

**Agency: Commerce, Community and Economic Development****Grants to Municipalities (AS 37.05.315)****Grant Recipient: Delta Junction****Federal Tax ID: 92-0047101****Project Title:****Project Type: Remodel, Reconstruction and Upgrades**

## Delta Junction - LED Lighting Upgrades

**State Funding Requested: \$97,500****House District: 6 / C**

One-Time Need

**Brief Project Description:**

Installation of LED lighting in the public ice skating facility.

**Funding Plan:**

Total Project Cost: \$97,500

Funding Already Secured: (\$0)

FY2014 State Funding Request: (\$97,500)

Project Deficit: \$0

*Funding Details:*

July 2013

**Detailed Project Description and Justification:**

The Liewer-Olmstead Ice Arena is the City's public ice skating facility. Home to the Delta/Greely elementary, middle and high school students, including the Delta Skating Association; the building serves a full schedule of skaters. As an attempt to hold down operational costs, the installation of LED lighting will reduce energy usage,. The City has realized a cost savings of over 50% in recent LED installations and therefore continues to pursue energy efficiencies whenever feasible.

**Project Timeline:**

July 2013

**Entity Responsible for the Ongoing Operation and Maintenance of this Project:**

City of Delta Junction

**Grant Recipient Contact Information:**

Name: Mike Tvenge

Title: City Administrator

Address: 2288 Deborah Street

Delta Junction, Alaska 99737

Phone Number: (907)895-4656

Email: mtvenge@ci.delta-junction.ak.us

Has this project been through a public review process at the local level and is it a community priority?  Yes  No

**General Description**

Slim, low profile, easy mounting design. Luminaire sides are rugged cast aluminum with integral, weather-tight LED driver compartments and high performance aluminum heat sinks specifically designed for LED lighting application. Pendant mount fixture is supplied with a 3/4" (19mm) NPT stainless steel pendant connection and single 5' (1.5m) cord out of the top of the pendant. Longer cords available; consult factory. Includes bug/debris guard. Five year limited warranty on fixture.

**Electrical**

Modular design accommodates varied lighting output from high power, white, 6000K (+/- 500K per full fixture), minimum 70 CRI, long life LED sources. Optional 4300K (+/- 300K per full fixture) also available. 120-277V 50/60 Hz, Class 1 LED drivers are standard. 347-480V 50/60 Hz driver is optional. LED drivers have power factor >90% and THD <20% at full load. Units provided with integral 10kV surge suppression protection standard. Surge protection tested in accordance with IEEE/ANSI C62.41.2.

**Testing & Compliance**

UL listed in the U.S. and Canada for wet locations and enclosure rated IP66 per IEC 60529. Consult factory for CE Certified products. Dark Sky Friendly. IDA Approved. RoHS compliant.



**Finish**

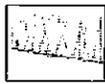
Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable silver powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Bronze, black, white and platinum bronze powder topcoats are also available. The finish is covered by our 10 year limited warranty.

Fixture and finish are endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117.

**Patents**

U.S. and international patents granted and pending. BetaLED is a division of Ruud Lighting, Inc. For a listing of Ruud Lighting, Inc. patents, visit [www.uspto.gov](http://www.uspto.gov).

**Field-Installed Accessories**



**Bird Spikes**  
XA-BROSPK



**No Photo Available**

**12" (305mm) Pendant Kit**  
XA-CL12KIT

(Pendant height to bottom of fixture; mounting accessories or surface boxes will add to overall height)



**No Photo Available**

**18" (457mm) Pendant Kit**  
XA-CL18KIT

(Pendant height to bottom of fixture; mounting accessories or surface boxes will add to overall height)



**No Photo Available**

**22" (559mm) Pendant Kit**  
XA-CL22KIT

(Pendant height to bottom of fixture; mounting accessories or surface boxes will add to overall height)

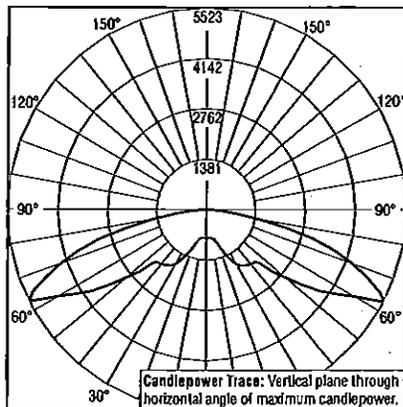


**Leveler**  
XA-PNDTLVL  
(For 0-13° sloped ceilings)

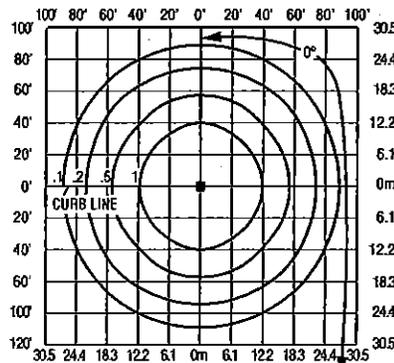


**Pendant Fitting**  
XA-PSFTG

**Photometrics**



Independent Testing Laboratories certified test. Report No. ITL68282. Candlepower trace of 4300K, 120 LED Type V Medium area luminaire with 16,029 initial delivered lumens operating at 525mA. All published luminaire photometric testing performed to IESNA LM-79-08 standards.



Isofootcandle plot of 4300K, 120 LED Type V Medium canopy luminaire at 25' (7.6m) A.F.G. Luminaire with 15,341 initial delivered lumens operating at 525mA. Initial FC at grade.

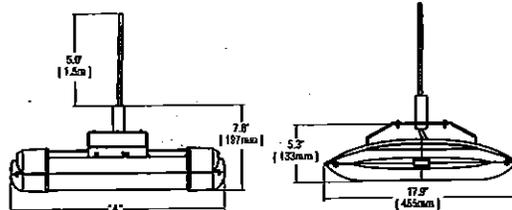


# CAN-EDG-5M-PD THE EDGE® LED Canopy Light – Type V Medium

Rev. Date: 9/22/11



Notes:



# of LEDs	40	60	80	100	120	140	160	200	240
Dist. "A"	16.06"	18.06"	18.06"	18.06"	20.06"	22.06"	24.06"	28.06"	32.06"

Product	Family	Optic	Mounting	# of LEDs (x 10)	LED Series	Voltage	Color Options	Drive Current Not Field Adjustable	Factory-Installed Options
CAN	EDG	5M <sup>1</sup>	PD <sup>2</sup>	04 <sup>3</sup> 08 <sup>4</sup> 08 10 12 14 16 20 24	D	UL Universal 120-277V UH Universal 347-480V 12 120V 24 240V 27 277V 34 347V	SV Silver BK Black BZ Bronze PB Platinum WH White	350 350mA 525 <sup>5</sup> 525mA 700 <sup>6</sup> 700mA	43K 4300K Color Temperature <sup>7</sup> DIM 0-10V Dimming <sup>8,9</sup> F Fuse <sup>10,11,12</sup> HL Hi/Low (175/350/525, dual circuit input) <sup>13</sup> P Photocell <sup>12,14,15</sup> ML Multi-Level (75/525) <sup>13</sup>

**Footnotes**

1. IESNA Type V Medium distribution
2. Pendant mount
3. Uses 80 LED size with two blanks in outside positions
4. Uses 100 LED size with two blanks in outside positions
5. Available on fixtures with 40-160 LEDs
6. Available on fixtures with 40-60 LEDs
7. Color temperature per luminaire; 6000K standard; minimum 70 CRI
8. Control by others
9. Refer to dimming spec sheet for availability and additional information
10. When code dictates fusing use time delay fuse
11. Not available when UH voltage is selected
12. Not available with all multi-level options. Refer to multi-level spec sheet for availability and additional information
13. Refer to multi-level spec sheet for availability and additional information
14. Must specify voltage other than UL or UH
15. 120 LED maximum when 34 voltage is selected

**LED PERFORMANCE SPECS**

# of LEDs	Initial Delivered Lumens - Type V Medium @ 6000K	BUG Rating**			Initial Delivered Lumens - Type V Medium @ 4300K	BUG Rating**			System Watts 120-480V	Total Current @ 120V	Total Current @ 230V	Total Current @ 277V	Total Current @ 347V*	Total Current @ 480V*	L <sub>80</sub> Hours** @ 25° C (77° F)	50X Hours Lumen Maintenance Factor** @ 15° C (59° F)
		B	U	G		B	U	G								
<b>350mA Fixture Operating at 25° C (77° F)</b>																
40 <sup>3</sup>	4,025 (04)	2	1	1	3,710 (04)	2	1	1	47	0.40	0.21	0.19	0.15	0.12	>150,000	93%
60 <sup>4</sup>	5,960 (06)	3	2	1	5,493 (06)	3	2	1	68	0.58	0.30	0.26	0.20	0.16	>150,000	
80	7,946 (08)	3	2	2	7,324 (08)	3	2	2	90	0.77	0.38	0.34	0.26	0.20	>150,000	
100	9,908 (10)	4	3	2	9,131 (10)	3	3	2	111	0.95	0.47	0.42	0.32	0.24	>150,000	
120	11,889 (12)	4	3	2	10,958 (12)	4	3	2	132	1.15	0.56	0.50	0.38	0.28	>150,000	
140	13,808 (14)	4	3	2	12,726 (14)	4	3	2	157	1.34	0.67	0.61	0.47	0.35	149,000	
160	15,781 (16)	4	3	2	14,544 (16)	4	3	2	179	1.54	0.76	0.68	0.53	0.39	149,000	
200	19,726 (20)	4	3	2	18,180 (20)	4	3	2	221	1.92	0.95	0.84	0.65	0.46	149,000	
240	23,671 (24)	5	3	3	21,816 (24)	5	3	3	264	2.30	1.12	1.00	0.77	0.56	149,000	
<b>525mA Fixture Operating at 25° C (77° F)</b>																
40 <sup>3</sup>	5,635 (04)	3	2	1	5,194 (04)	3	2	1	70	0.57	0.29	0.26	0.21	0.16	136,000	92%
60 <sup>4</sup>	8,344 (06)	3	2	2	7,690 (06)	3	2	2	102	0.87	0.44	0.39	0.30	0.22	129,000	
80	11,125 (08)	4	3	2	10,253 (08)	4	3	2	133	1.14	0.56	0.49	0.39	0.29	128,000	
100	13,871 (10)	4	3	2	12,784 (10)	4	3	2	172	1.47	0.75	0.67	0.51	0.38	128,000	
120	16,645 (12)	4	3	2	15,341 (12)	4	3	2	204	1.76	0.88	0.78	0.60	0.44	128,000	
140	19,331 (14)	4	3	2	17,817 (14)	4	3	2	233	2.01	0.99	0.87	0.69	0.51	123,000	
160	22,092 (16)	5	3	3	20,362 (16)	5	3	3	265	2.29	1.11	0.98	0.78	0.57	123,000	
<b>700mA Fixture Operating at 25° C (77° F)</b>																
40 <sup>3</sup>	6,883 (04)	3	2	1	6,344 (04)	3	2	1	93	0.79	0.40	0.35	0.27	0.20	111,000	90%
60 <sup>4</sup>	10,191 (06)	4	3	2	9,393 (06)	3	3	2	137	1.16	0.59	0.51	0.39	0.29	111,000	

\* For recommended lumen maintenance factor data see TD-13

\*\* For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit [www.iesna.org/PDF/Erratas/TM-15-07BugRatingsAddendum.pdf](http://www.iesna.org/PDF/Erratas/TM-15-07BugRatingsAddendum.pdf)

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Meets Buy American requirements within the ARRA.

