

### iCOLOR COVE SPECIFICATIONS

<b>COLOR RANGE</b>	16.7 million (24-bit) additive RGB colors; continuously variable intensity output range
<b>SOURCE</b>	High brightness colored LEDs
<b>BEAM ANGLE</b>	110° x 40°
<b>HOUSING</b>	Two-piece vented plastic
<b>CONNECTORS</b>	3-pin power and data connector for use with master cable; master cable unterminated for use with Color Kinetics PDS-150e
<b>LISTINGS</b>	C-UL US Listed, CE certified

### COMMUNICATION SPECIFICATIONS

<b>DATA INTERFACE</b>	Color Kinetics data interface system
<b>CONTROL</b>	Color Kinetics full line of controllers, DMX512 (RS485) compatible when using Color Kinetics power/data supply, and Stand Alone

### ELECTRICAL SPECIFICATIONS

<b>POWER REQUIREMENT</b>	24VDC
<b>POWER CONSUMPTION</b>	Maximum: 4.2 Watts (6-inch) Maximum: 6 Watts (12-inch)
<b>POWER SUPPLY</b>	PDS-150e (ITEM# 109-000008-01); PDS-60 24V (ITEM# 109-000017-XX)
<b>MASTER CABLE</b>	Wire Harness for iColor Cove (ITEM# 108-000013-00),



ITEM# 101-000002-00 (12-inch)  
101-000002-01 (6-inch)

U.S. PATENTS 6,016,038, 6,150,774, 6,340,868, AND 6,788,011  
FOREIGN PATENTS: EUROPE 1,016,062, AUSTRALIA 757,000,  
HONG KONG 1025416, AND CANADA 2,302,227  
OTHER PATENTS PENDING

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ColorBurst, ColorPlay, ColorScape, iColor, iColor Cove, iPlayer,  
QuickPlay, and Smartjuice are registered trademarks, and  
Chromatic, ColorBlaze, ColorCast, and Optibin are  
trademarks of Color Kinetics Incorporated.

All other brand or product names are trademarks  
or registered trademarks of their respective owners.

BRO013 Rev 12

Specifications subject to change without notice.

### DESCRIPTION OF SHOWS

<b>FIXED COLOR</b>	Static display of a single color
<b>COLOR WASH</b>	Colors transition gracefully from color to color, cycling through the entire color wheel
<b>CROSS FADE</b>	Colors cycle back and forth gracefully between two colors
<b>RANDOM COLOR</b>	Colors step or jump from one color to the next in random order
<b>FIXED COLOR STROBE</b>	A constant color appears in a rapid series of intense flashes of light
<b>VARIABLE COLOR STROBE</b>	A sequence of colors appear in a rapid series of intense flashes of light

### OPTIBIN™

There are inherent variations in the fabrication processes of all semiconductor materials. For LEDs, this variance results in differences in the color and intensity of light output as well as electrical characteristics. Due to these differences, LED manufacturers sort production into "bins," but insuring the availability of a single bin is very difficult. To minimize this issue and achieve optimal color consistency in its products, Color Kinetics has developed and uses a proprietary technology called Optibin. Optibin is an advanced production binning optimization process that minimizes the effects of LED variance for the best possible output uniformity in the final product. Color Kinetics Optibin technology gives you the most consistent control of color and intensity from product to product.

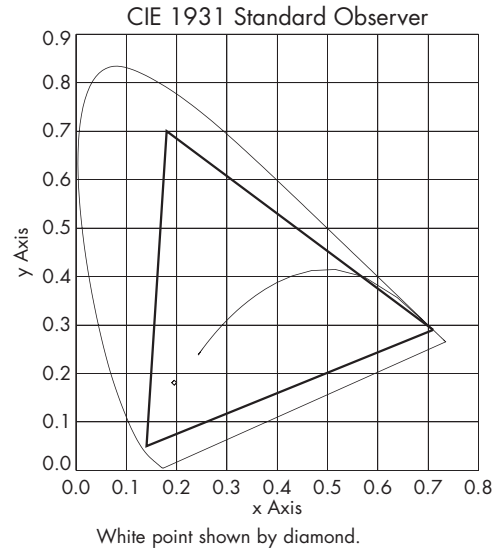
# iCOLOR COVE — 12"

## PHOTOMETRIC PERFORMANCE

### SOURCE SPECIFICATIONS

Optics: Clear polycarbonate  
 Source: 45 LEDs (15 Red, 15 Green, 15 Blue)  
 Beam Angle: 110° x 40° (at 50% of peak illuminance)  
 Distribution: Asymmetric direct illumination  
 CCT: Adjustable 1,000–10,000K  
 CRI: Not measurable (CIE 13.3-1995)

### GAMUT

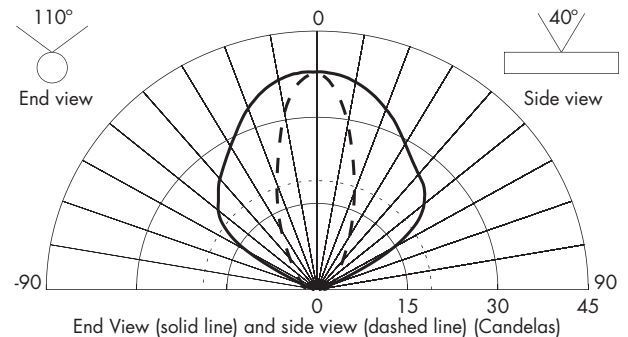


### ILLUMINANCE DISTRIBUTION

0.8	1.4	1.3	1.3	1.4	0.8	1.5'/0.5m
9.1	14.9	13.8	13.9	14.9	9.1	
2.1	4.0	4.5	4.5	4.0	2.12	
22.9	43.0	48.5	48.5	42.9	22.8	
3.9	9.2	18.3	18.3	9.1	3.9	
42.0	98.6	197	197	98.2	41.8	
3.9	9.2	18.4	18.4	9.2	3.9	0'/0m
42.1	99.0	198	198	98.5	41.9	
2.1	4.0	4.5	4.5	4.0	2.1	
23.0	43.3	48.9	48.9	43.2	22.9	
0.9	1.4	1.3	1.3	1.4	0.9	1.5'/0.5m
9.2	15.0	13.9	14.0	15.0	9.1	
1.5'/0.5m		0'/0m		1.5'/0.5m		

Units: Footcandles/Lux  
 Measured on: White  
 Distance from surface: 1'/.33m (from center of grid)  
 Multipliers: 0.15 Red, 0.65 Green, 0.21 Blue

### CANDLE POWER DISTRIBUTION



Measured on: White  
 Beam center: 38 cd  
 Thin dashed line: Indicates 50% of peak  
 Multipliers: 0.15 Red, 0.65 Green, 0.21 Blue

### ILLUMINANCE

COLOR	3'	6'	9'	12'	15'
	1m	2m	3m	4m	5m
WHITE	3.8	0.9	0.4	0.2	0.2
	40.5	10.1	4.5	2.5	1.6
RED	0.6	0.1	0.1	0.0	0.0
	6.1	1.5	0.7	0.4	0.2
GREEN	2.4	0.6	0.3	0.2	0.1
	26.3	6.6	2.9	1.6	1.1
BLUE	0.8	0.2	0.1	0.0	0.0
	8.5	2.1	0.9	0.5	0.3

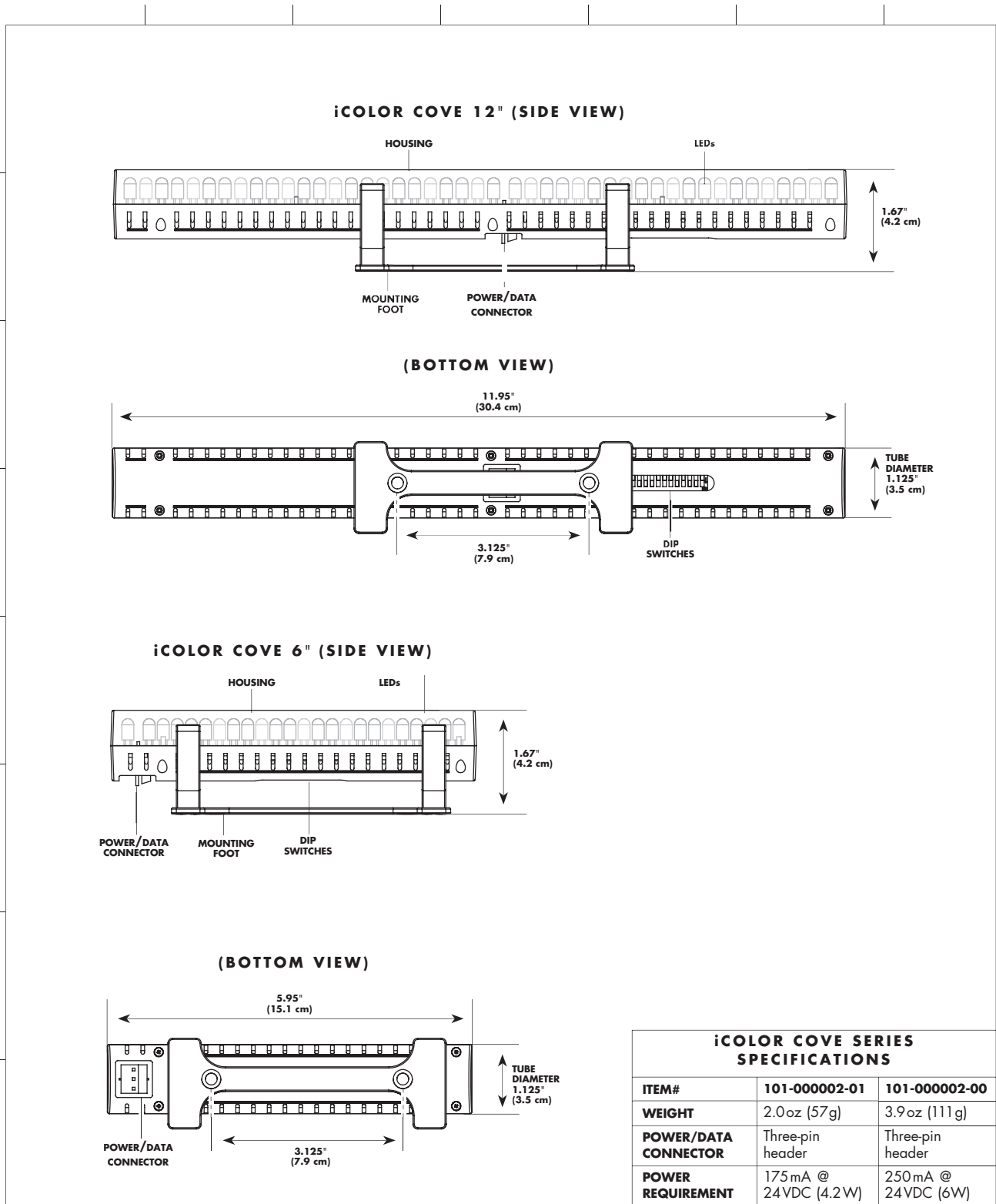
Measured in Footcandles/Lux on axis.

### LIGHT OUTPUT

COLOR	TOTAL OUTPUT (LUMENS)	POWER (WATTS)	EFFICACY (lm/w)
WHITE	52.4	6.1	8.5
RED	7.6	1.7	4.5
GREEN	34.3	2.5	14.0
BLUE	10.4	2.5	4.2

# iCOLOR COVE

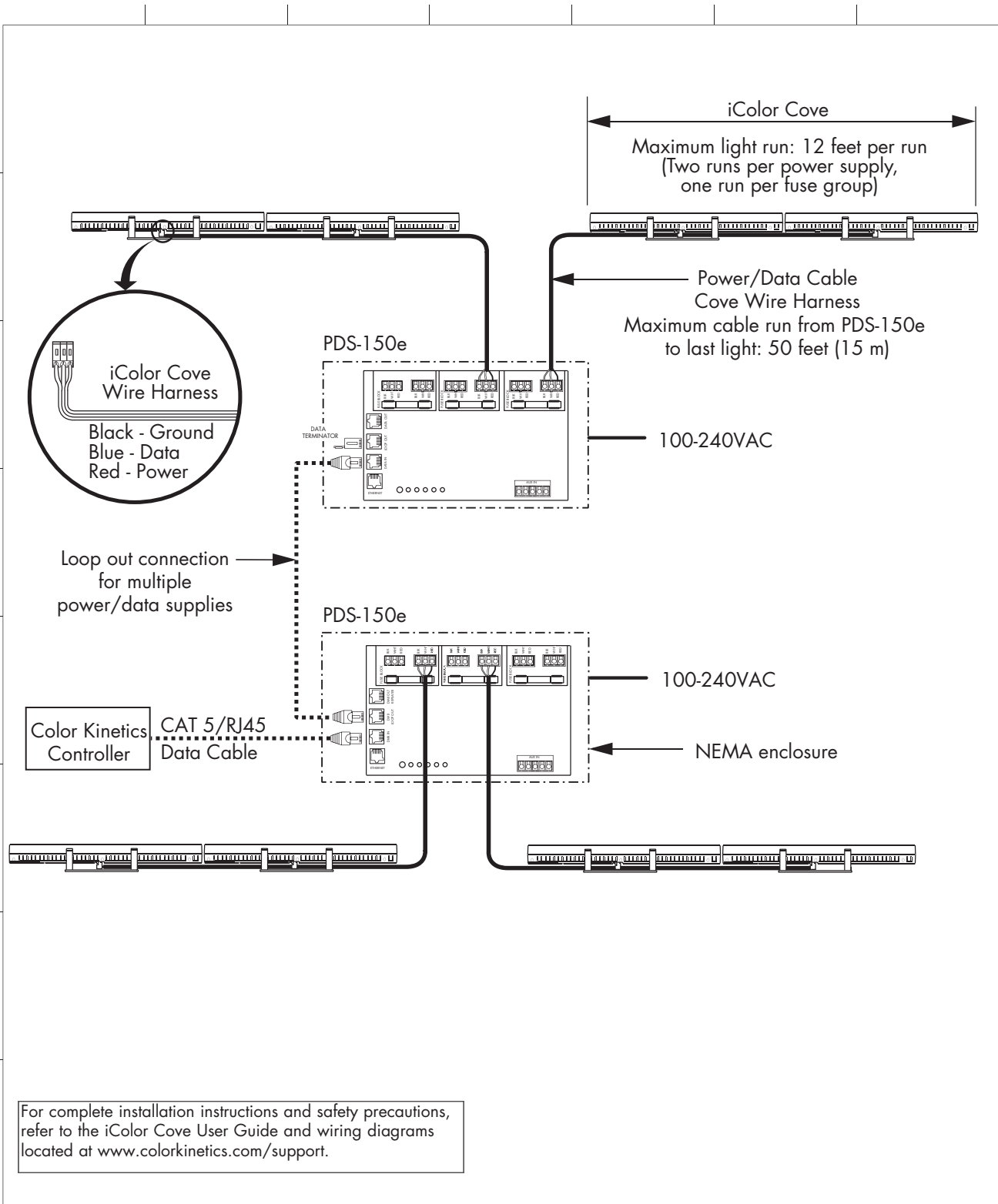
## PHYSICAL DIMENSIONS

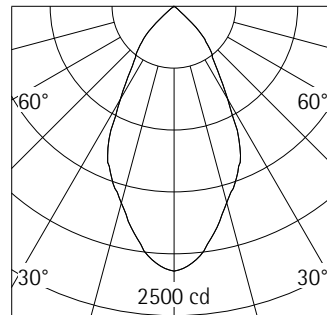
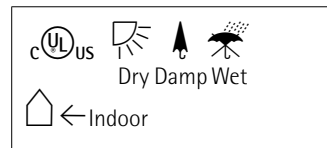
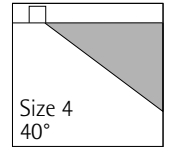
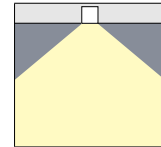
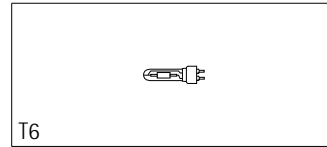
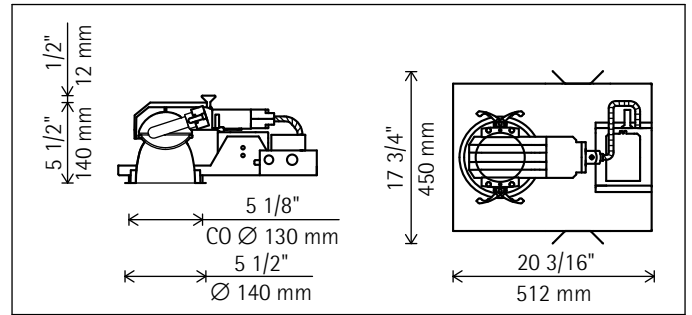
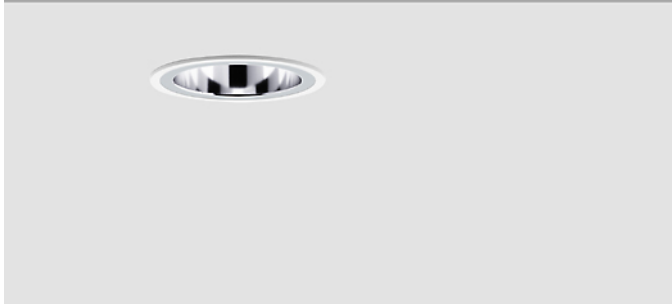
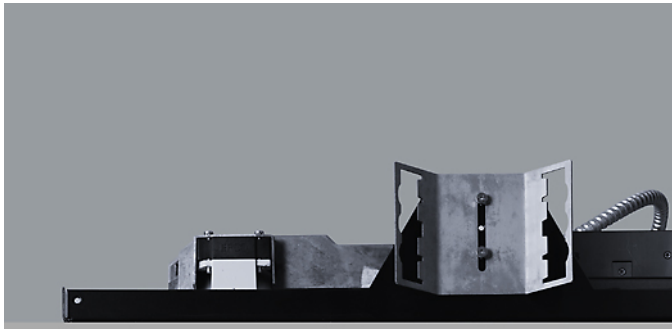


iCOLOR COVE SERIES SPECIFICATIONS		
ITEM#	101-000002-01	101-000002-00
WEIGHT	2.0oz (57g)	3.9oz (111g)
POWER/DATA CONNECTOR	Three-pin header	Three-pin header
POWER REQUIREMENT	175mA @ 24VDC (4.2W)	250mA @ 24VDC (6W)

# iCOLOR COVE

## FUNCTIONAL FLOW DIAGRAM





T6 39W G12 3400lm

Efficiency: 53%

**22682.023**

Reflector color Silver  
T6 39W G12 3400lm  
ECG

**Product description**

Housing: cast aluminum, designed as heat sink.

Mounting ring: cast aluminum, white (RAL9002) powder-coated. 4-point support and screw tightening for fixing to mounting plate.

Mounting plate for preinstallation with junction box for through-wiring, black powder-coated. Electronic control gear 120V, 60Hz on top of junction box. Snap-in plug for connection between junction box and luminaire.

Low brightness reflector: aluminum, specular anodized. Cut-off angle 40° from horizontal.

Diffuser as lamp cover: glass, frosted.

Type Non IC luminaire.

Insulation materials must be kept away from the luminaire by a minimum of 3". Thermally protected luminaire. Luminaires protected with disconnecting switch. Suitable for damp location. Removal of reflector allows access to junction box from below.

Max. ceiling thickness 3/4".

Weight: 7.94 lbs / 3.60 kg

## Planning Data

### Connected load of luminaire

T6 39W G12 3400lm

PL: 45 W

### Connected load per 100fc

T6 39W G12 3400lm

P\*: 0.3 W/ft<sup>2</sup>

### Number of luminaires per 100fc

T6 39W G12 3400lm

n\*: 6.6 1/1000 ft<sup>2</sup>

### Number of luminaires per 1000ft<sup>2</sup> for

T6 39W G12 3400lm

10fc	20fc	30fc	50fc
6	12	18	31

### Illuminances (fc) for module (ft)

T6 39W G12 3400lm

4x6	6x6	6x8	8x8
63	42	32	24

### Correction table

Ceiling	0.7	0.7	0.7	0.5	0
Wall	0.7	0.5	0.2	0.2	0
Floor	0.5	0.2	0.2	0.1	0

k 0.6	88	70	64	63	61
k 1.0	105	84	77	75	73
k 1.5	118	93	88	85	82
k 2.5	128	100	96	91	88
k 3.0	131	102	99	93	90

## Photometric report

### Candlepower distribution

Vertical Angle	Candelas
0°	2140
10°	1862
20°	1477
30°	867
40°	447
50°	37
60°	0
70°	0
80°	0
90°	0

### Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0°	0	0	0
10°	190	6	11
20°	653	19	36
30°	1212	36	68
40°	1591	47	89
50°	1793	53	100
60°	1794	53	100
70°	1794	53	100
80°	1794	53	100
90°	1794	53	100

### Lamp information

T6 39W G12 3400lm

Note:  
Photometric data may change when using different lamps.

These guide values are based on 10ft ceiling height in a square room of 1000ft<sup>2</sup> and mean reflectances (ceiling 70 %, walls 50 % and floor 20 %). Other room shapes or reflectances should be converted accordingly. The values include the light loss factor of 0.8.

### Coefficients of Utilisation

Reflectances

Ceiling	80	80	80	70	70	70	50	50	50	30	30	30	10	10	10	0
Walls	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
Floor	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20

Room Cavity Ratio

0	63	63	63	61	61	61	59	59	59	56	56	56	54	54	54	53
1	59	58	57	58	57	56	56	55	54	54	53	53	52	52	51	50
2	56	54	52	55	53	52	53	52	51	52	50	50	50	49	49	48
3	53	50	49	52	50	48	51	49	47	49	48	47	48	47	46	45
4	50	47	45	49	47	45	48	46	45	47	45	44	46	45	44	43
5	47	44	42	47	44	42	46	43	42	45	43	41	44	42	41	40
6	45	42	40	44	42	40	43	41	39	43	41	39	42	40	39	38
7	42	39	37	42	39	37	41	39	37	40	38	37	40	38	37	36
8	40	37	35	39	37	35	39	36	35	38	36	35	38	36	34	34
9	37	34	33	37	34	32	37	34	32	36	34	32	36	34	32	31
10	35	32	31	35	32	30	35	32	30	34	32	30	34	32	30	30

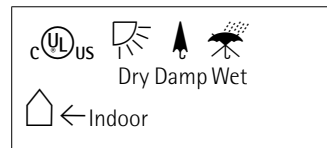
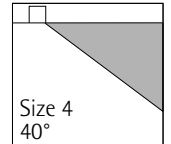
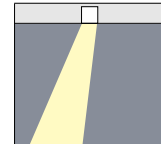
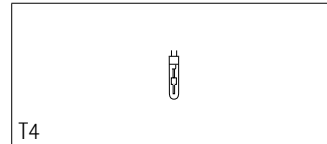
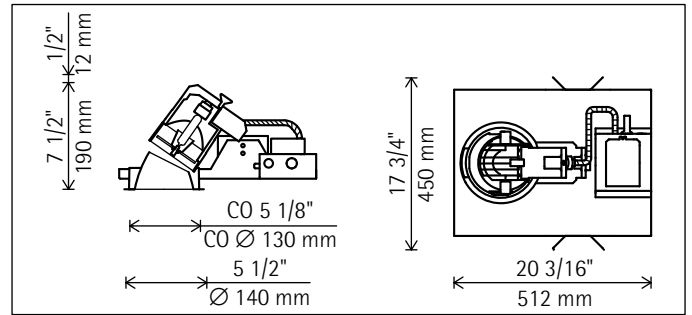
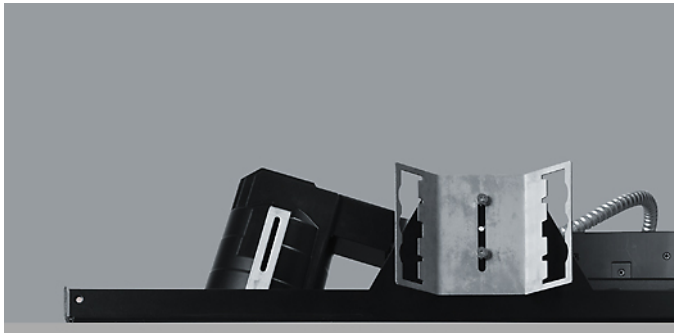
### Luminance Data

Vertical Angle Footlamberts

45°	171553
50°	23950
55°	0
60°	0
65°	0
70°	0
75°	0
80°	0
85°	0
90°	0



for metal halide lamps



**22685.023**  
 Reflector color Silver  
 T4 39W G8.5 3300lm  
 ECG

**Product description**

Housing: cast aluminum, black powder-coated. 0°-35° tilt, 360° rotation.

Mounting ring: plastic, white (RAL9002) powder-coated, with fixing springs for fixing to mounting plate.

Mounting plate for preinstallation with junction box for through-wiring, black powder-coated. Electronic control gear 120V, 60Hz on top of junction box. Snap-in plug for connection between junction box and luminaire.

Reflector: aluminum, silver anodized. Safety glass with anti-glare cylinder.

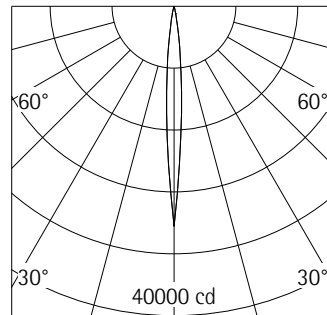
Low brightness reflector: aluminum, specular anodized. Cut-off angle 40° from horizontal.

Type Non IC luminaire.

Insulation materials must be kept away from the luminaire by a minimum of 3". Thermally protected luminaire. Luminaires protected with disconnecting switch. Suitable for damp location. Removal of reflector allows access to junction box from below. Max. ceiling thickness 3/4".

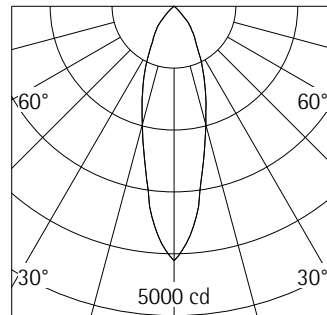
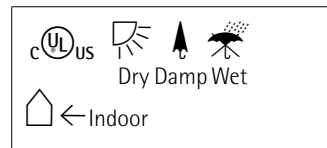
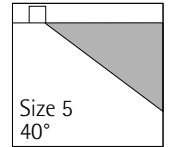
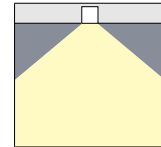
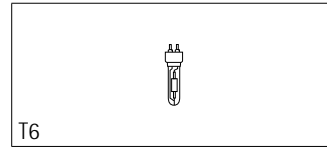
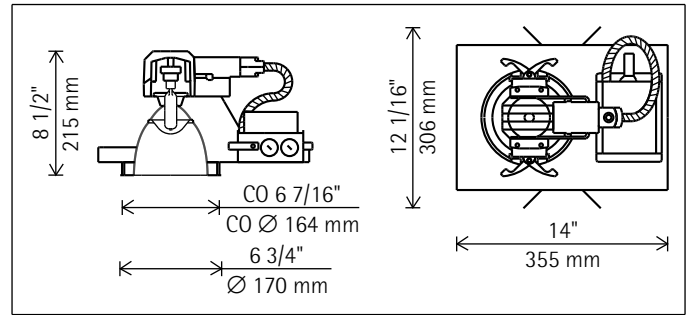
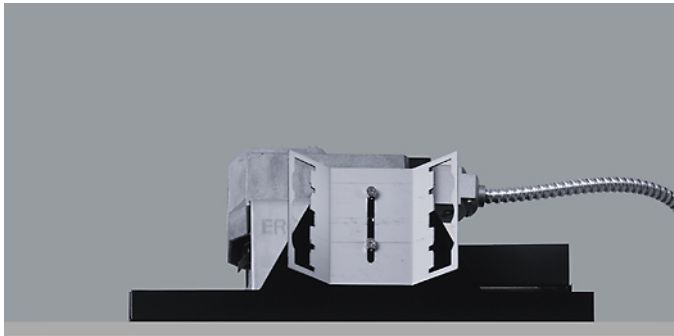
Max. ceiling thickness 3/4".

Weight: 8.16 lbs / 3.70 kg



T4 39W G8.5 3300lm

h(ft)	E(fc)	D(ft)
		8°
3	3164	0'5"
6	791	0'10"
9	352	1'3"
12	198	1'8"
15	127	2'1"



T6 39W G12 3400lm

Efficiency: 54%

**28551.023**

Reflector color Silver  
 T6 39W G12 3400lm  
 ECG

**Product description**

Housing: cast aluminum, designed as heat sink.

Mounting ring: cast aluminum, white (RAL9002) powder-coated. 4-point support and screw tightening for fixing to mounting plate.

Mounting plate for preinstallation with junction box for through-wiring, black powder-coated. Electronic control gear 120V, 60Hz on top of junction box. Snap-in plug for connection between junction box and luminaire.

Low brightness reflector: aluminum, specular anodized. Cut-off angle 40° from horizontal.

Diffuser as lamp cover: glass, frosted.

Type Non IC luminaire.

Insulation materials must be kept away from the luminaire by a minimum of 3". Thermally protected luminaire. Luminaires protected with disconnecting switch. Suitable for damp location. Removal of reflector allows access to junction box from below.

Max. ceiling thickness 3/4".

Weight: 7.94 lbs / 3.60 kg

## Planning Data

### Connected load of luminaire

T6 39W G12 3400lm

PL: 45 W

### Connected load per 100fc

T6 39W G12 3400lm

P\*: 0.3 W/ft<sup>2</sup>

### Number of luminaires per 100fc

T6 39W G12 3400lm

n\*: 6.4 1/1000 ft<sup>2</sup>

### Number of luminaires per 1000ft<sup>2</sup> for

T6 39W G12 3400lm

10fc	20fc	30fc	50fc
6	12	18	30

### Illuminances (fc) for module (ft)

T6 39W G12 3400lm

4x6	6x6	6x8	8x8
65	43	32	24

### Correction table

Ceiling	0.7	0.7	0.7	0.5	0
Wall	0.7	0.5	0.2	0.2	0
Floor	0.5	0.2	0.2	0.1	0

k 0.6	92	75	70	69	67
k 1.0	107	86	81	79	76
k 1.5	118	94	90	87	84
k 2.5	127	100	97	92	88
k 3.0	130	102	99	93	90

## Photometric report

### Candlepower distribution

Vertical Angle	Candelas
0°	4114
10°	2668
20°	1492
30°	741
40°	370
50°	5
60°	2
70°	1
80°	0
90°	0

### Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0°	0	0	0
10°	311	9	17
20°	864	25	48
30°	1361	40	75
40°	1699	50	93
50°	1816	53	100
60°	1818	53	100
70°	1819	53	100
80°	1819	54	100
90°	1819	54	100

### Lamp information

T6 39W G12 3400lm

Note:  
Photometric data may change when using different lamps.

These guide values are based on 10ft ceiling height in a square room of 1000ft<sup>2</sup> and mean reflectances (ceiling 70 %, walls 50 % and floor 20 %). Other room shapes or reflectances should be converted accordingly. The values include the light loss factor of 0.8.

### Coefficients of Utilisation

#### Reflectances

Ceiling	80	80	80	70	70	70	50	50	50	30	30	30	10	10	10	0
Walls	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
Floor	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20

#### Room Cavity Ratio

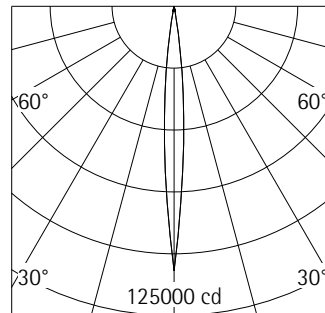
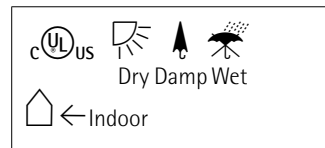
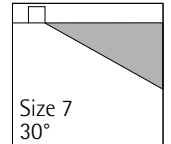
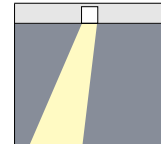
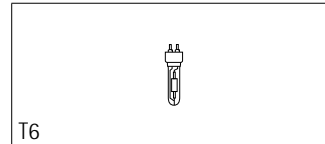
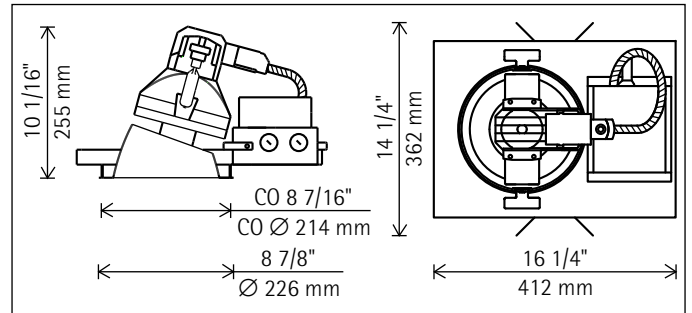
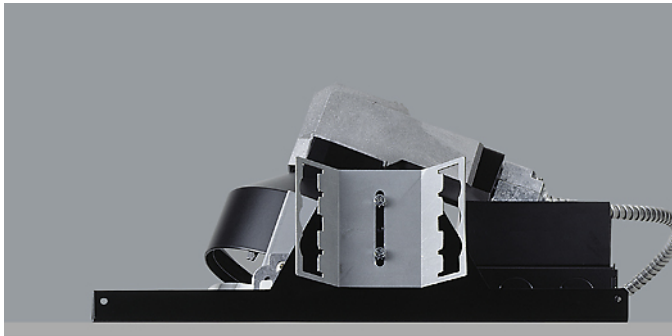
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2	57	55	54	56	55	53	54	53	52	53	52	51	52	51	50	49
3	54	52	51	54	52	50	52	51	49	51	50	49	50	49	48	47
4	52	49	48	51	49	47	50	48	47	49	48	46	48	47	46	45
5	49	47	45	49	47	45	48	46	44	47	45	44	46	45	44	43
6	47	45	43	47	44	43	46	44	42	45	44	42	45	43	42	41
7	45	42	41	45	42	40	44	42	40	43	42	40	43	41	40	39
8	43	40	39	43	40	38	42	40	38	42	40	38	41	39	38	37
9	41	38	37	41	38	36	40	38	36	40	38	36	39	37	36	36
10	39	36	35	39	36	35	38	36	35	38	36	35	38	36	34	34

### Luminance Data

#### Vertical Angle

Vertical Angle	Footlamberts
45°	53188
50°	2084
55°	1176
60°	860
65°	628
70°	421
75°	238
80°	323
85°	0
90°	0

for metal halide lamps



**81529.023**  
 Reflector color Silver  
 T6 70W G12 6600lm  
 ECG

**Product description**

Housing: cast aluminum, black powder-coated. Lampholder carrier designed as heat sink, 0°-30° tilt, 360° rotation.

Mounting ring: cast aluminum, white (RAL9002) powder-coated for fixing to mounting plate.

Mounting plate for preinstallation with junction box for through-wiring, black powder-coated. Electronic control gear 120V, 60Hz on top of junction box. Snap-in plug for connection between junction box and luminaire.

Reflector: aluminum, silver, specular anodized. Safety glass with anti-glare cylinder.

Low brightness reflector: aluminum, specular anodized. Cut-off angle 30° from horizontal.

Type Non IC luminaire.

Insulation materials must be kept away from the luminaire by a minimum of 3". Thermally protected luminaire. Luminaires protected with disconnecting switch. Suitable for damp location. Removal of reflector allows access to junction box from below. Max. ceiling thickness 3/4".

Max. ceiling thickness 3/4".

Weight: 11.46 lbs / 5.20 kg

T6 70W G12 6600lm

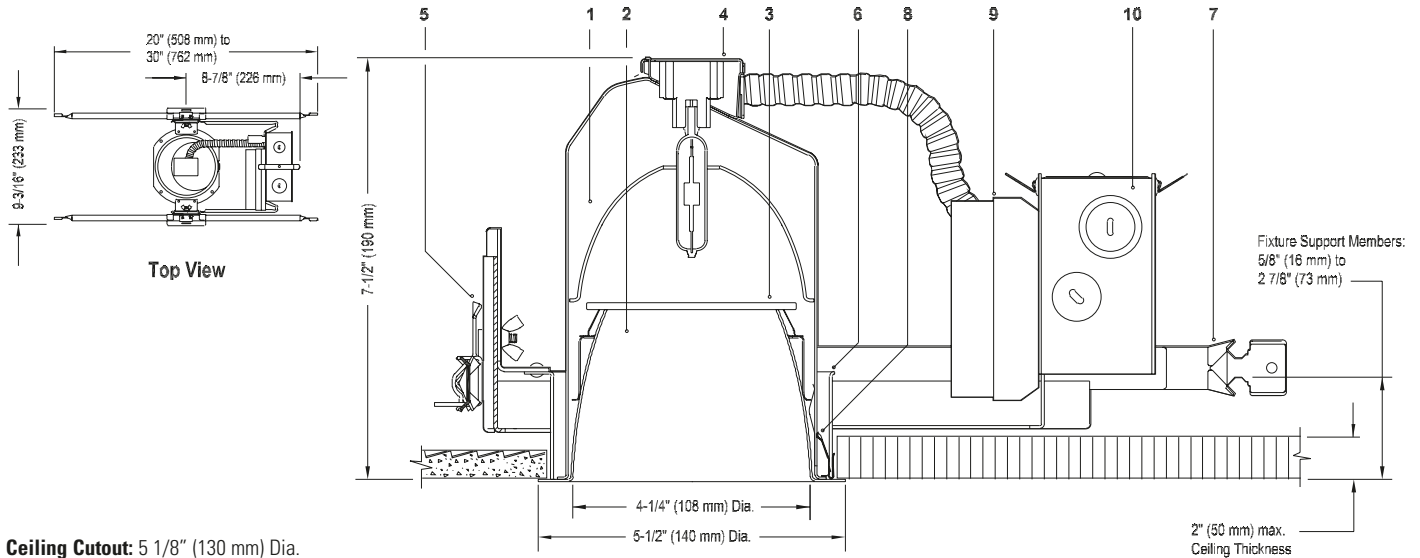
h(ft)	E(fc)	D(ft)
		9°
3	11879	0'6"
6	2970	0'11"
9	1320	1'5"
12	742	1'11"
15	475	2'4"



# Calculite® HID Downlight C4T4VN

Page 1 of 2

4 1/2" Aperture, 2pc Vertical, T4.5 Narrow Beam



Ceiling Cutout: 5 1/8" (130 mm) Dia.

Reflector Trim			Frame-In Kit		Lamp	
<b>C4T4VN</b>	<b>CLW</b>	Specular Clear, White Painted Flange.	<b>C420T4E1</b>	Electronic 120V	20W T4.5	Ceramic Metal Halide
	<b>CLP</b>	Specular Clear, Matching Flange.	<b>C420T4E2</b>	Electronic 277V	20W T4.5	Ceramic Metal Halide
	<b>CCDW</b>	Comfort Clear Diffuse, White Painted Flange.	<b>C439T4E1</b>	Electronic 120V	39W T4.5	Ceramic Metal Halide
	<b>CCDP</b>	Comfort Clear Diffuse, Matching Flange.	<b>C439T4E2</b>	Electronic 277V	39W T4.5	Ceramic Metal Halide
	<b>CCZW</b>	Champagne Bronze, White Painted Flange.	<b>C470T4E1</b>	Electronic 120V	70W T4.5	Ceramic Metal Halide
	<b>CCZP</b>	Champagne Bronze, Matching Flange.	<b>C470T4E2</b>	Electronic 277V	70W T4.5	Ceramic Metal Halide

## Features

- Upper Reflector:** Clear anodized aluminum, 0.040" (16-ga.). Provides medium beam optics ideal for general lighting. Also available in medium and wide beam, see C4T4VM and C4T4VW specification sheets.
- Aperture Cone:** Provides 50° visual cut-off to lamp and lamp image; self-flange in painted white or aperture-matching polished flange. Consult factory for other finishes.
- Lamp Shield:** High-temperature glass as required by code, captive during re-lamping. Light diffusion provides exceptionally smooth beam.
- Socket Housing:** Galvanized steel, pre-wired with G8.5 pulse rated socket. Snaps onto upper reflector for secure attachment without tools; unitized construction assures proper lamp alignment to optics for consistent performance.
- Mounting Frame:** 0.048" (18-ga.) galvanized steel. Vertical adjustment mechanism accommodates mounting to virtually any ceiling system using mounting bars (provided, or 1/2" EMT tubing (by others). Single locking feature secures all adjustments. Alignment holes and markings allow fixture to be preset prior to installation.
- Mounting Ring:** 0.048" (18-ga.) galvanized steel. Designed for vertical adjustment from above or below for ceilings from 0" to 2" thick. Center-line notches allow consistent alignment of multiple fixtures.
- Mounting Bars:** 0.048" (18-ga.) pre-installed, telescoping bars extend to 30" long and lock securely into position. Built-in locking tabs provide positive attachment to common T-bar systems. Self-centering feature simplifies installation in 24" O.C. grid systems. Attaches to steel or wood joists without accessories.
- Trim Retention Springs:** Rust resistant springs secure reflector/housing for quick, tool-less installation.
- Ballast / Socket Housing / Cover Assembly:** Snaps onto junction box without tools for inspection and ballast replacement, accessible from below.
- Junction Box:** 0.048" (18-ga.) galvanized steel. UL listed for 8 No. 12 AWG, 90°C through branch circuit conductors. Allows inspection from below.
- Thermal Protector:** (Not Shown) Meets NEC and UL requirements. Do not install insulation above nor within 3" (76mm) of any part of the luminaire.

## Electrical

**Electronic Ballast:** 120 or 277V, 50/60 Hz., enclosed, high power factor, T.H.D. <15%, thermally and transient protected, RMI/RFI complies with FCC Part 18 non-consumer limits, shut-down circuit at end of lamp life, sound rating "A", -5°F minimum starting temperature, Type 1 Outdoor rating.

Ballast	ANSI Code	Voltage	Max. Amps	Input Watts
20W MH	M156	120/277	0.21/0.10	23
39W MH	M130	120/277	0.39/0.17	44
70W MH	M139	120/277	0.67/0.29	78

## Options and Accessories

**Slope Ceiling Adapters:** See Specification Sheet SCA.

**Chicago Plenum:** Consult Factory.

## Labels

UL (Suitable for Damp Locations), CSA, I.B.E.W.

For 70W, install fixtures with minimum spacing between:

- Center-to center of adjacent luminaires: 2 feet.
- Top of luminaire to overhead building member: 1/2 inch.
- Luminaire center to side building member: 1 foot.

## Job Information

Type:

Job Name:

Cat. No.:

Lamp(s):

Notes:

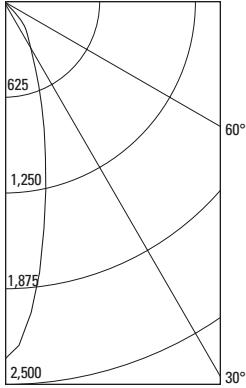
Lightolier a Genlyte Thomas Company [www.lightolier.com](http://www.lightolier.com)  
631 Airport Road, Fall River, MA 02720 • (508) 679-8131 • Fax (508) 674-4710  
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# LIGHTOLIER®



### 20W T4 GE CMH LAMP, LUMEN RATING = 1700 LMS, AROMAT ELECTRONIC BALLAST, CL FINISH TRIM

#### CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMENS
0	2340	
5	2039	189
10	1505	
15	1047	306
20	720	
25	490	237
30	351	
35	270	173
40	209	
45	96	79
50	6	
55	0	1
60	0	0
65	0	0
70	0	0
75	0	0
80	0	0
85	0	0
90	0	0

#### LUMINANCE SUMMARY CD. / SQ. M.

ANGLE	MEAN CD/SQ M
45	13228
55	32
65	8
75	0
85	0

#### Coefficients of Utilization

CEILING	80%		70%		50%		30%		0	
	70	50	30	10	50	10	50	10		
WALL										
RCR										
0	.69	.69	.69	.69	.67	.67	.64	.64	.62	.58
1	.67	.65	.64	.63	.64	.62	.62	.60	.60	.56
2	.64	.62	.60	.59	.61	.58	.59	.57	.58	.54
3	.62	.59	.57	.55	.58	.55	.57	.54	.55	.51
4	.60	.56	.54	.52	.56	.52	.54	.51	.53	.49
5	.57	.54	.51	.49	.53	.49	.52	.48	.51	.47
6	.55	.51	.49	.47	.51	.47	.50	.46	.49	.45
7	.53	.49	.46	.44	.49	.44	.48	.44	.47	.43
8	.51	.47	.44	.42	.46	.42	.46	.42	.45	.41
9	.49	.45	.42	.40	.44	.40	.44	.40	.43	.39
10	.47	.43	.40	.38	.42	.38	.42	.38	.42	.37

ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	732	43.09	74.35
0-40	905	53.24	91.87
0-60	985	57.95	100.0
0-90	985	57.95	100.0
40-90	80	4.71	8.13
60-90	0	0.0	0.0
90-180	0	0.0	0.0
0-180	985	57.95	100.0

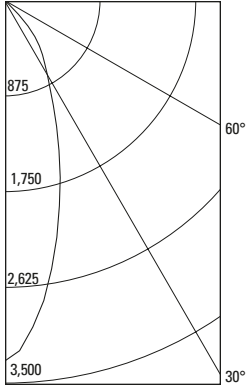
LUMINAIRE INPUT WATTS = 23

\*\* EFFICIENCY = 58.0% \*\*  
SC = 0.4

CERTIFIED TEST REPORT NO. 2401FR, DATE: DEC 22, 2003  
COMPUTED BY LSI PROGRAM \*\*TEST-LITE\*\*

### 39W T4 PHILIPS CMH LAMP, LUMEN RATING = 3300 LMS, AROMAT BALLAST, CL FINISH TRIM

#### CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMENS
0	3301	
5	2998	281
10	2493	
15	1946	556
20	1462	
25	1061	506
30	788	
35	609	383
40	435	
45	185	158
50	10	
55	0	2
60	0	0
65	0	0
70	0	0
75	0	0
80	0	0
85	0	0
90	0	0

#### LUMINANCE SUMMARY CD. / SQ. M.

ANGLE	MEAN CD/SQ M
45	25548
55	0
65	0
75	0
85	0

#### Coefficients of Utilization

CEILING	80%		70%		50%		30%		0	
	70	50	30	10	50	10	50	10		
WALL										
RCR										
0	.68	.68	.68	.68	.67	.67	.64	.64	.61	.57
1	.66	.64	.63	.62	.63	.61	.61	.59	.59	.55
2	.63	.61	.59	.57	.60	.57	.58	.56	.57	.53
3	.61	.58	.56	.54	.57	.53	.56	.52	.54	.50
4	.58	.55	.52	.51	.54	.50	.53	.50	.52	.48
5	.56	.52	.49	.47	.52	.47	.51	.47	.50	.45
6	.54	.50	.47	.45	.49	.45	.49	.44	.48	.43
7	.52	.47	.44	.42	.47	.42	.46	.42	.45	.41
8	.50	.45	.42	.40	.44	.40	.44	.40	.43	.39
9	.47	.43	.40	.38	.42	.38	.42	.37	.41	.37
10	.45	.40	.38	.36	.40	.36	.40	.36	.39	.35

ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	1343	40.71	71.2
0-40	1726	52.33	91.52
0-60	1886	57.17	100
0-90	1886	57.17	100
40-90	159	4.85	8.48
60-90	0	0	0
90-180	0	0	0
0-180	1886	57.17	100

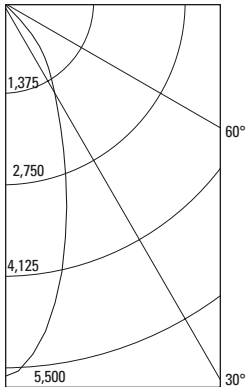
LUMINAIRE INPUT WATTS = 44

\*\* EFFICIENCY = 57.2% \*\*  
SC = 0.6

CERTIFIED TEST REPORT NO. 2400FR, DATE: DEC 22, 2003  
COMPUTED BY LSI PROGRAM \*\*TEST-LITE\*\*

### 70W T4 PHILIPS CMH LAMP, LUMEN RATING = 6400 LMS, AROMAT ELECTRONIC BALLAST, CL FINISH TRIM

#### CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMENS
0	5645	
5	5314	498
10	4588	
15	3673	1044
20	2797	
25	2083	989
30	1582	
35	1220	770
40	878	
45	386	322
50	14	
55	0	3
60	0	0
65	0	0
70	0	0
75	0	0
80	0	0
85	0	0
90	0	0

#### LUMINANCE SUMMARY CD. / SQ. M.

ANGLE	MEAN CD/SQ M
45	53412
55	0
65	0
75	0
85	0

#### Coefficients of Utilization

CEILING	80%		70%		50%		30%		0	
	70	50	30	10	50	10	50	10		
WALL										
RCR										
0	.68	.68	.68	.68	.66	.66	.63	.63	.61	.57
1	.65	.64	.63	.62	.63	.61	.60	.59	.58	.54
2	.63	.60	.59	.57	.59	.56	.58	.55	.56	.52
3	.60	.57	.55	.53	.56	.53	.55	.52	.54	.49
4	.58	.54	.52	.50	.54	.49	.53	.49	.51	.47
5	.55	.51	.49	.47	.51	.46	.50	.46	.49	.44
6	.53	.49	.46	.44	.49	.44	.48	.44	.47	.43
7	.51	.46	.43	.42	.46	.41	.45	.41	.45	.40
8	.49	.44	.41	.39	.43	.39	.43	.39	.43	.38
9	.46	.42	.39	.37	.41	.37	.41	.36	.40	.36
10	.44	.39	.37	.35	.39	.35	.39	.34	.38	.34

ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	2530	39.54	69.8
0-40	3299	51.56	91.02
0-60	3625	56.65	100
0-90	3625	56.65	100
40-90	325	5.09	8.98
60-90	0	0	0
90-180	0	0	0
0-180	3625	56.65	100

LUMINAIRE INPUT WATTS = 78

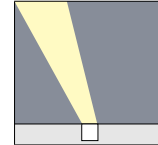
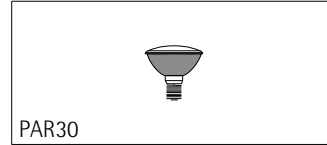
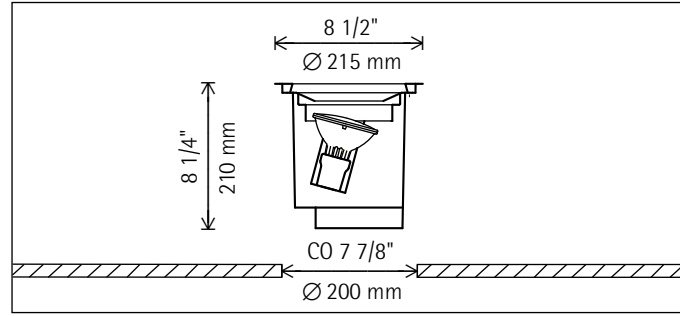
\*\* EFFICIENCY = 57.0% \*\*  
SC = 0.6

CERTIFIED TEST REPORT NO. 2397FR, DATE: DEC 18, 2003  
COMPUTED BY LSI PROGRAM \*\*TEST-LITE\*\*

Job Information      Type:

**LIGHTOLIER®**

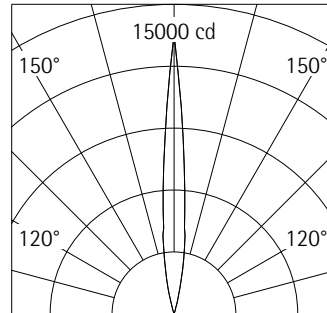
Directional luminaire for PAR lamps



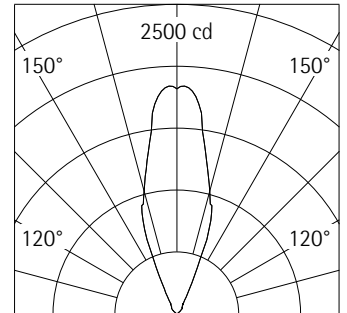
**33820.023**  
 PAR30 75W 120V Med. 9°  
 PAR30 75W 120V Med. 35°

**Product description**

Size 6  
 Housing with mounting ring: corrosion-resistant, cast aluminum, No-rinse surface treatment. External silver double powder-coated. 0°-15° tilt, 180° rotation. Pre-drilled holes in the base of the housing. Mounting by means of an adjustable bar. Clamp extension 5/8"-1 3/8" / 15-35mm.  
 Aperture mask: aluminum, silver, specular anodized.  
 Mounting ring with safety glass: corrosion-resistant cast aluminum, silver double powder-coated.  
 Safety glass: 1/2" / 12mm, clear.  
 Surface temperature 360°F / 180°C.  
 Load 3372lb.wt / 15kN.  
 Suitable for wet location (IP67): dust-proof and protected against immersion damage.  
 To avoid ingress of water it is necessary to seal the mounting area on site or to provide a drainage.  
 Weight: 5.95 lbs / 2.70 kg



PAR30 75W 120V Med. 9°



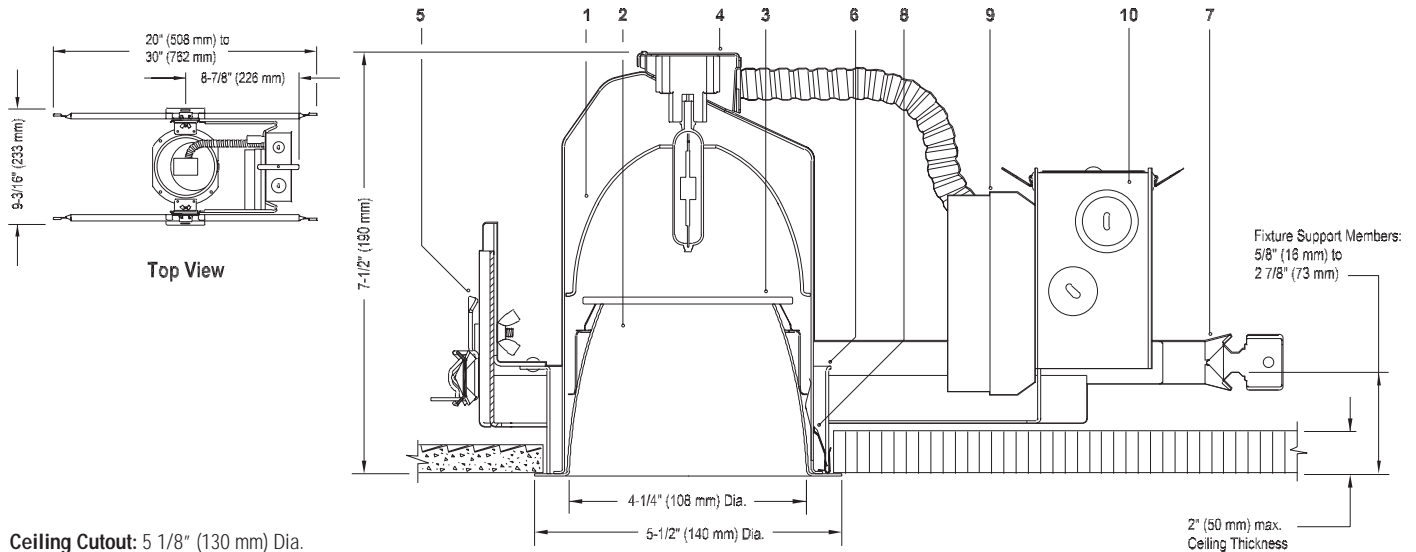
PAR30 75W 120V Med. 35°



# Calculite® HID Downlight C4T4VM

Page 1 of 2

4 1/2" Aperture, 2pc Vertical, T4.5 Medium Beam



Ceiling Cutout: 5 1/8" (130 mm) Dia.

Reflector Trim			Frame-In Kit		Lamp	
C4T4VM	CLW	Specular Clear, White Painted Flange.	C420T4E1	Electronic 120V	20W T4.5	Ceramic Metal Halide
	CLP	Specular Clear, Matching Flange.	C420T4E2	Electronic 277V	20W T4.5	Ceramic Metal Halide
	CCDW	Comfort Clear Diffuse, White Painted Flange.	C439T4E1	Electronic 120V	39W T4.5	Ceramic Metal Halide
	CCDP	Comfort Clear Diffuse, Matching Flange.	C439T4E2	Electronic 277V	39W T4.5	Ceramic Metal Halide
	CCZW	Champagne Bronze, White Painted Flange.	C470T4E1	Electronic 120V	70W T4.5	Ceramic Metal Halide
	CCZP	Champagne Bronze, Matching Flange.	C470T4E2	Electronic 277V	70W T4.5	Ceramic Metal Halide

## Features

- Upper Reflector:** Clear anodized aluminum, 0.040" (16-ga.). Provides medium beam optics ideal for general lighting. Also available in narrow and wide beam, see C4T4VN and C4T4VW specification sheets.
- Aperture Cone:** Provides 50° visual cut-off to lamp and lamp image; self-flange in painted white or aperture-matching polished flange. Consult factory for other finishes.
- Lamp Shield:** High-temperature glass as required by code, captive during re-lamping. Light diffusion provides exceptionally smooth beam.
- Socket Housing:** Galvanized steel, pre-wired with G8.5 pulse rated socket. Snaps onto upper reflector for secure attachment without tools; unitized construction assures proper lamp alignment to optics for consistent performance.
- Mounting Frame:** 0.048" (18-ga.) galvanized steel. Vertical adjustment mechanism accommodates mounting to virtually any ceiling system using mounting bars (provided, or 1/2" EMT tubing (by others)). Single locking feature secures all adjustments. Alignment holes and markings allow fixture to be preset prior to installation.
- Mounting Ring:** 0.048" (18-ga.) galvanized steel. Designed for vertical adjustment from above or below for ceilings from 0" to 2" thick. Center-line notches allow consistent alignment of multiple fixtures.
- Mounting Bars:** 0.048" (18-ga.) pre-installed, telescoping bars extend to 30" long and lock securely into position. Built-in locking tabs provide positive attachment to common T-bar systems. Self-centering feature simplifies installation in 24" O.C. grid systems. Attaches to steel or wood joists without accessories.
- Trim Retention Springs:** Rust resistant springs secure reflector/housing for quick, tool-less installation.
- Ballast/Socket Housing/Cover Assembly:** Snaps onto junction box without tools for inspection and ballast replacement, accessible from below.
- Junction Box:** 0.048" (18-ga.) galvanized steel. UL listed for 8 No. 12 AWG, 90°C through branch circuit conductors. Allows inspection from below.
- Thermal Protector:** (Not Shown) Meets NEC and UL requirements. Do not install insulation above nor within 3" (76mm) of any part of the luminaire.

## Electrical

**Electronic Ballast:** 120 or 277V, 50/60 Hz., enclosed, high power factor, T.H.D. <15%, thermally and transient protected, RMI/RFI complies with FCC Part 18 non-consumer limits, shut-down circuit at end of lamp life, sound rating "A", -5°F minimum starting temperature, Type 1 Outdoor rating.

Ballast	ANSI Code	Voltage	Max. Amps	Input Watts
20W MH	M156	120/277	0.21/0.10	23
39W MH	M130	120/277	0.39/0.17	44
70W MH	M139	120/277	0.67/0.29	78

## Options and Accessories

**Slope Ceiling Adapters:** See Specification Sheet SCA.

**Chicago Plenum:** Consult Factory.

## Labels

UL (Suitable for Damp Locations), CSA, I.B.E.W.

For 70W, install fixtures with minimum spacing between:

- Center-to-center of adjacent luminaires: 2 feet.
- Top of luminaire to overhead building member: 1/2 inch.
- Luminaire center to side building member: 1 foot.

## Job Information

Type:

Job Name:

Cat. No.:

Lamp(s):

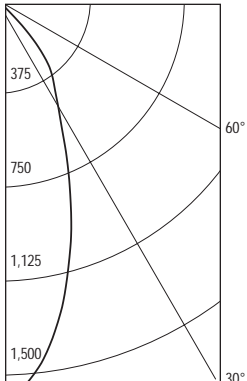
Notes:



# Calculite® HID Downlight C4T4VM

## 20W T4 GE CMH LAMP, LUMEN RATING = 1700 LMS, AROMAT 20W ELECTRONIC BALLAST CL FINISH TRIM

CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMENS
0	1595	
5	1524	143
10	1345	
15	1109	314
20	867	
25	649	308
30	493	
35	396	248
40	294	
45	125	107
50	10	
55	0	2
60	0	
65	0	0
70	0	
75	0	0
80	0	
85	0	0
90	0	

LUMINANCE SUMMARY CD. / SQ. M.

ANGLE	MEAN CD/SQ M
45	17255
55	39
65	0
75	0
85	0

Coefficients of Utilization

CEILING	80%		70%		50%		30%		0	
	70	50	30	10	50	10	50	10		
WALL	70	50	30	10	50	10	50	10	0	
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%									
0	.79	.79	.79	.79	.77	.77	.74	.74	.71	.66
1	.76	.74	.73	.72	.73	.71	.70	.68	.68	.63
2	.73	.70	.68	.66	.69	.65	.67	.64	.65	.60
3	.70	.66	.64	.61	.65	.61	.64	.60	.62	.57
4	.67	.63	.60	.58	.62	.57	.61	.57	.60	.54
5	.64	.60	.56	.54	.59	.54	.58	.53	.57	.51
6	.62	.57	.53	.51	.56	.51	.55	.50	.54	.49
7	.59	.53	.50	.48	.53	.47	.52	.47	.51	.46
8	.56	.51	.47	.45	.50	.45	.49	.44	.49	.43
9	.53	.48	.44	.42	.47	.42	.47	.42	.46	.41
10	.51	.45	.42	.39	.45	.39	.44	.39	.44	.38

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	764	44.9%	68.13
0-40	1012	59.56	90.25
0-60	1121	66	100
0-90	1121	66	100
40-90	109	6.43	9.75
60-90	0	0	0
90-180	0	0	0
0-180	1121	66	100

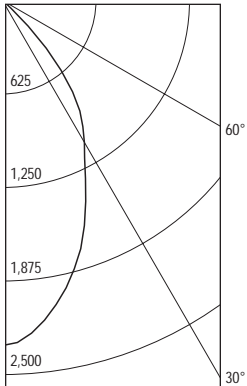
LUMINAIRE INPUT WATTS = 23

\*\* EFFICIENCY = 66.0% \*\*  
SC = .7

CERTIFIED TEST REPORT NO. 2322FR, DATE: OCT 04, 2003  
COMPUTED BY LSI PROGRAM \*\*TEST-LITE\*\*

## 39W T4 PHILIPS CMH LAMP, LUMEN RATING = 3300 LMS, AROMAT 39W ELECTRONIC BALLAST, CL FINISH TRIM

CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMENS
0	2306	
5	2232	211
10	2064	
15	1856	523
20	1601	
25	1313	616
30	1095	
35	902	551
40	609	
45	243	216
50	20	
55	3	6
60	0	0
65	0	0
70	0	0
75	0	0
80	0	0
85	0	0
90	0	0

LUMINANCE SUMMARY CD. / SQ. M.

ANGLE	MEAN CD/SQ M
45	33651
55	466
65	0
75	0
85	0

Coefficients of Utilization

CEILING	80%		70%		50%		30%		0	
	70	50	30	10	50	10	50	10		
WALL	70	50	30	10	50	10	50	10	0	
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%									
0	.77	.77	.77	.77	.75	.75	.72	.72	.69	.63
1	.74	.72	.71	.70	.71	.68	.68	.66	.66	.61
2	.71	.68	.66	.64	.67	.63	.65	.62	.63	.58
3	.68	.64	.61	.59	.63	.59	.62	.58	.60	.55
4	.65	.60	.57	.55	.60	.54	.58	.54	.57	.52
5	.62	.57	.53	.51	.56	.51	.55	.50	.54	.49
6	.59	.54	.50	.48	.53	.48	.52	.47	.51	.46
7	.56	.51	.47	.45	.50	.44	.49	.44	.48	.43
8	.53	.47	.44	.42	.47	.41	.46	.41	.46	.41
9	.50	.45	.41	.39	.44	.39	.44	.38	.43	.37
10	.48	.42	.38	.36	.42	.36	.41	.36	.41	.35

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	1349	40.9	63.6
0-40	1900	57.59	89.56
0-60	2121	64.3	100
0-90	2121	64.3	100
40-90	221	6.72	10.44
60-90	0	0	0
90-180	0	0	0
0-180	2121	64.3	100

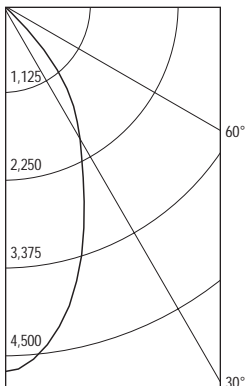
LUMINAIRE INPUT WATTS = 44

\*\* EFFICIENCY = 64.3% \*\*  
SC = .8

CERTIFIED TEST REPORT NO. 2321FR, DATE: OCT 01, 2003  
COMPUTED BY LSI PROGRAM \*\*TEST-LITE\*\*

## 70W T4 PHILIPS CMH LAMP, LUMEN RATING = 6400 LMS, AROMAT 70W ELECTRONIC BALLAST, CL FINISH TRIM

CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMEN
0	4707	
5	4560	430
10	4188	
15	3667	1032
20	3046	
25	2445	1148
30	1987	
35	1587	982
40	1090	
45	444	390
50	38	
55	3	10
60	0	0
65	0	0
70	0	0
75	0	0
80	0	0
85	0	0
90	0	0

LUMINANCE SUMMARY CD. / SQ. M.

ANGLE	MEAN CD/SQ M
45	61418
55	584
65	0
75	0
85	0

Coefficients of Utilization

CEILING	80%		70%		50%		30%		0	
	70	50	30	10	50	10	50	10		
WALL	70	50	30	10	50	10	50	10	0	
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%									
0	.74	.74	.74	.74	.73	.73	.70	.70	.67	.63
1	.71	.70	.69	.67	.69	.66	.66	.64	.64	.59
2	.68	.66	.64	.62	.65	.61	.63	.60	.61	.56
3	.66	.62	.59	.57	.61	.57	.60	.56	.58	.53
4	.63	.59	.56	.54	.58	.53	.57	.53	.56	.51
5	.60	.56	.52	.50	.55	.50	.54	.49	.53	.48
6	.57	.53	.49	.47	.52	.47	.51	.46	.50	.45
7	.55	.49	.46	.44	.49	.44	.48	.43	.47	.42
8	.52	.47	.43	.41	.46	.41	.46	.41	.45	.40
9	.49	.44	.41	.38	.44	.38	.43	.38	.42	.37
10	.47	.41	.38	.36	.41	.36	.41	.36	.40	.34

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	2610	40.79	65.39
0-40	3592	56.13	89.97
0-60	3992	62.38	100
0-90	3992	62.38	100
40-90	400	6.26	10.03
60-90	0	0	0
90-180	0	0	0
0-180	3992	62.38	100

LUMINAIRE INPUT WATTS = 78

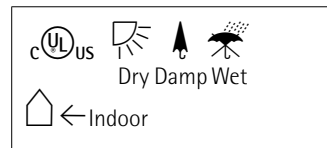
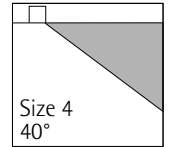
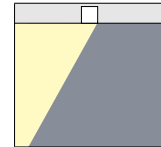
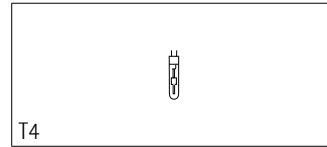
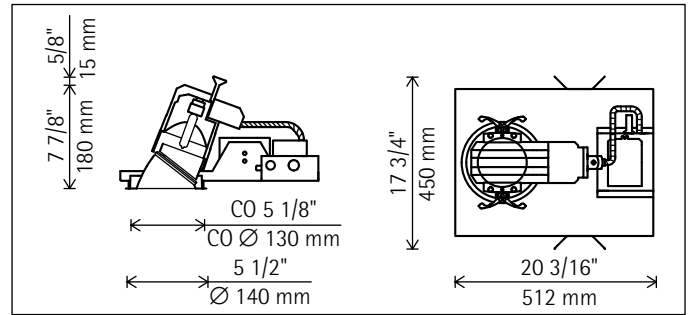
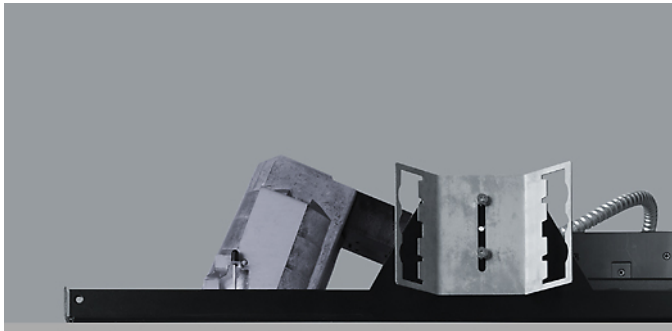
\*\* EFFICIENCY = 62.4% \*\*  
SC = .8

CERTIFIED TEST REPORT NO. 2320FR, DATE: OCT 01, 2003  
COMPUTED BY LSI PROGRAM \*\*TEST-LITE\*\*

LIGHTOLIER®

Job Information  Type:

for metal halide lamps



**22684.023**  
 Reflector color Silver  
 T4 39W G8.5 3300lm  
 ECG

**Product description**

Housing: cast aluminum.  
 Mounting ring: cast aluminum, white (RAL9002) powder-coated.  
 4-point support and screw tightening for fixing to mounting plate.  
 Mounting plate for preinstallation with junction box for through-wiring, black powder-coated. Electronic control gear 120V, 60Hz on top of junction box. Snap-in plug for connection between junction box and luminaire.  
 Upper and wallwasher reflector: aluminum, silver anodized.  
 Low brightness reflector: aluminum, specular anodized, with upper spread lens as safety glass. Cut-off angle 40° from horizontal.  
 Type Non IC luminaire.  
 Insulation materials must be kept away from the luminaire by a minimum of 3". Thermally protected luminaire. Luminaires protected with disconnecting switch. Suitable for damp location. Removal of reflector allows access to junction box from below. Max. ceiling thickness 3/4".  
 Max. ceiling thickness 3/4".  
 Weigh: 8.16 lbs / 3.70 kg

**Wallwash information**  
 T4 39W G8.5 3300lm

Distance from ceiling (Feet)	3.00' from wall 3.00' O.C.		3.00' from wall 4.00' O.C.		4.00' from wall 4.00' O.C.		4.00' from wall 5.00' O.C.	
	Below Fixture	Between Fixtures	Below Fixture	Between Fixtures	Below Fixture	Between Fixtures	Below Fixture	Between Fixtures
0	0	0	0	0	0	0	0	0
1	6	5	5	3	2	1	2	1
2	16	15	13	11	7	6	6	5
3	22	19	18	15	10	9	8	7
4	27	24	22	18	12	11	10	9
5	28	25	22	19	15	13	12	10
6	26	23	20	18	16	14	13	11
7	22	19	17	15	16	14	13	11
8	18	15	14	12	15	13	12	11
9	15	12	11	10	13	11	11	10
10	12	10	9	8	11	10	9	8

All vertical footcandles include the light loss factor of 0.8 with no contribution from ceiling or floor reflectances. Computation performed with a total of five wallwashers.

**T100 STANDARD LUMEN TRANSFORMER SYSTEM COLD CATHODE LAMP COLOR INFORMATION**

**FUNCTIONAL COLOR LAMP DATA**

Gas: Argon w/Mercury Amalgam (blue color) T-8 25mm

COLOR	KELVIN	LUMEN/FT. (1)
→ Warm White	3000	305
Soft White (2)	3500	320
Cool White	4500	328
Snow White (Daylight)	6500	498
Tri-Phosphor Incandescent	2800T28	371
Tri-Phosphor Warm White (2)	3000T30	386
Tri-Phosphor Soft White	3500TC	374
Tri-Phosphor Ice White	5000TC	364
Tri-Phosphor Daylight	6500TC	369

- 1) Lumen Data provided by ITL for all white lamps.
- 2) Most popular colors specified for functional lighting installations.

**DECORATIVE COLORS LAMP DATA (1) (2)**

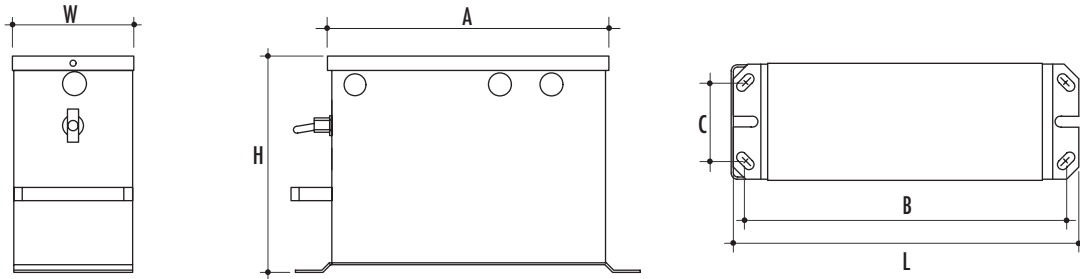
Gas: Argon w/Mercury Amalgam (blue color) T-8 25mm

COLOR	LUMEN/FT. (3)
Violet	236
Powder Blue	307
Sparkling Blue (deeper)	257
Turquoise	364
Aquamarine	272
Green	358
Gold	187
Pineapple	151
Orange	141

- 1) Decorative colors may require special orders. Consult factory for availability.
- 2) Additional colors available upon request.
- 3) Estimates based on lumen data provided by phosphor manufacturers.



**T100 STANDARD LUMEN TRANSFORMER SYSTEM -- UL2161 SGI TRANSFORMERS**



**High Power Factor 120Volts\* Primary - 60Hertz**

Secondary Volt-MA	Primary Volt-Amps	Approximate Watt Input	L	W	H	A	B	C	Ship Wt. LBS.
5000 - 120	600	237	13 3/8"	4 5/8"	8 1/2"	10 7/8"	12 1/4"	3"	29
6000 - 120	720	290	13 3/8"	4 5/8"	8 1/2"	10 7/8"	12 1/4"	3"	30
7500 - 120	900	352	17 1/2"	4 5/8"	8"	15 1/8"	16 3/8"	3"	42
9000 - 120	1080	416	17 1/2"	4 5/8"	8"	15 1/8"	16 3/8"	3"	45

**Normal Power Factor 277Volts\* Primary - 60Hertz**

Secondary Volt-MA	Primary Volt-Amps	Approximate Watt Input	L	W	H	A	B	C	Ship Wt. LBS.
5000 - 120	600	256	13 3/8"	4 5/8"	8 1/2"	10 7/8"	12 1/4"	3"	29
6000 - 120	720	274	13 3/8"	4 5/8"	8 1/2"	10 7/8"	12 1/4"	3"	30
7500 - 120	900	375	17 1/2"	4 5/8"	8"	15 1/8"	16 13/8"	3"	42
9000 - 120	1080	423	17 1/2"	4 5/8"	8"	15 1/8"	16 13/8"	3"	45

**Transformer Installation Information**

Transformers shall be located as close to lamps as possible in order to keep the secondary cable in conduit as short as possible. Long secondary cable in metallic conduit act like a capacitor inducing higher voltage resulting in corona discharge that can lead to overloading, transformer causing premature failure, shortened lamp life, and audible noise. Transformers shall be installed in an accessible ventalated location that shall not exceed 100 degrees fahrenheit ambient temperature. For more information refer to Transformer Specification.

**Luminous Tube Footage Chart**

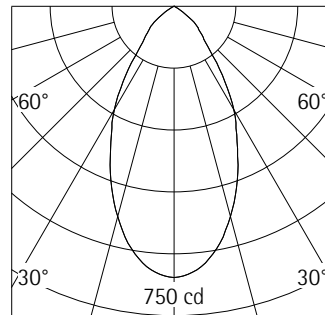
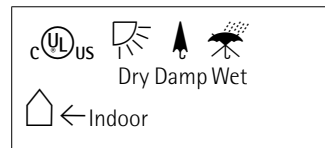
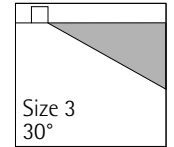
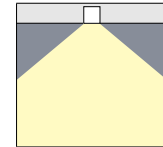
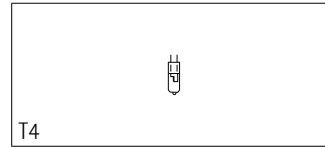
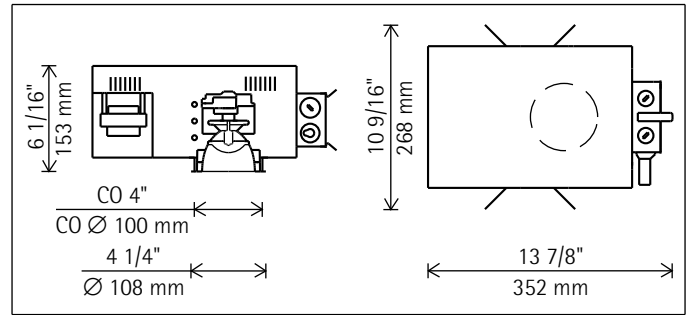
Secondary Volt-MA	Blue Gas (non dimming)	Blue Gas (dimming)
5000 - 120	46'	36'
7500 - 120	70'	56'
9000 - 120	92'	73'

T100 STANDARD LUMEN TRANSFORMER SYSTEM TECHNICAL SHEETS 2.20

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**T** 323.581.8800  
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**E** aclinc@cathodelighting.com  
**W** www.cathodelighting.com



**22403.023**  
 Reflector color Silver  
 T4 50W 12V GY6.35 950lm

**Product description**  
 Lampholder carrier: cast aluminum, black powder-coated, designed as heat sink.  
 Mounting ring: plastic, white (RAL9002), with fixing springs.  
 Mounting box for preinstallation with junction box for through-wiring, black powder-coated.  
 Magnetic transformer 120/12V, 60Hz inside mounting box. Snap-in plug for connection between transformer and downlight.  
 Low brightness reflector: aluminum, specular anodized. Cut-off angle 30° from horizontal.  
 Diffuser as lamp cover: glass, frosted.  
 Type Non IC luminaire.  
 Insulation materials must be kept away from the luminaire by a minimum of 3". Thermally protected luminaire. Suitable for damp location. Removal of luminaire allows access to transformer and junction box from below.  
 Max. ceiling thickness 3/4".  
 Weight: 9.04 lbs / 4.10 kg

T4 50W 12V GY6.35 950lm

Efficiency: 64%

h(ft)	E(fc)	D(ft)
		55°
3	73	3'1"
6	18	6'3"
9	8	9'4"
12	5	12'6"
15	3	15'7"

## Planning Data

### Connected load of luminaire

T4 50W 12V GY6.35 950lm

PL: 58 W

### Connected load per 100fc

T4 50W 12V GY6.35 950lm

P\*: 1.2 W/ft<sup>2</sup>

### Number of luminaires per 100fc

T4 50W 12V GY6.35 950lm

n\*: 19.9 1/1000 ft<sup>2</sup>

### Number of luminaires per 1000ft<sup>2</sup> for

T4 50W 12V GY6.35 950lm

10fc	20fc	30fc	50fc
18	37	55	92

### Illuminances (fc) for module (ft)

T4 50W 12V GY6.35 950lm

4x6	6x6	6x8	8x8
21	14	10	8

### Correction table

Ceiling	0.7	0.7	0.7	0.5	0
Wall	0.7	0.5	0.2	0.2	0
Floor	0.5	0.2	0.2	0.1	0

k 0.6	86	68	61	60	57
k 1.0	104	82	75	73	70
k 1.5	117	93	87	84	81
k 2.5	128	100	96	91	87
k 3.0	132	102	99	93	90

## Photometric report

### Candlepower distribution

Vertical Angle	Candelas
0°	658
10°	597
20°	449
30°	290
40°	127
50°	69
60°	2
70°	0
80°	0
90°	0

### Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0°	0	0	0
10°	60	6	10
20°	207	22	34
30°	374	39	62
40°	501	53	83
50°	572	60	95
60°	602	63	100
70°	602	63	100
80°	602	63	100
90°	602	63	100

### Lamp information

T4 50W 12V GY6.35 950lm

Note:  
Photometric data may change when using different lamps.

These guide values are based on 10ft ceiling height in a square room of 1000ft<sup>2</sup> and mean reflectances (ceiling 70 %, walls 50 % and floor 20 %). Other room shapes or reflectances should be converted accordingly. The values include the light loss factor of 0.8.

### Coefficients of Utilisation

#### Reflectances

	80	80	80	70	70	70	50	50	50	30	30	30	10	10	10	0
Ceiling	80	80	80	70	70	70	50	50	50	30	30	30	10	10	10	0
Walls	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
Floor	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20

#### Room Cavity Ratio

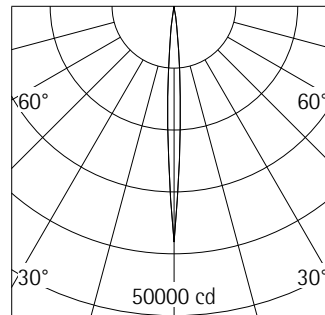
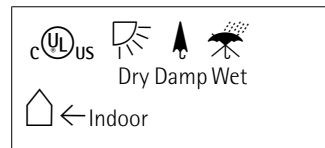
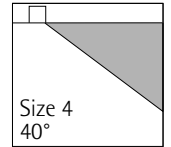
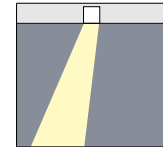
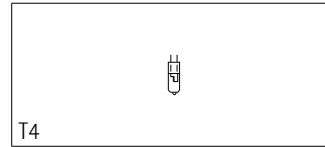
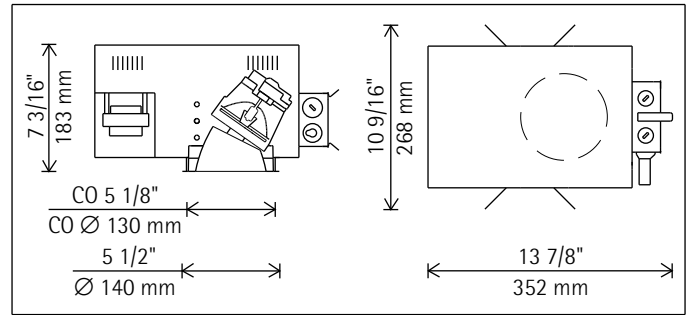
0	75	75	75	74	74	74	70	70	70	67	67	67	65	65	65	63
1	71	69	68	69	68	67	67	66	65	64	63	63	62	61	61	60
2	66	64	62	65	63	61	63	61	60	61	60	59	60	58	57	56
3	62	59	57	61	59	56	60	57	56	58	56	55	57	55	54	53
4	58	55	53	58	55	52	56	54	52	55	53	51	54	52	51	50
5	55	51	49	54	51	49	53	50	48	52	50	48	51	49	47	47
6	52	48	46	51	48	45	50	47	45	49	47	45	49	46	45	44
7	48	45	42	48	44	42	47	44	42	46	44	42	46	43	41	41
8	45	42	39	45	42	39	44	41	39	44	41	39	43	41	39	38
9	43	39	36	42	39	36	42	39	36	41	38	36	41	38	36	35
10	40	37	34	40	36	34	39	36	34	39	36	34	38	36	34	33

### Luminance Data

Vertical Angle	Footlamberts
45°	98005
50°	80784
55°	43555
60°	2722
65°	577
70°	423
75°	285
80°	186
85°	39
90°	0



for low-voltage halogen lamps



T4 75W 12V GY6.35 1450lm

h(ft)	E(fc)	D(ft)
		7°
3	4237	0'4"
6	1059	0'9"
9	471	1'1"
12	265	1'6"
15	169	1'10"

**22413.023**  
 Reflector color Silver  
 T4 75W 12V GY6.35 1450lm

**Product description**  
 Lampholder carrier: cast aluminum, black powder-coated, designed as heat sink, 360° rotation.  
 Mounting ring: plastic, white (RAL9002), with fixing springs. 0°-35° tiltable.  
 Mounting box for preinstallation with junction box for through-wiring, black powder-coated.  
 Magnetic transformer 120/12V, 60Hz inside mounting box. Snap-in plug for connection between transformer and downlight.  
 Low brightness reflector: aluminum, specular anodized. Cut-off angle 40° from horizontal.  
 Spot reflector: aluminum, silver anodized. Anti-glare cap attached to the safety glass.  
 Type Non IC luminaire.  
 Insulation materials must be kept away from the luminaire by a minimum of 3". Thermally protected luminaire. Suitable for damp location. Removal of luminaire allows access to transformer and junction box from below.  
 Max. ceiling thickness 3/4".  
 Weight: 10.80 lbs / 4.90 kg



# COLORBLAST 6

POWERED BY CHROMACORE



Color Kinetics® ColorBlast® 6 is a Chromacore®-powered product, in the bColor Series, designed for washing walls with rich, saturated colors and color changing effects. ColorBlast 6 provides lighting designers and architects a small, sleek solution for dynamic color lighting.

ColorBlast 6 is a sealed product designed for both indoor and outdoor installations. The stylish and rugged die-cast aluminum housing meets or exceeds specifications for use in wet and damp locations. ColorBlast 6 is available with a soft-focus, tempered glass lens or a clear tempered glass lens. The soft-focus lens produces a soft-edge 22° beam of light, while the clear lens offers an extended light projection. The housing is also equipped to affix spread lenses, louvers, and other attachments and is available in either a black, white, or aluminum powder coat finish to match its environment and prevent oxidation. A single 3-wire, 60-foot (18.3 m) cable, which provides both power and data to the light fixture, is rated for outdoor installations.

Designed to quickly aim the fixture without the need of special tools, ColorBlast 6 includes an industrial-grade constant torque hinge. Set screws and an Allen wrench are included for installations requiring locked positioning. The versatile base of ColorBlast 6 can be mounted to a junction box on a wall, ceiling, or floor. ColorBlast 6 includes a separate canopy, liquid-tight cable fitting, and swivel bracket. For a more finished look, mount the canopy to the base and mounting surface. The liquid-tight cable fitting seals the canopy opening. The swivel bracket allows for flexible fixture positioning.

ColorBlast 6 can be controlled by a Color Kinetics controller or a third-party controller. Each fixture comes pre-addressed to light number one. Simple effects, such as, fixed color and color wash, require no additional addressing. Other effects across multiple lights, including Chasing Rainbow or Color Sweep, require further addressing using one of the following Color Kinetics addressing tools: Serialized Addressing Software (SAS) or Zapi.

For protection from extreme temperatures, ColorBlast 6 has been designed with a temperature monitoring feature. If operating temperatures rise to an unsafe level, a compensation circuit is triggered and ColorBlast 6 operation is interrupted causing the lights to turn dull red. After 30 minutes the lights will auto-cycle and return to full intensity.

## COLORBLAST SPECIFICATIONS

<b>COLOR RANGE</b>	16.7 million (24-bit) additive RGB colors; continuously variable intensity output range
<b>SOURCE</b>	High intensity power light emitting diodes (LEDs)
<b>BEAM ANGLE</b>	22° Beam angle
<b>HOUSING</b>	Die Cast Aluminum in black, white, or aluminum powder coat finish
<b>LENSES</b>	Soft-focus tempered glass or clear tempered glass
<b>CONNECTORS</b>	Unified power and data cable
<b>LISTINGS</b>	C-UL US listed, CE certified

## COMMUNICATION SPECIFICATIONS

<b>DATA INTERFACE</b>	Color Kinetics data interface system
<b>CONTROL</b>	Color Kinetics full line of controllers or other DMX512 (RS485) compatible when using Color Kinetics power/data supply

## ELECTRICAL SPECIFICATIONS

<b>POWER REQUIREMENT</b>	24VDC
<b>POWER CONSUMPTION</b>	2.5W Max. at full intensity (full RGB)
<b>POWER SUPPLY</b>	PDS-150e (ITEM# 109-000008-01); PDS-60 24V (ITEM# 109-000017-XX)

## ENVIRONMENTAL SPECIFICATIONS

<b>TEMPERATURE RANGE</b>	-4°F to 122°F (-20°C to 50°C) based on testing of specific product
<b>PROTECTION RATING</b>	IP66

## SOURCE LIFE

Color Kinetics illumination products utilize high brightness LEDs as the illumination source. LED manufacturers predict LED life of up to 100,000 hours MTBF (mean time between failure), the standard used by conventional lamp manufacturers to measure source life. However, like all basic light sources, LEDs also experience lumen depreciation over time. So while LEDs can emit light for an extremely long period of time, MTBF is not the only consideration in determining useful life. LED lumen depreciation is affected by numerous environmental conditions such as ambient temperature, humidity and ventilation. Lumen depreciation is also affected by means of control, thermal management, current levels, and a host of other electrical design considerations.

Color Kinetics systems are expertly engineered to optimize LED life when used under normal operating conditions [ambient temperature: -4°F to 104°F (-20°C to 40°C), humidity: 0-95% non-condensing humidity, adequate ventilation and air volume] and when operated using typical color-changing effects. Long-term operation outside of these ranges or conditions, or at the upper limits of these ranges or conditions, may subject the product to further degradation of the LED source life, or in extreme cases, failure of internal components. Source life information is based on LED manufacturers' data, as well as other third party testing.



LISTED  
Low Voltage Fixture  
78GF

ITEM# 116-000001-00 (White)  
116-000001-01 (Black)  
116-000001-02 (Aluminum)

U.S. PATENTS 6,016,038, 6,150,774, 6,340,868, AND 6,788,011  
FOREIGN PATENTS: EUROPE 1,016,062, AUSTRALIA 757,000,  
HONG KONG 1025416, AND CANADA 2,302,227  
OTHER PATENTS PENDING

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BRO088 Rev 04

Specifications subject to change without notice.

# COLORBLAST 6

## PHOTOMETRIC PERFORMANCE

Photometric data is based on test results from an independent testing lab.

### SOURCE SPECIFICATIONS

Optics:	Tempered soft focus glass diffuser Clear tempered glass (Photometrics not yet available)
Source:	18 LEDs (6 Red, 6 Green, 6 Blue)
Beam Angle:	22° (at 50% of peak illuminance)
Distribution:	Symmetric direct illumination
CCT:	Adjustable 1,000–10,000K
CRI:	Not measurable (CIE 13.3-1995)

### ILLUMINANCE DISTRIBUTION

6.0'/2.0m					
0.5	1.0	1.6	1.6	1.0	0.5
5.4	10.8	17.2	17.2	10.8	5.4
0.7	1.9	4.2	4.2	1.9	0.7
7.5	20.5	45.2	45.2	20.5	7.5
1.0	4.4	20.9	20.9	4.4	1.0
10.8	47.4	225	225	47.4	10.8
3.0'/1.0m					
1.0	4.8	28.8	28.8	4.8	1.0
10.8	51.7	310.0	310.0	51.7	10.8
0.9	3.4	18.9	18.9	3.4	0.9
9.7	36.6	203.4	203.4	36.6	9.7
0.7	1.7	4.3	4.3	1.7	0.7
7.5	18.3	46.3	46.3	18.3	7.5
0.0'/0.0m					
3.0'/1.0m		0'/0m		3.0'/1.0m	

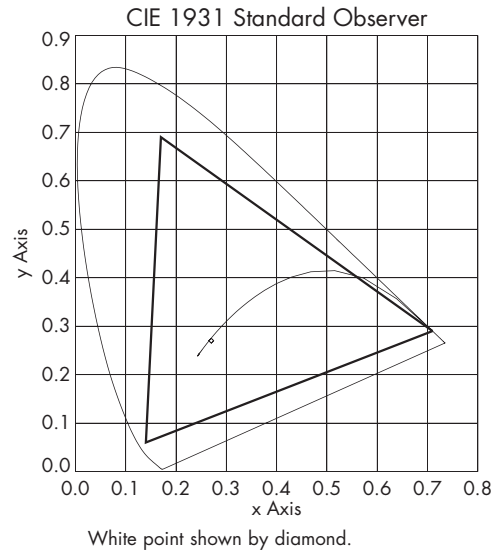
Units: Footcandles/Lux  
 Measured on: White  
 Distance from surface: 3'/1m (from bottom of grid with light at a 45° angle)  
 Multipliers: 0.31 Red, 0.51 Green, 0.26 Blue

### ILLUMINANCE

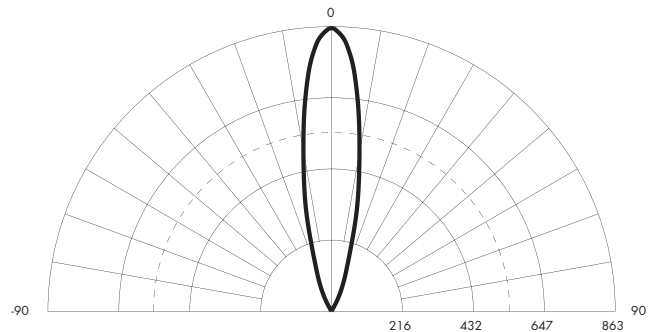
COLOR	3'	6'	9'	12'	15'
	1m	2m	3m	4m	5m
WHITE	96.8 1041.9	24.0 258.3	10.7 115.2	6.0 64.6	3.8 40.9
RED	29.9 321.8	7.5 80.7	3.3 35.5	1.9 20.5	1.2 12.9
GREEN	48.9 526.4	12.2 131.3	5.4 58.1	3.1 33.4	2.0 21.5
BLUE	25.6 275.6	6.4 68.9	2.8 30.1	1.6 17.2	1.0 10.8

Measured in Footcandles/Lux on axis.

### GAMUT



### CANDLE POWER DISTRIBUTION



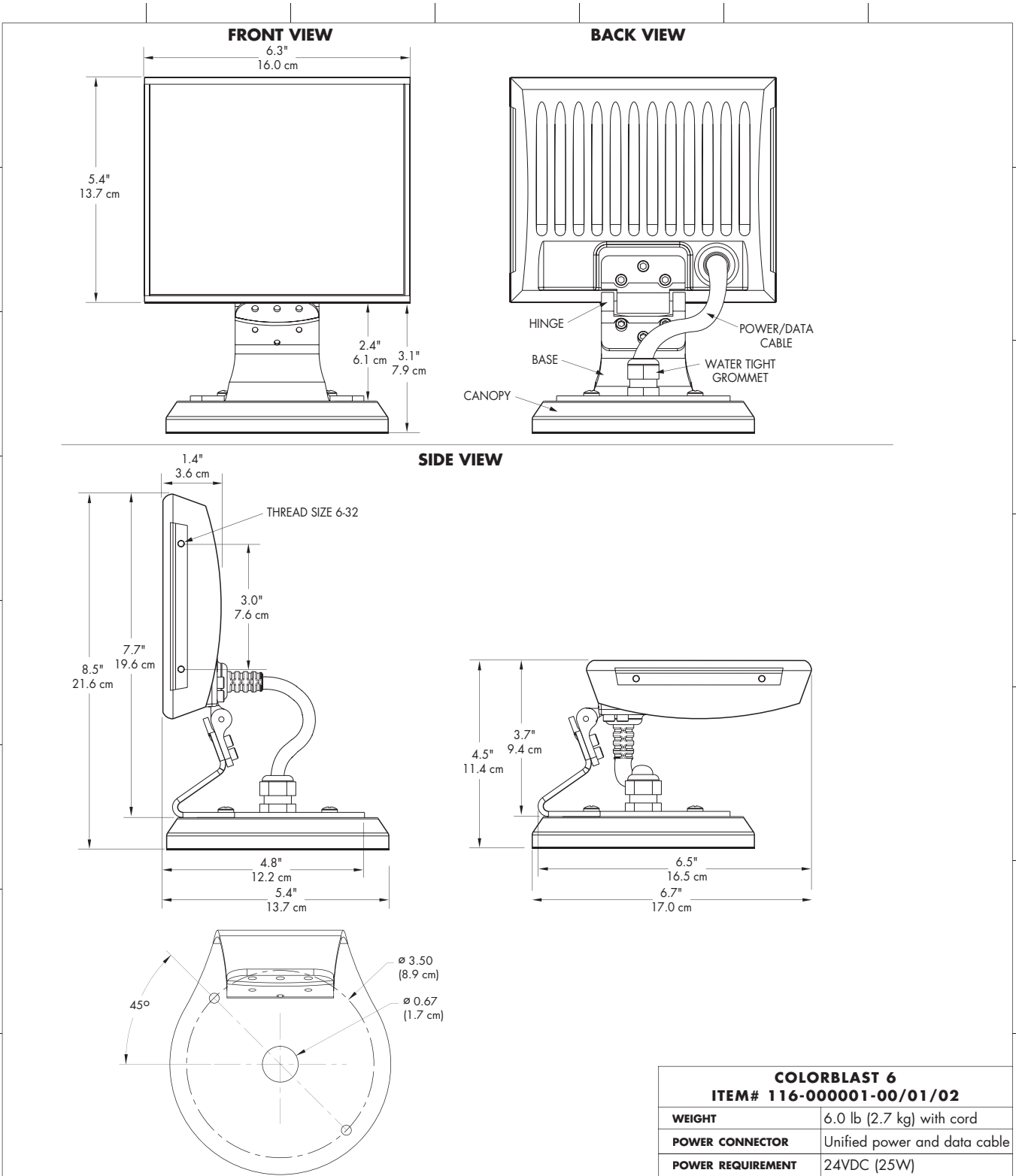
Measured on: White  
 Beam center: 863cd  
 Thin dashed lined: Indicates 50% of peak  
 Multipliers: 0.31 Red, 0.51 Green, 0.26 Blue

### LIGHT OUTPUT

COLOR	TOTAL OUTPUT (LUMENS)	POWER (WATTS)	EFFICACY (lm/w)
WHITE	222	25.3	8.8
RED	67	8.8	7.6
GREEN	123	8.8	14
BLUE	57	8.8	6.5

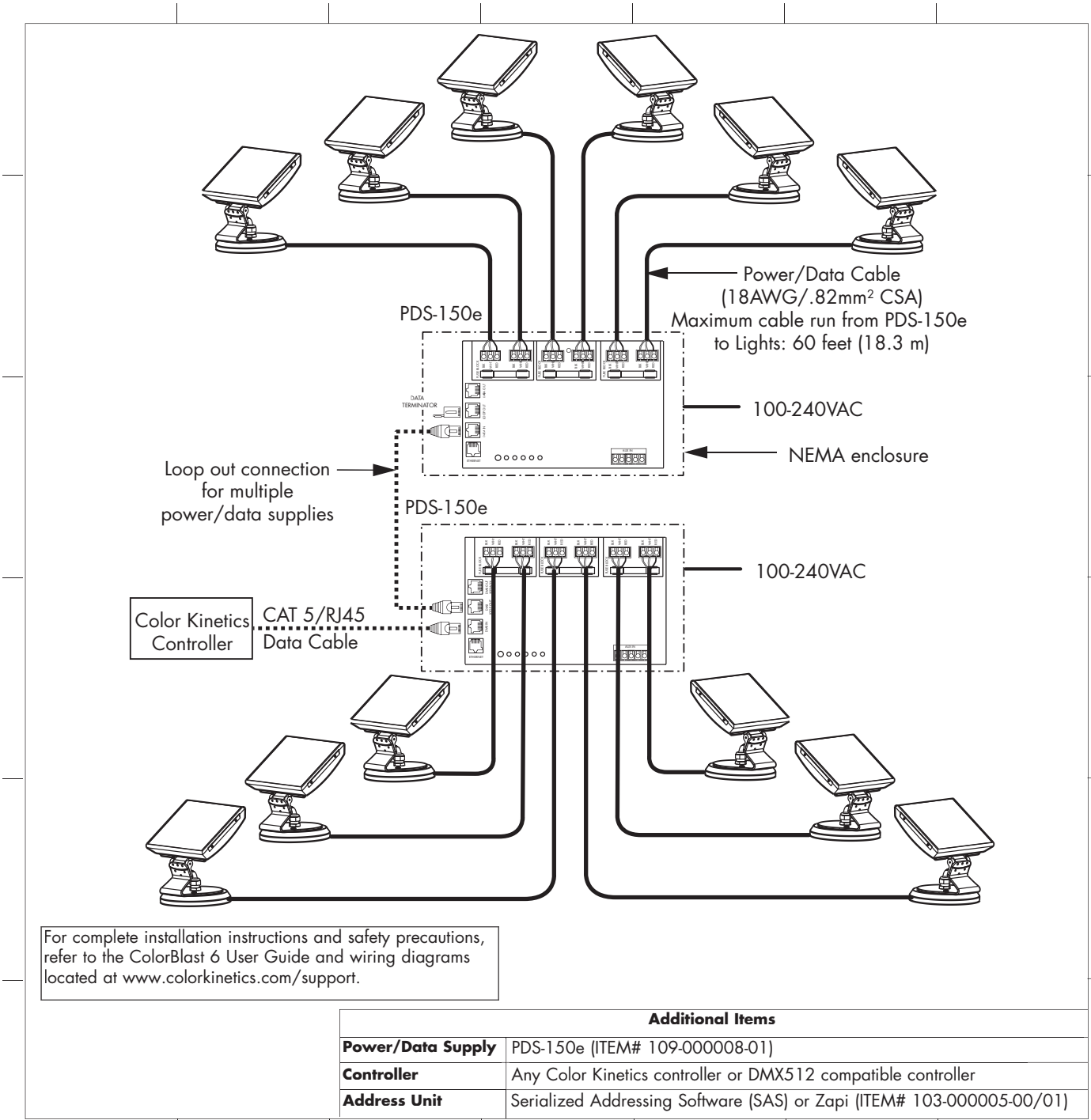
# COLORBLAST 6

## PHYSICAL DIMENSIONS



# COLORBLAST 6

## FUNCTIONAL FLOW DIAGRAM

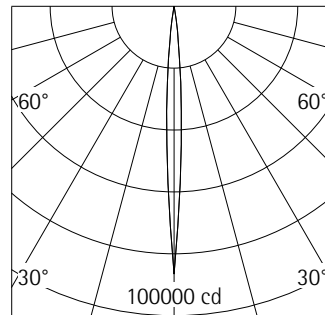
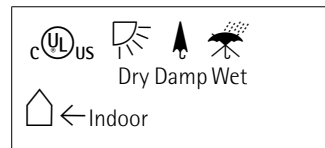
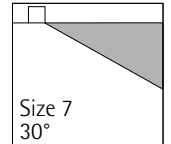
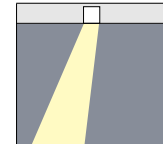
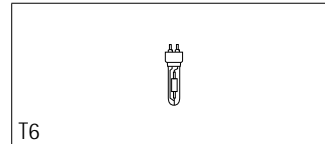
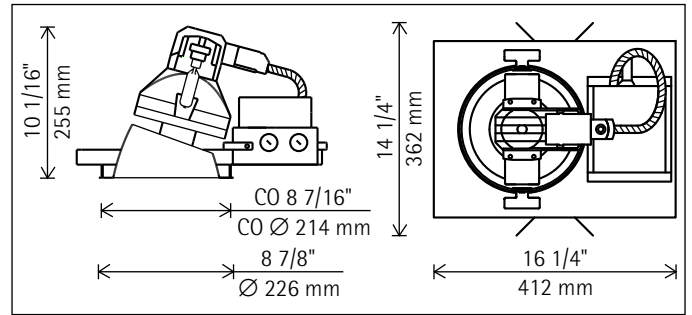


### U.S. AND FOREIGN PATENTS AND PATENTS PENDING

#### OPTIBIN™

There are inherent variations in the fabrication processes of all semiconductor materials. For LEDs, this variance results in differences in the color and intensity of light output as well as electrical characteristics. Due to these differences, LED manufacturers sort production into "bins," but insuring the availability of a single bin is very difficult. To minimize this issue and achieve optimal color consistency in its products, Color Kinetics has developed and uses a proprietary technology called Optibin. Optibin is an advanced production binning optimization process that minimizes the effects of LED variance for the best possible output uniformity in the final product. Color Kinetics Optibin technology gives you the most consistent control of color and intensity from product to product.

for metal halide lamps



**28553.023**

Reflector color Silver  
 T6 39W G12 3400lm  
 ECG

**Product description**

Housing: cast aluminum, black powder-coated. Lampholder carrier designed as heat sink, 0°-30° tilt, 360° rotation.

Mounting ring: cast aluminum, white (RAL9002) powder-coated for fixing to mounting plate.

Mounting plate for preinstallation with junction box for through-wiring, black powder-coated. Electronic control gear 120V, 60Hz on top of junction box. Snap-in plug for connection between junction box and luminaire.

Reflector: aluminum, silver, specular anodized. Safety glass with anti-glare cylinder.

Low brightness reflector: aluminum, specular anodized. Cut-off angle 30° from horizontal.

Type Non IC luminaire.

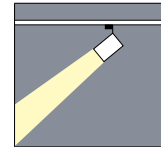
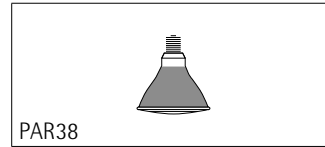
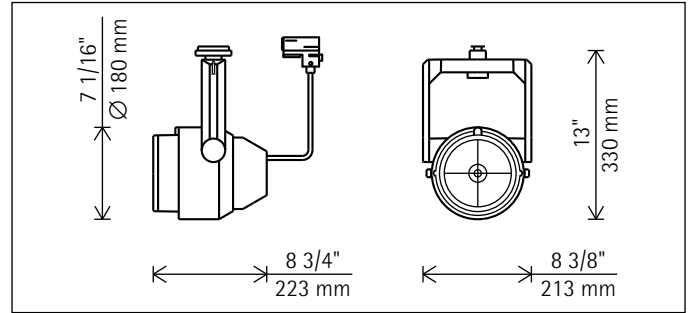
Insulation materials must be kept away from the luminaire by a minimum of 3". Thermally protected luminaire. Luminaires protected with disconnecting switch. Suitable for damp location. Removal of reflector allows access to junction box from below. Max. ceiling thickness 3/4".

Max. ceiling thickness 3/4".

Weight: 11.46 lbs / 5.20 kg

T6 39W G12 3400lm

h(ft)	E(fc)	D(ft)
		7°
3	9622	0'4"
6	2405	0'9"
9	1069	1'1"
12	601	1'6"
15	385	1'10"



H1

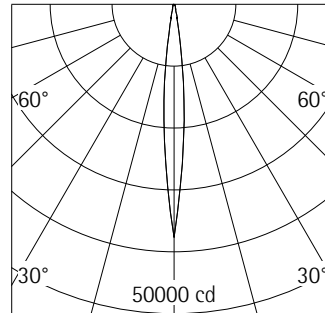
73512.023 Silver  
PAR38 250W 120V Med. 10°

H2

PAR38 250W 120V Med. 30°

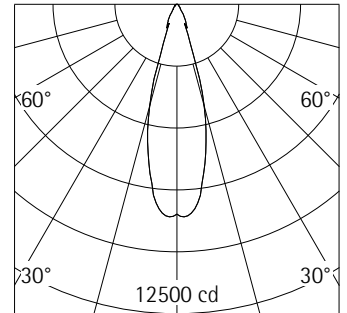
**Product description**

Housing and yoke: cast aluminum, powder-coated. 90° tiltable, on the mechanical adapter rotatable through 360°. Calibration for setting of group alignment. Turning adapter with cable for ERCO 2-circuit track: plastic. Snoot: cast aluminum, powder-coated. Internal anti-glare ring with anti-glare screen, rotatable, black lacquered. Unclap snoot for lamp replacement. For service safety, all settings can be fixed with the Allen key located in the bracket. Weight: 6.39 lbs / 2.90 kg



PAR38 250W 120V Med. 10°

h(ft)	E(fc)	D(ft)
		10°
3	4193	0'6"
6	1048	1'1"
9	466	1'7"
12	262	2'1"
15	168	2'7"



PAR38 250W 120V Med. 30°

h(ft)	E(fc)	D(ft)
		30°
3	943	1'7"
6	236	3'3"
9	105	4'10"
12	59	6'5"
15	38	8'0"



**Mounting**

ERCO 2-circuit track  
Hi-trac track  
Monopoll track

## **BALLASTS / POWER SUPPLY**



# "Mini-Square" 120V DCP™

## Electronic Metal Halide Ballast for 20 Watt Lamps

*DRIVING the Future of Luminaires!*

**Miniaturized Size! 51% smaller than the Industry Standard Case!**

- Resonance Start Technology
- Superior Lamp Starting
- Improved Hot restrike Characteristic



Shown with side leads

### Features & Benefits:

- Fantastic 74% Energy Savings vs. 90W HIR Lamp
- HID Lamp life approximately 4-6 times more than halogen lamps
- Excellent line regulation;  $\pm 0.5\%$  output variation with  $\pm 10\%$  change in line voltage.
- Reduction in visual flicker & increased lamp life.
- Increased reliability and safety with lamp "Turn-off Function": (Resets by cycling line voltage "off-then-on")
- Ease of assembly; only one unit to mount.
- Extremely Light weight - **ONLY 6 ounces**
- Eliminates long term lamp cycling. No need to wait for lamps to cycle to identify replacement.
- Sound Rated "A" for indoor applications.
- Thermally protected/ Transient protected.

### Specifications:

Lamps <sup>1</sup>	20W Metal Halide M156 Ceramic
Input Voltage	120V 50/60 hertz
Power Factor	High
Input Power	23W
Input Current (Maximum)	120V: 0.20A
Harmonic Distortion	<20%
Lamp Frequency	170 Hertz Square-Wave
EMI/ RFI	Complies with FCC 18C, non consumer limits
Lamp Current Crest Factor	1.4 Typical
Safety	UL Outdoor Type 1, Suitable for Recessed Use
Thermal Protection	Functions at approximately 90°C hot spot
Warranty <sup>2</sup>	3 years-max. case temperature <75°C
Minimum Lamp Start Temp	-30° C/ -22° F
Minimum Ballast Temp.	-15° C/ -5° F
Maximum Mounting Distance	3 feet in a minimum 3/8" ID stem or conduit; Consult Aromat for other configurations.

**Note 1:** Consult lamp manufacturers for lamp compatibility approval.

**Note 2:** Warranty is based on maximum operating time of 4000 hours per year. For additional operating hours consult with Aromat Application Engineering.

### Product Summary

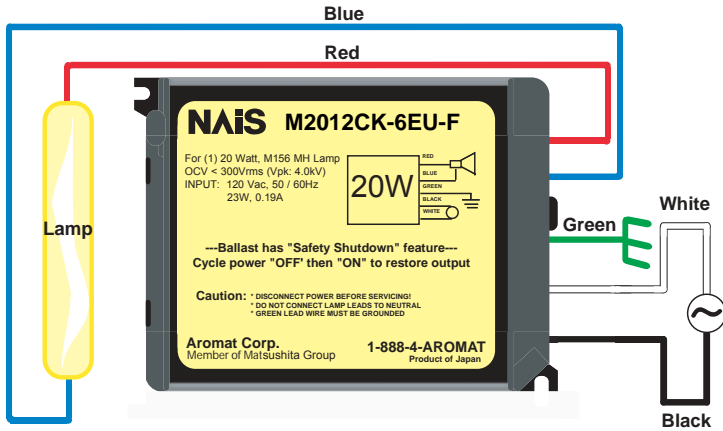
LAMP	<b>20W Metal Halide M156 Ceramic</b>
Input Volts	120V 50/60Hz
Model Number	<b>M2012CK-6EU-F</b>
Mounting/ Lead Exit	Feet with Side Leads Exit
Safety	Listed:
Lamp Holder	Minimum 4KV Pulse Rated

Aromat reserves the right to change any of the above performance characteristics without notice.

For More Information, call: **1-888-4-AROMAT**  
 Visit our Web Site: [www.aromat.com](http://www.aromat.com)

**Aromat Corporation**  
 (Matsushita Electric Works, America)  
**NAIS** A Worldwide Brand

## Wiring Diagram:

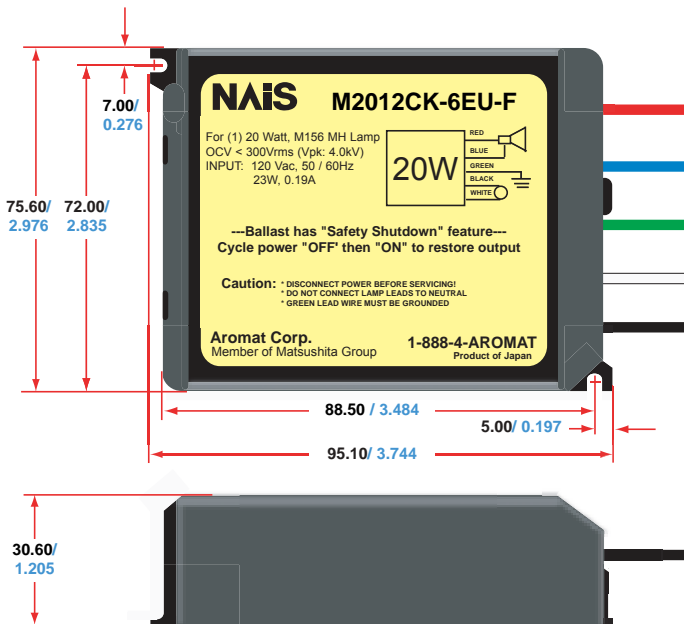


## Safety Instructions:

- Always disconnect power to the entire fixture before installation and/or removal of ballasts or controls.
- Ballast green wire must be grounded.
- Install per national and local electrical codes.
- Dispose of any replaced ballasts and lamps properly.
- **DO NOT** connect lamp leads to ground or neutral.

## Dimensions: Millimeters / Inches

### M2012CK-6EU-F



## NOTES

1. For additional installation and operational information, please refer to: *Aromat Application Guidelines*.
2. Dimensional Tolerances:
  - **Case:**  $\pm 0.3\text{mm} / \pm 0.012''$
  - **Lead Wires:**  $+50\text{mm} / +2''$   
 $-30\text{mm} / -1''$
  - **Lead Length:** Nominal 10"
  - **Slot width on "F" mounting tabs:**  $4.0\text{mm} / 0.157''$
3. The maximum case temperature test point is located in the center of case bottom and is designated by "Tc" symbol.

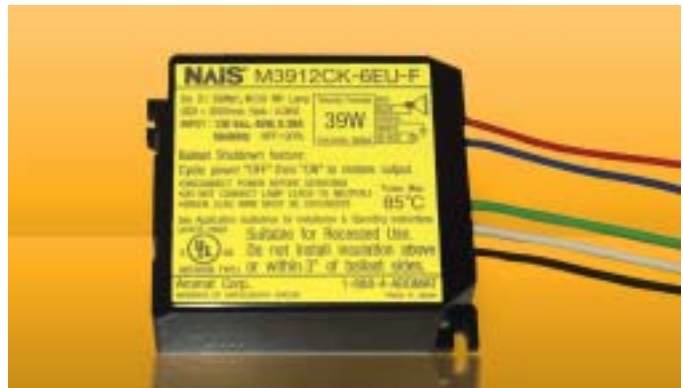
# "Mini-Square" 120V DCP™

## Electronic Metal Halide Ballast for 39 Watt Lamps

*DRIVING the Future of Luminaires!*

**Miniaturized Size! 51% smaller than the Industry Standard Case!**

- Resonance Start Technology
- Superior Lamp Starting
- Improved Hot restrike Characteristic



Shown with side leads

### Features & Benefits:

- Fantastic 50% Energy Savings vs. 90W HIR Lamp
- HID Lamp life approximately 4-6 times more than halogen lamps
- Excellent line regulation;  $\pm 0.5\%$  output variation with  $\pm 10\%$  change in line voltage.
- Reduction in visual flicker & increased lamp life.
- Increased reliability and safety with lamp "Turn-off Function": (Resets by cycling line voltage "off-then-on")
- Ease of assembly; only one unit to mount.
- Extremely Light weight - **ONLY 6 ounces**
- Eliminates long term lamp cycling. No need to wait for lamps to cycle to identify replacement.
- Sound Rated "A" for indoor applications.
- Thermally protected/ Transient protected.

### Specifications:

Lamps <sup>1</sup>	39W Metal Halide M130 Ceramic
Input Voltage	120V 50/60 hertz
Power Factor	High
Input Power	45W
Input Current (Maximum)	120V: 0.38A
Harmonic Distortion	<20%
Lamp Frequency	170 Hertz Square-Wave
EMI/ RFI	Complies with FCC 18C, non consumer limits
Lamp Current Crest Factor	1.4 Typical
Safety	UL Outdoor Type 1, Suitable for Recessed Use
Thermal Protection	Functions at approximately 90°C hot spot
Warranty <sup>2</sup>	3 years-max. case temperature <85°C
Minimum Lamp Start Temp	-30° C/ -22° F
Minimum Ballast Temp.	-15° C/ -5° F
Maximum Mounting Distance	3 feet in a minimum 3/8" ID stem or conduit; Consult Aromat for other configurations.

**Note 1:** Consult lamp manufacturers for lamp compatibility approval.

**Note 2:** Warranty is based on maximum operating time of 4000 hours per year. For additional operating hours consult with Aromat Application Engineering.

### Product Summary

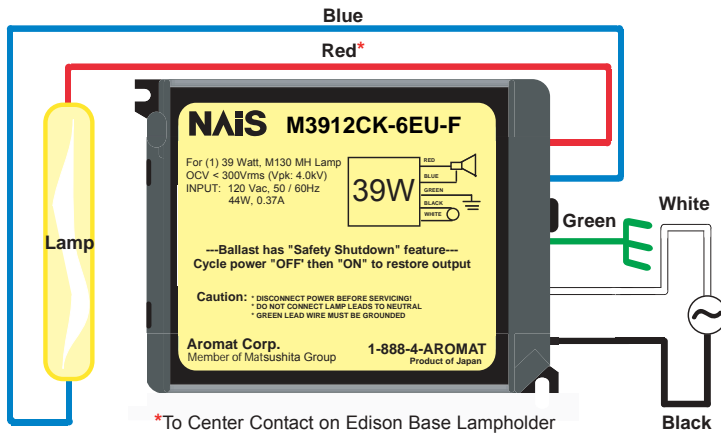
LAMP	<b>39W Metal Halide M130 Ceramic</b>
Input Volts	120V 50/60Hz
Model Number	<b>M3912CK-6EU-F</b>
Mounting/ Lead Exit	Feet with Side Leads Exit
Safety	Listed:
Lamp Holder	Minimum 4KV Pulse Rated

Aromat reserves the right to change any of the above performance characteristics without notice.

For More Information, call: **1-888-4-AROMAT**  
 Visit our Web Site: **www.aromat.com**

**Aromat Corporation**  
 (Matsushita Electric Works, America)  
**NAIS** A Worldwide Brand

## Wiring Diagram:

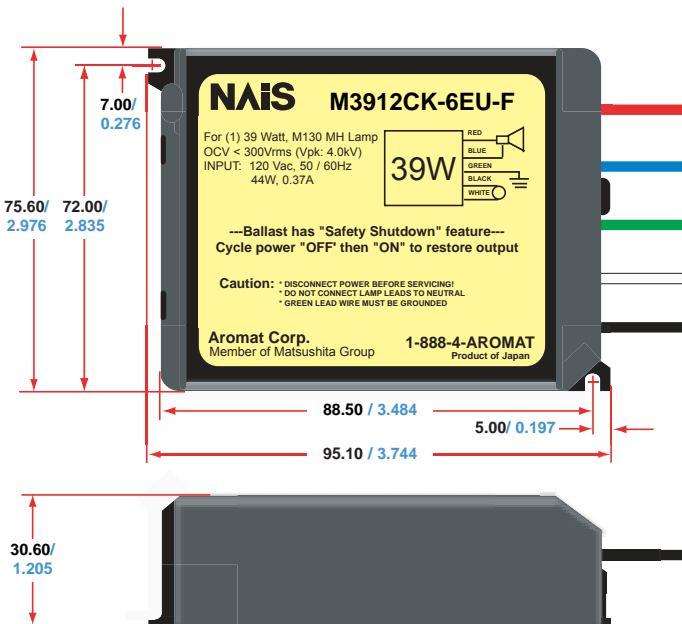


## Safety Instructions:

- Always disconnect power to the entire fixture before installation and/or removal of ballasts or controls.
- Ballast green wire must be grounded.
- Install per national and local electrical codes.
- Dispose of any replaced ballasts and lamps properly.
- **DO NOT** connect lamp leads to ground or neutral.

## Dimensions: Millimeters / Inches

### M3912CK-6EU-F



## NOTES

1. For additional installation and operational information, please refer to: *Aromat Application Guidelines*.
2. Dimensional Tolerances:
  - **Case:**  $\pm 0.3\text{mm} / \pm 0.012''$
  - **Lead Wires:**  $+50\text{mm} / +2''$   
 $-30\text{mm} / -1''$
  - **Lead Length:** Nominal 10"
  - **Slot width on "F" mounting tabs:**  $4.0\text{mm} / 0.157''$
3. The maximum case temperature test point is located in the center of case bottom and is designated by "Tc" symbol.

# "mini-Square" 120V DCP

## Electronic Metal Halide Ballast for 70 Watt Lamps

*DRIVING* the Future of Luminaires!

**World's Smallest 70W MH Ballast!\***

- 51% Smaller than Industry Standard Case
- Resonance Start Technology
- Improved Hot Restrike Characteristics
- Superior Lamp Starting



\*For UL listed 120V applications

### Features & Benefits:

- HID lamp life approximately 4-6 times more than Halogen lamps.
- Excellent line regulation;  $\pm 0.5\%$  output variation with  $\pm 10\%$  change in line voltage.
- Reduction in visual flicker & increased lamp life.
- Ease of assembly; only one unit to mount.
- Light weight (<1 lbs.)
- Eliminates long term lamp cycling, no need to wait for lamps to cycle to identify replacement.
- Sound Rated "A" for indoor applications
- Thermally protected/ Transient protected.
- Ballast has a lamp end-of-life detection feature to enhance safety and reliability.

### Lamp Maintenance Notice:

- To start new lamps or replaced lamps, turn off the ballast input voltage for 10 seconds then back on.
- If lamp or wiring is defective the ballast will "shut down" in 1.5 to 30 minutes depending on the fault condition.

### Specifications:

Lamps <sup>1</sup>	70W Metal Halide lamps: M143, M139, or M98 Ceramic
Input Voltage	120V 50/60 hertz
Power Factor	High
Input Power	77W
Input Current (Maximum)	120V: 0.64A
Harmonic Distortion	<10%
Lamp Frequency	170 Hertz Square-Wave
EMI/ RFI	Complies with FCC 18C, non consumer limits
Lamp Current Crest Factor	1.4 Typical
Safety	UL Outdoor Type 1, Suitable for Recessed Use
Thermal Protection	Functions at approximately 100°-110°C hot spot
Warranty <sup>2</sup>	3 year; Tmax 90°C and if critical components meet Aromat limits. (See notes on P2)
Minimum Ballast Temp.	-15°C/ 5°F
Maximum Mounting Distance <sup>3</sup>	3 meters

**Note 1:** Consult lamp manufacturers for lamp compatibility approval.  
**Note 2:** Warranty is based on maximum operating time of 4000 hours per year. For additional operating hours consult with Aromat Application Engineering.  
**Note 3:** Based on individual lamp lead wires. Consult Aromat for use with jacketed power cords for lamp lead extensions.

### Product Summary

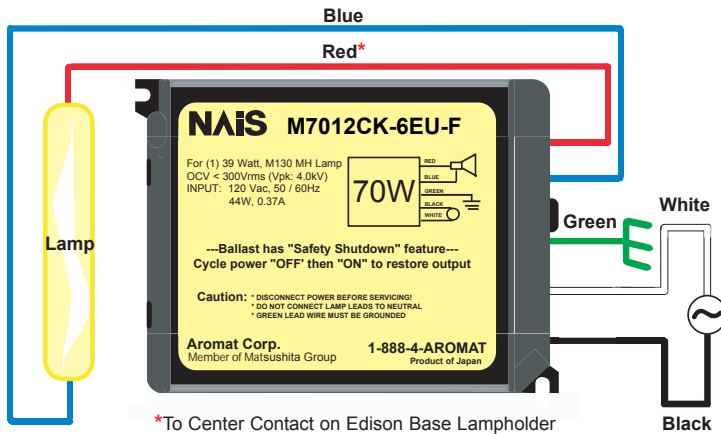
LAMP	70W MH Lamp: M143, M139 or M98 Ceramic	
Input Volts	120V 50/60Hz	
Model Number(s)	M7012CK-6EU-F	JM7012CK-6EU-F (with metal jacket heatsink)
Mounting/ Lead Exit	Feet with Side Leads Exit	
Safety	Listed:  US	
Lamp Holder	Minimum 4KV Pulse Rated	

\*Please check with Aromat for compatibility with non-ceramic M.H. lamps.  
 Aromat reserves the right to change any of the above performance characteristics without notice.

For More information, call: 1-888-4-AROMAT  
 Visit our Web Site: [www.aromat.com](http://www.aromat.com)

**Aromat Corporation**  
 (Matsushita Electric Works, America)

## Wiring Diagram:



\*To Center Contact on Edison Base Lampholder

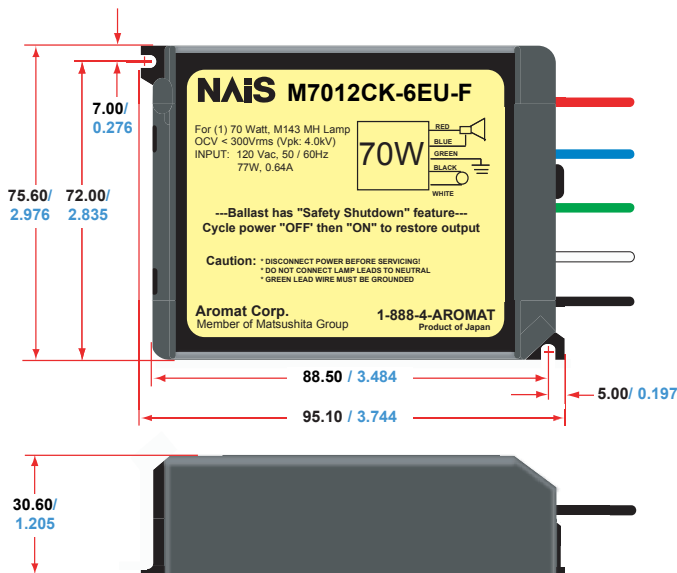
\*\*Wiring diagram is the same for both ballast models (M7012CK-6EU-F and JM7012CK-6EU-F)

## Safety Instructions:

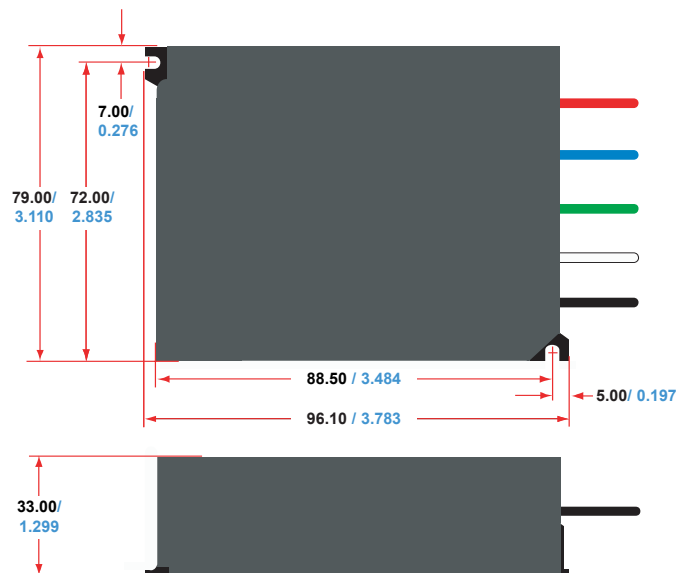
- Always disconnect power to the entire fixture before installation and/or removal of ballasts or controls.
- Ballast green wire must be grounded.
- Install per national and local electrical codes.
- Dispose of any replaced ballasts and lamps properly.
- **DO NOT** connect lamp leads to ground or neutral.

## Dimensions: Millimeters / Inches

### M7012CK-6EU-F



### JM7012CK-6EU-F



## CONSTRUCTION NOTES

- For additional installation and operational information, please refer to: *Aromat Application Guidelines*.
- Dimensional Tolerances:**
  - **Case:**  $\pm 0.3\text{mm} / \pm 0.012''$
  - **Lead Wires:**  $+50\text{mm} / +2''$
  - **Lead Length:**  $-30\text{mm} / -1''$
  - **Slot width on "F" mounting tabs:**  $4.0\text{mm} / 0.157''$
- The maximum case temperature test point is located in the center of case bottom and is designated by "Tc" symbol. In addition, two critical components' temperatures must be tested. (See Notes 1, 2 & 3 below)

## MOUNTING & TESTING NOTES

- In many fixture housings, thermal gradients can vary significantly depending on housing material, fixture design and ballast mounting. It is recommended that ballast critical component temperatures be measured during the initial & final performance testing of the fixture design to assure proper ballast life.
- Aromat recommends that all ballasts be securely mounted against a fixture-housing surface to adequately provide proper heat transfer and cooling for the ballast.
- The worst case end-use fixture application temperature must be factored into the ballast component temperature limits so ballast perform properly at expected higher ceiling temperature ambients. Consult Aromat for maximum component temperature limits.

**B200-2 HIGH LUMEN BALLAST SYSTEM -- FEATURES/ELECTRICAL DATA/LAMP DATA**

**FEATURES:**

- High lumen output (see lamp data table below).
- Ballast can be remote up to 60' (maximum for 120ma system 20').
- No socket shadows and no lamp overlap required.
- Extended lamp life.
- Field Installed UL IFAY Listing.
- Safety circuit interrupt lampholder (ballast automatically turns off when lamps are removed).
- Economical dimming (NPF only, HPF are not dimmable).
- ITL certified lumen data (see lamp table below).

**ELECTRICAL DATA**

POWER SUPPLY	NPF Ballast	HPF Ballast
Operating Current	200MA	200MA
VA/FT. (1) (2)	27.75	11.25
AMPS/FT. (2)	0.23	0.09
WATTS/FT. (2)	11.5	10.4
LUMENS/WATTS (3)	61.7	68.2

- 1) Use these figures to calculate loads.
- 2) These figures are estimates only and will vary from project to project.
- 3) These figures are based on 3000 °K Tri-Phosphor Warm White.

**LAMP DATA**

Gas: Argon w/Mercury Amalgam (blue color) T-8 25mm

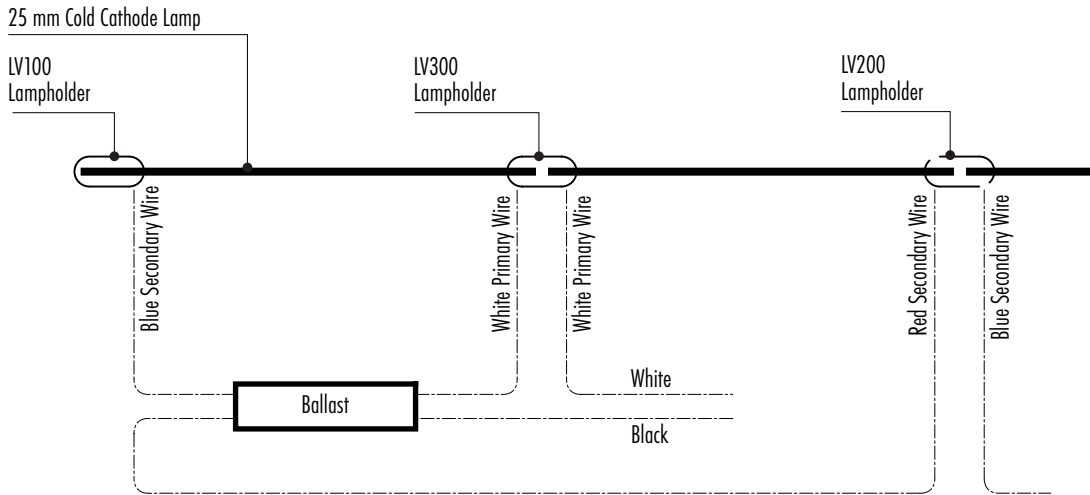
COLOR (1) (3)	KELVIN	LUMEN/FT. (2)
Warm White	3000	526
Soft White (4)	3500	594
Cool White	4500	554
Snow White (Daylight)	6500	498
Tri-Phosphor Incandescent	2800TC	665
Tri-Phosphor Warm White (4)	3000TC	709
Tri-Phosphor Soft White (4)	3500TC	687
Tri-Phosphor Ice White	5000TC	659
Tri-Phosphor Daylight	6500TC	681

- 1) Consult factory for lead time.
- 2) ITL report available upon request.
- 3) Additional colors available upon request.
- 4) Most popular colors specified for functional lighting installations.

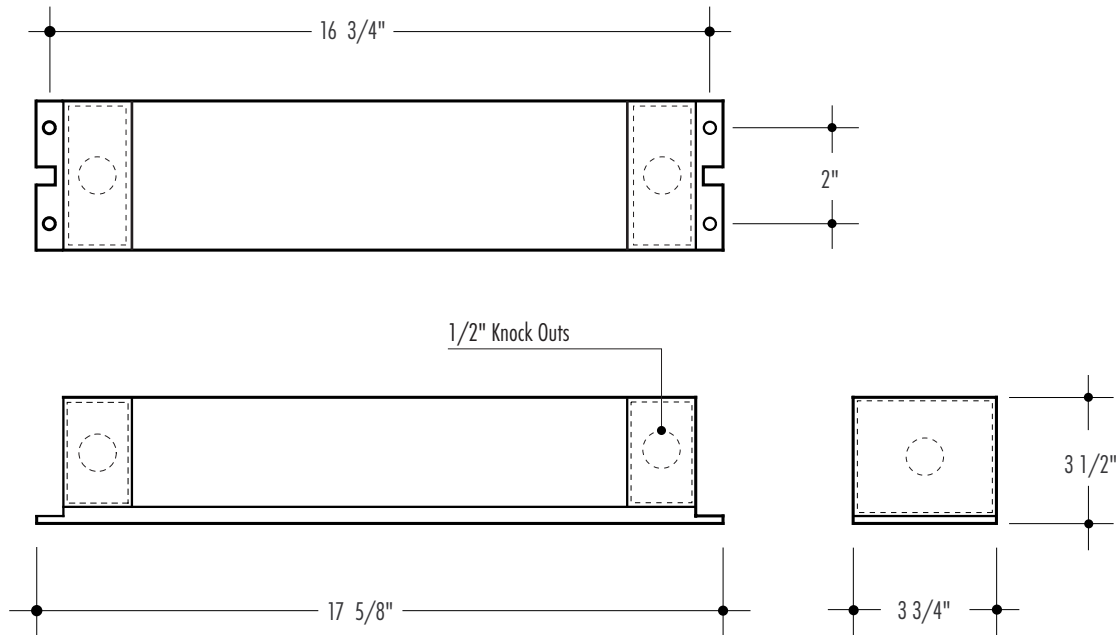


**B200-2 HIGH LUMEN BALLAST SYSTEM -- WIRING DIAGRAM/BALLAST DIMENSION**

B200-2 HIGH LUMEN BALLAST SYSTEM  
TECHNICAL SHEETS  
3.20



**WIRING DIAGRAM**



**BALLAST DIMENSIONS**



**T** 323.581.8800  
**F** 323.581.7971  
**E** aclinc@cathodelighting.com  
**W** www.cathodelighting.com





# PDS-150E



Color Kinetics® PDS-150e intelligent power/data supply is specifically designed for Color Kinetics bColor Series and iColor Series fixtures. PDS-150e provides a robust 150W power source and intelligent data drive circuitry. This data circuitry conditions data supplied from a DMX512 controller, including Color Kinetics full line of controllers, to a format compatible with the fixtures. This integration of power and data simplifies wiring installation.

The 150W power source features a built-in ventilation fan in addition to an automatic over-temperature shut-off to protect it from damage due to overheating. The data drive circuitry has been specifically designed with short circuit protection to prevent failures due to incorrect wiring/installation. PDS-150e also features diagnostic LEDs to aid troubleshooting of Color Kinetics systems.

PDS-150e automatically accommodates supply voltages ranging from 100VAC to 240VAC, which must be hard-wired to the supply. Light fixtures are hard-wired to two-piece locking connectors for easy fixture disconnection and reconnection to output terminals. RJ45 data input and output connectors let you daisy-chain data from one power/data supply to another. A DMX repeater is provided to maintain the integrity of the data in large installations.

The entire package is housed in a NEMA-style enclosure with 14 pre-formed knockout holes sized for standard conduit connectors, which comply with National Electrical Code (NEC) requirements. PDS-150e is rated for indoor use only. For outdoor installations, a NEMA 4 (IP66) outdoor rated enclosure must be used.

PDS-150e is outfitted for advanced ethernet options using a Color Kinetics proprietary protocol. These control options are ideal for large installations, and will be available soon as standard products. For more information, contact Color Kinetics.

## PDS-150e SPECIFICATIONS

<b>POWER INPUT</b>	100VAC to 240VAC auto ranging (50Hz–60Hz) Power factor correction (PFC) 2.8A (115V)/1.4A (230V)
<b>POWER OUTPUT</b>	24VDC (150W Max.)
<b>HEAT DISSIPATION</b>	25 percent of total power output
<b>AMBIENT OPERATING TEMP</b>	14°F to 122°F (-10°C to 50°C)
<b>HOUSING</b>	NEMA-style indoor rated enclosure; housing dimensions: 10.38" (26.37 cm) x 10.10" (25.65 cm) x 4.38" (11.13 cm)
<b>CONNECTORS</b>	Data: Screw terminal or RJ45 input and output connectors Power: Screw terminal output connectors
<b>DATA INTERFACE</b>	Color Kinetics full line of controllers or DMX512 (RS485) compatible
<b>CLASSIFICATION</b>	Class 2 power supply
<b>LISTINGS</b>	C-UL US listed, CE listed



ITEM# 109-000008-01

FOR USE UNDER U.S. PATENTS 6,016,038 AND 6,150,774  
OTHER PATENTS PENDING

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All other brand or product names are trademarks or registered trademarks of their respective owners.

BR0103 Rev 02

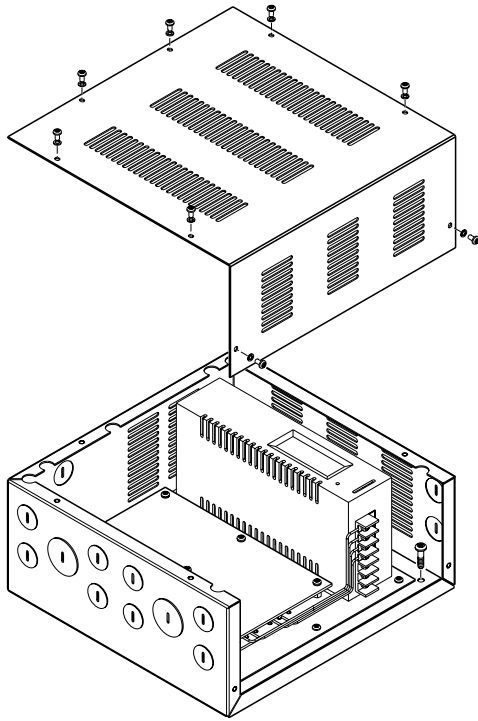
Specifications subject to change without notice.

## U.S. AND FOREIGN PATENTS AND PATENTS PENDING

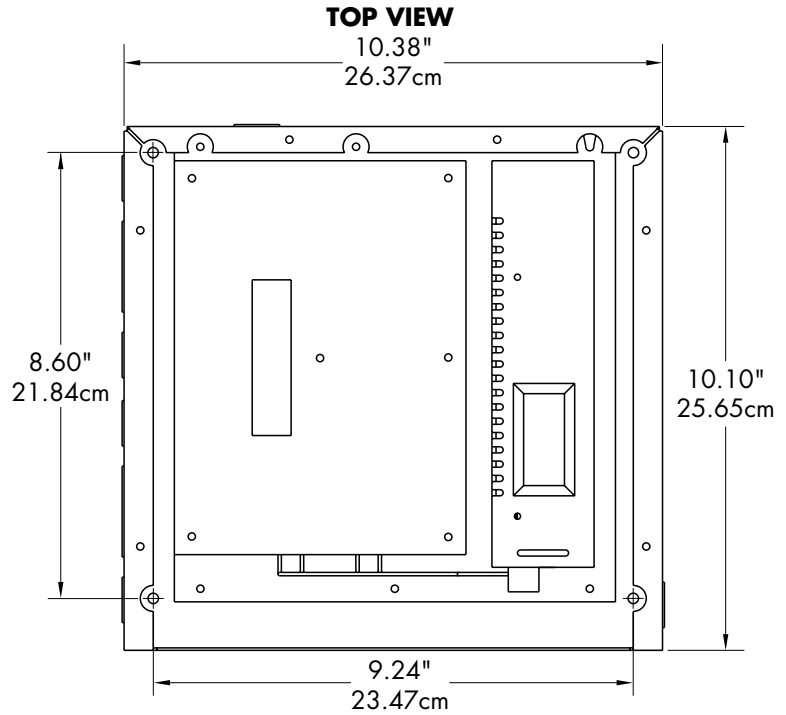
Color Kinetics Incorporated grants the purchaser of its lighting products and controllers a personal and non-transferable license to use Chromacore®, its patented technology for networkable control of LED-based color-changing lighting fixtures for illumination, display and design. This license is granted only by Color Kinetics Incorporated, and may not be transferred except by the grantor. The design, duplication, manufacture, or sale of other products using networkable control of LED-based color-changing lighting may be prohibited and is not licensed hereunder. Other patents pending.

**PDS-150e**

PHYSICAL DIMENSIONS

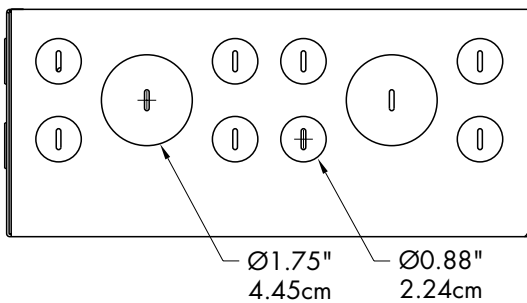


**NOTE:** Requires 4 inches open space on all vented sides

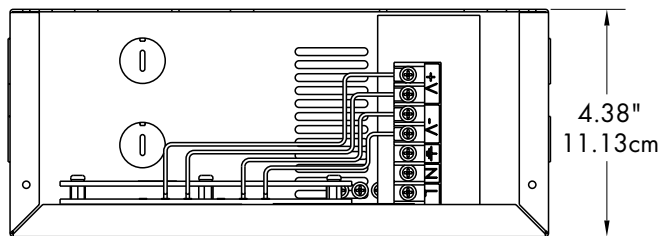


(SHOWN WITHOUT COVER)

**SIDE VIEW**



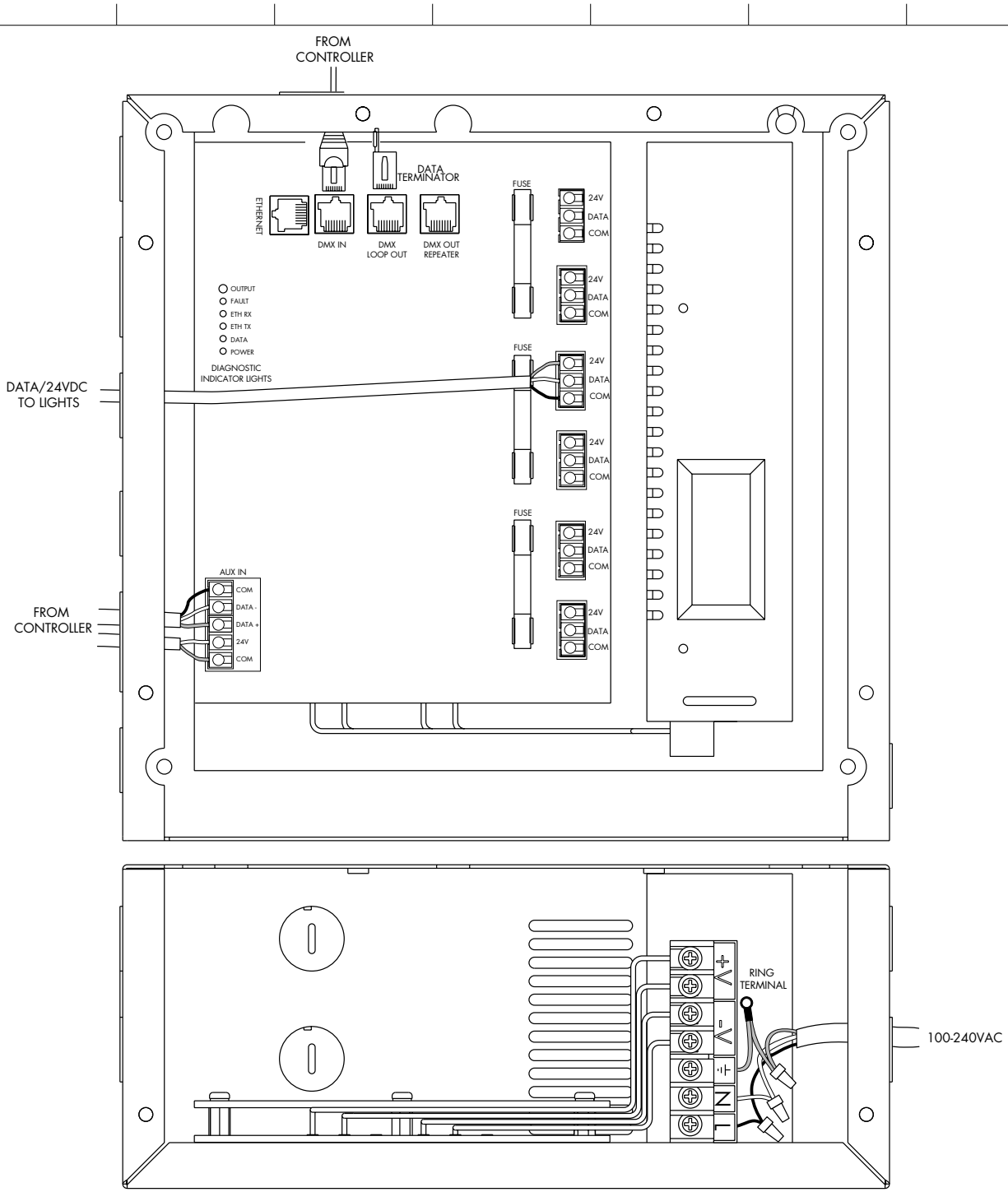
**FRONT VIEW**



PDS-150e	
ITEM # 109-00008-01	
<b>DATA CONNECTOR</b>	Input and output via RJ45 or screw terminals
<b>OUTPUT CONNECTOR</b>	Screw terminals
<b>SUPPLY CONNECTOR</b>	Flying leads
<b>WEIGHT</b>	8 lb. (3.6 kg)

**PDS-150e**

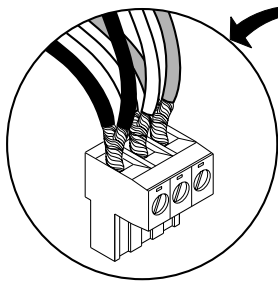
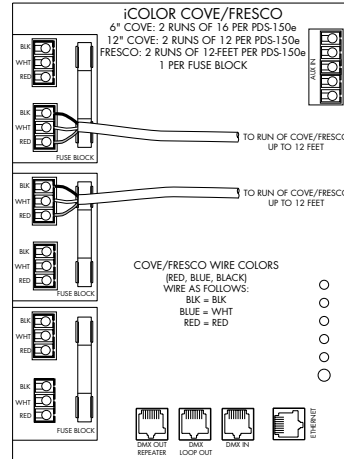
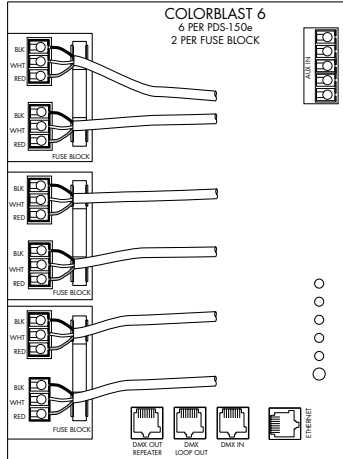
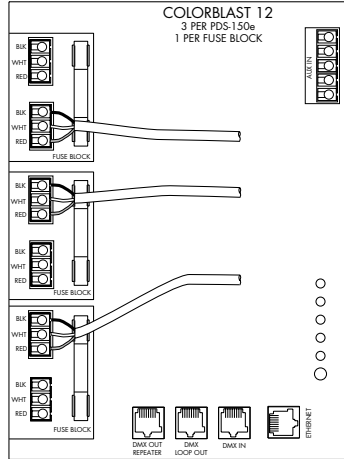
**FUNCTIONAL FLOW DIAGRAM**



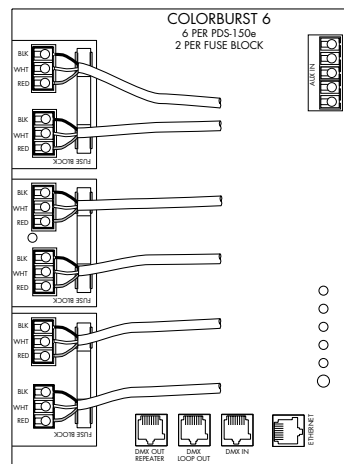
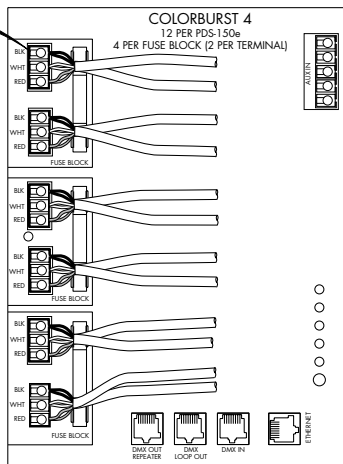
For complete installation instructions and safety precautions, refer to the PDS-150e User Guide and wiring diagrams located at <http://support.colorkinetics.com>

**PDS-150e**

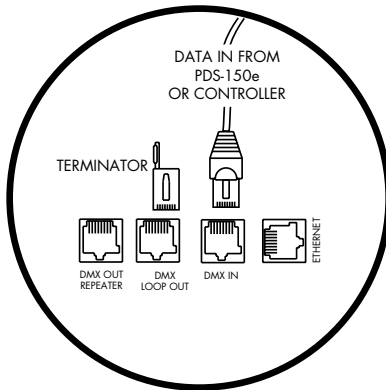
**FUNCTIONAL FLOW DETAIL**



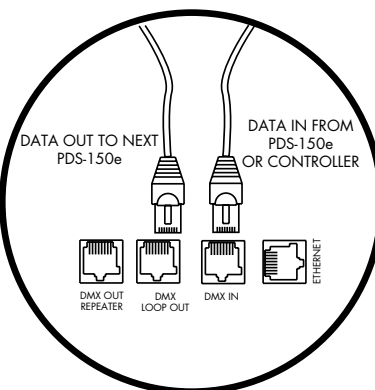
**NOTE:** iColor Accent cannot be used with the PDS-150e



**DMX CONTROLLER**

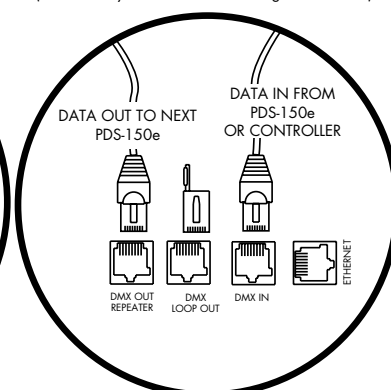


**DAISY-CHAIN**



**LARGE CHAIN**

(Use on every 32nd PDS-150e in large installations)



For complete installation instructions and safety precautions, refer to the PDS-150e User Guide and wiring diagrams located at <http://support.colorkinetics.com>

**LAMPS**

**Philips MasterColor® 150W HORIZONTAL BURNING (+/- 45°) Position Ceramic Metal Halide TD-7 Double-Ended Lamp w/ R7S Base, 3000K WARM WHITE Color, & CRI=85. (diameter 7/8", length 5 1/8"). Metal Halide Ballast (ANSI Code M142AJ-REXJ or M102 or M81) & **ENCLOSED FIXTURE REQUIRED.** Sold Individually.**

**Case Quantity**

12

**Pricing Per Each Item**

1 to 11	\$54.99	
12 to 35	\$49.49	<b>SAVE</b>
36 +	\$46.99	<b>SAVE MORE</b>

**Status**

IN STOCK



**CDM150/TD/830 Light Bulb**

**Add to Cart**

**CDM150/TD/830 Bulb General Information**

Product Number	231670
Ordering Code	CDM150/TD/830
Light Output	10,600 lumens
Energy Used	150 Watts
Life	15,000 Avg. Hours
Volts	
Bulb Shape	TD-7
Beam Spread	
Base	RX7s `
Class and Filament	
Diameter (in)	0.88
Length (in)	5.125
Finish	Warm White
CRI	85
Color Temperature (Kelvin)	3000K
Brand	Philips

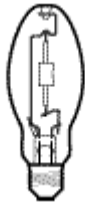
**Common Cross-References**

GE	No Available Direct Offset
Osram Sylvania	64794 - MC150T6/DE/830

**Additional Information**

- Contains FadeBlock™ UV Filtering
- Lifetime Color Stability Within +/-200K
- [Manufacturer's Warnings and Cautions](#)
- See Lamp Packaging for Operating Instructions

22119 - CMH Elliptical Item Detail



**General**

<a href="#">Product Code</a>	22119
<a href="#">Description</a>	CMH70/U/830/MED
Subcategory	CMH Elliptical

**Physical**

<a href="#">Bulb Type</a>	BD17
<a href="#">Base Type</a>	Med
<a href="#">Bulb Material</a>	Hard Glass
<a href="#">Max Overall Length (In.)</a>	5.43
<a href="#">Max Overall Length (mm)</a>	138.000
<a href="#">Nominal Length (In.)</a>	5.43
<a href="#">Bulb Nominal Diameter (In.)</a>	2.120

**Photometric**

<a href="#">Average Life in Hours</a>	15000
<a href="#">Lumens (Initial)</a>	6300
<a href="#">Lumens (Mean)</a>	4100
<a href="#">Color Temperature (K)</a>	3000
<a href="#">Color Rendering Index (Ra) CRI (&gt; or =)</a>	80
<a href="#">Warm Up Time (min.) to 90%</a>	2
<a href="#">Hot Restart Time (min.) to 90%</a>	15
<a href="#">Effective Arc Length in inches</a>	.2813
<a href="#">Lighted Center Length (In.)</a>	3.37

**Electrical**

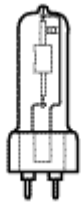
<a href="#">Watts</a>	70
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**Luminaire**

<a href="#">Operating Position Code</a>	U
<b>Ballast-related information</b>	
<a href="#">Minimum Ballast Open Circuit Voltage - RMS - Lag Ballast (Ballast A/B/C)</a>	225/198
<a href="#">Minimum Ballast Open Circuit Voltage - Peak Lag Ballast (Ballast A/B/C)</a>	332/280
<b>Miscellaneous</b>	
<a href="#">ANSI Ballast Type</a>	M98 or M139
<a href="#">Additional Information</a>	Clear
<a href="#">Footnotes</a>	Rated life based on 11 hours per start.



## 42070 - CMH Single Ended G12 Item Detail



### General

<a href="#">Product Code</a>	42070
<a href="#">Description</a>	CMH39/T/U830/G12
<a href="#">Subcategory</a>	CMH Single Ended G12

### Physical

<a href="#">Bulb Type</a>	T4.5
<a href="#">Base Type</a>	BiPin G12
<a href="#">Bulb Material</a>	UV Block Quartz
<a href="#">Max Overall Length (In.)</a>	3.56
<a href="#">Max Overall Length (mm)</a>	91.000
<a href="#">Nominal Length (In.)</a>	3.56
<a href="#">Bulb Nominal Diameter (In.)</a>	0.750

### Photometric

<a href="#">Average Life in Hours</a>	10000
<a href="#">Lumens (Initial)</a>	3400
<a href="#">Lumens (Mean)</a>	2600
<a href="#">Color Temperature (K)</a>	3000
<a href="#">Color Rendering Index (Ra) CRI (&gt; or =)</a>	82
<a href="#">Warm Up Time (min.) to 90%</a>	2
<a href="#">Effective Arc Length in inches</a>	.1831
<a href="#">Lighted Center Length (In.)</a>	2.18

### Electrical

<a href="#">Watts</a>	39
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### Luminaire

<a href="#">Operating Position Code</a>	U
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### Ballast-related information


<a href="#">Minimum Ballast Open Circuit Voltage - RMS - Lag Ballast (Ballast A/B/C)</a>	198
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<a href="#">Minimum Ballast Open Circuit Voltage - Peak Lag Ballast (Ballast A/B/C)</a>	280
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**Miscellaneous**

<a href="#">ANSI Ballast Type</a>	M130
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[Footnotes](#) UV Control is a quartz material that effectively cuts UVB and UVC radiation. Rated life based on 7 hours per start Use electronic ballast, peak lead ballast, or system which can shut itself off if ballast overheating occurs.

 29703 - CMH Single Ended G12 Item Detail
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### General

<a href="#">Product Code</a>	29703
<a href="#">Description</a>	CMH20T/U/830/G12
Subcategory	CMH Single Ended G12

### Physical

<a href="#">Bulb Type</a>	T4.5
<a href="#">Base Type</a>	BiPin G12
<a href="#">Max Overall Length (In.)</a>	3.56

### Photometric

<a href="#">Average Life in Hours</a>	7500
<a href="#">Lumens (Initial)</a>	1700
<a href="#">Lumens (Mean)</a>	1200
<a href="#">Color Temperature (K)</a>	3000
<a href="#">Color Rendering Index (Ra) CRI (&gt; or =)</a>	81
<a href="#">Lighted Center Length (In.)</a>	2.18

### Electrical

<a href="#">Watts</a>	20
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### Luminaire

<a href="#">Operating Position Code</a>	U
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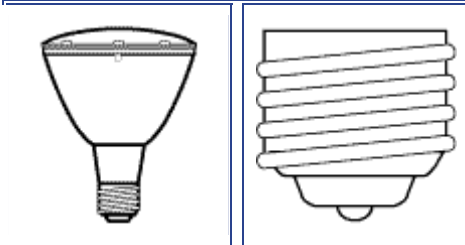
### Miscellaneous

<a href="#">ANSI Ballast Type</a>	M156
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[Footnotes](#) Rated life based on 11 hours per start. UV Control is a quartz material that effectively cuts UVB and UVC radiation. Use only with electronic ballast

All values are design values or typical values when measured under laboratory conditions. Information provided is subject to change without notice. Where applicable, values are based on guidelines published in ANSI. For more information see Terms and Conditions in the link below

11124 - Compact PAR30 Long Neck Item Detail



Subcategory	Compact PAR30 Long Neck
<a href="#">Product Code</a>	11124 <del>✖</del>
<a href="#">Description</a>	75PAR30L/H/SP10
<a href="#">Volts</a>	120
<a href="#">Watts</a>	75
<a href="#">Average Life in Hours</a>	3000
<a href="#">Lumens</a>	940
<a href="#">CBCP</a>	13000
<a href="#">Color Temperature (K)</a>	2830
<a href="#">Bulb Type</a>	PAR30L
<a href="#">Base Type</a>	Med NP
<a href="#">Max Overall Length (In.)</a>	4.75
<a href="#">Max Overall Length (mm)</a>	121.000
<a href="#">Filament Type</a>	CC-8
<a href="#">Sales Unit UPC</a>	043168111249
<a href="#">Case UPC</a>	043168111249
<a href="#">SCC</a>	00043168111249
<a href="#">Case Quantity</a>	15
<a href="#">Additional Information</a>	Spotlight

[Footnotes](#)

**WARNING**

- Turn power off before inspection, installation or removal
- Keep combustible materials away from lamp
- Use in fixture rated for this product--see instructions
- Do not use lamp if outer glass is scratched or broken

**CAUTION**

- Allow lamp to cool before handling
- Do not use lamp if outer glass is scratched or broken



## Value Brand 50W, 120V, Clear, JD-Type (Double Contact Base), T-4 Lamp (dia. 1/2", length 2 1/4"), Sold Individually

### Case Quantity

10

### Pricing Per Each Item

1 to 9	\$4.72
10 to 49	\$4.24 <b>SAVE</b>
50 +	\$4.01 <b>SAVE MORE</b>

### Status

IN STOCK



### Q50CL/DC (120V) Light Bulb

[Add to Cart](#)

### Q50CL/DC (120V) Bulb General Information

Product Number	613050
Ordering Code	Q50CL/DC (120V)
Light Output	950 lumens
Energy Used	50 Watts
Life	2000 Avg. Hours
Volts	120 Volts
Bulb Shape	T-4
Beam Spread	N/A
Base	Bayonet Double Contact ( <a href="#">Base Types</a> )`
Class and Filament	
Diameter (in)	1/2
Length (in)	2 1/4
Finish	Clear
CRI	
Color Temperature (Kelvin)	
Brand	Value Brand

### Common Cross-References

GE	No Available Direct Offset
Osram Sylvania	No Available Direct Offset



### Case Quantity

50

### Pricing Per Each Item

1 to 9	\$5.49
10 to 49	\$4.99 <b>SAVE</b>
50 +	\$4.69 <b>SAVE MORE</b>

### Status

IN STOCK



### Q75CL/MC (120V) Light Bulb

[Add to Cart](#)

## Value Brand 75W, 120V, Mini-Candelabra Base, T-4 Clear Quartz Halogen Lamp, (dia. 1/2", length 2 1/2"), Sold Individually

### Q75CL/MC (120V) Bulb General Information

Product Number	610076
Ordering Code	Q75CL/MC (120V)
Light Output	1,350 lumens
Energy Used	75 Watts
Life	2,000 Avg. Hours
Volts	120 Volts
Bulb Shape	T-4
Beam Spread	N/A
Base	Candelabra Miniature (E11) ( <a href="#">Base Types</a> )
Class and Filament	N/A
Diameter (in)	1/2
Length (in)	2 1/2
Finish	Clear
CRI	
Color Temperature (Kelvin)	
Brand	Value

### Common Cross-References

GE	12715 - Q75CL/MC/CD
Osram Sylvania	58884 - 75Q/CL/MC/RP

## Sylvania CAPSYLITE PAR38 SPL 250W PAR38 Bulb E26 Medium Skirted Base

Product Name: 250PAR/CAP/SPL/FL30  
120V  
Product #: 15558  
Manufacturer: [Sylvania](#)  
Unit of Measure: Each (1)  
Our Price/Unit: \$25.92  
Average Wholesale Price/Unit: ~~\$31.11~~  
You Save: \$5.19 (16.68%)/Unit  
Quantity of Units/Case: 6.000  
Minimum Quantity of Cases to Order: 1  
Our Price/Case: \$155.52



\* Image accuracy not guaranteed

[Product Safety Data Sheet](#)

[Product Information Bulletin](#)

\* Because this bulb radiates considerable heat, do not use in enclosed, close fitting fixtures, or in close proximity to people, combustible materials, or substances adversely affected by heat or drying.

[Add To Cart](#)

[Click here to see more products in the PAR38 Halogen Light Bulbs category.](#)

[See the halogen cycle in action](#)

---

Abbrev. With Packaging Info.:	250PARCAPSPLFL30 120V 6/CS 1/SKU
Approx. Lumens:	3600
Average Rated Life (hr):	4500
Base:	E26 Medium Skirted
Beam Angle (deg):	30
Beam Type:	FL
Bulb:	PAR38
Centerbeam Candlepower (cp):	8900
Class:	C (gas)
Color Rendering Index (CRI):	100

You may also be interested in our [Reflector Shape \(PAR, R20, R30, R40\) Compact Fluorescent Lamps](#)

Color  
Temperature/CCT (K): 2950  
Diameter (in): 4.75  
Ecologic: YES  
Family Brand Name: CAPSYLITE PAR38 SPL  
Filament: CC-8  
Maximum Overall  
Length - MOL (in): 5 5/16  
Maximum Overall  
Length - MOL (mm): 135  
Nominal Voltage (V): 120  
Nominal Wattage (W): 250  
Ordering Abbreviation: 250PAR/CAP/SPL/FL30  
120V  
Value Added Product: YES



## Sylvania CAPSYLITE PAR38 SPL 250W PAR38 Bulb E26 Medium Skirted Base

Product Name: 250PAR/CAP/SPL/SP10  
120V  
Product #: 15526  
Manufacturer: [Sylvania](#)  
Unit of Measure: Each (1)  
Our Price/Unit: \$25.92  
Average Wholesale Price/Unit: ~~\$31.11~~  
You Save: \$5.19 (16.68%)/Unit  
Quantity of Units/Case: 6.000  
Minimum Quantity of Cases to Order: 1  
Our Price/Case: \$155.52



\* Image accuracy not guaranteed

[Product Safety Data Sheet](#)

[Product Information Bulletin](#)

\* Because this bulb radiates considerable heat, do not use in enclosed, close fitting fixtures, or in close proximity to people, combustible materials, or substances adversely affected by heat or drying.

[Add To Cart](#)

[Click here to see more products in the PAR38 Halogen Light Bulbs category.](#)

[See the halogen cycle in action](#)

---

Abbrev. With Packaging Info.:	250PARCAPSPLSP10 120V 6/CS 1/SKU
Approx. Lumens:	3600
Average Rated Life (hr):	4500
Base:	E26 Medium Skirted
Beam Angle (deg):	10
Beam Type:	SP
Bulb:	PAR38
Centerbeam Candlepower (cp):	44000
Class:	C (gas)
Color Rendering Index (CRI):	100

You may also be interested in our [Reflector Shape \(PAR, R20, R30, R40\) Compact Fluorescent Lamps](#)

Color  
Temperature/CCT (K): 2950  
Diameter (in): 4.75  
Ecologic: YES  
Family Brand Name: CAPSYLITE PAR38 SPL  
Filament: CC-8  
Maximum Overall  
Length - MOL (in): 5 5/16  
Maximum Overall  
Length - MOL (mm): 135  
Nominal Voltage (V): 120  
Nominal Wattage (W): 250  
Ordering Abbreviation: 250PAR/CAP/SPL/SP10  
120V  
Value Added Product: YES