



REQUEST FOR PROPOSAL (RFP) #1415-67 LED LIGHTING CONVERSION FOR SANTIAGO CANYON COLLEGE AND DISTRICT OPERATIONS CENTER

ADDENDUM # 2 ISSUED AUGUST 18, 2014

The following changes, additions, deletions or corrections shall become part of the Request for Proposal for the LED Lighting Conversion for the Santiago Canyon College and the District Operations Center.

1. Request for Information # 1:
For the retrofit of Linear Fluorescent troffers with RedBird LED kits, must we remove all sockets from the fixture in order to comply with the scope of work?

Response: [It's not required for performance reasons.](#)

2. Request for Information # 2:
For retrofit of Linear Fluorescent troffers with RedBird LED kits, is it a lamp for lamp replacement? For example for a three lamp fixture existing, will there be two 22" LED strips replacing each 4' lamp for a total of six total LED strips in the fixture? Are there any instances in the scope of work where fewer than two LED strips installed per lamp existing are desired?

Response: [No, in some cases we are going to de-lamp. Mostly on the open strip fixtures where we go from \(2\) 32W to \(1\) 4' strip with 22W driver. The specification has changed slightly since the Year 1 LED Projects. Redbird is now providing strips already secured to the aluminum extrusion, so when you order a 4' strip it will come with 2- 22" PCB boards placed in the extrusion that is 45" long. See attached spec sheet for reference.](#)

3. The LED fixtures for the exterior parking lot shoeboxes did not match the photometric study. Please use the revised exterior lighting survey with correct fixture types.
4. The District has added an allowance item to replace 25 existing fixtures with parabolic fixtures at the DOC building. The new item is on the summary tab of the survey.
5. An RFP respondent has requested the use of Daylight Technologies for the exterior parking LED fixtures and the gymnasium high bay fixtures. The District has determined the product meets the specifications. The use of the product is subject to review and approval of the product by DSA. The outdoor lighting is a head replacement box for box. The Daylight Technologies must be 40 lbs or less and they use the same attachment as the existing shoe box fixtures. The manufacturer of the fixture must provide a 10 year warranty. A photometric study must be provided immediately after contract issuance. The specifications are as follows:

Daylight DL-80W-S Equivalent to Cireon CA2-048-AG
Daylight DL-130W-S Equivalent to Cireon CA3-072-AG

The gymnasium high bay light fixture the Manufacturer must provide a 10 year warranty. Product must weigh less than 35 lbs and use existing gymnasium structural attachments. A photometric study must be provided.

Daylight DL-B-140 Equivalent to Cireon ON3-072-AG

End of Addendum #2



Stripit Kit[®]

Cardinal[®] Stripit Kits[®]. Using the same ultra high efficacy LEDs and power supplies developed for our 'best-in-class' tube lights, RedBird LED is proud to offer a direct, field installable LED retrofit kit that provides one of the easiest to install, most affordable and efficient lighting upgrades available today.

By utilizing a direct molecular fusing between the aluminum core PCB carrying the LEDs and the low profile aluminum extrusion ensures the lowest In Situ TMP readings in the industry today. Based on the LM80 and the ISTMT data, the calculated Energy Star TM21 LED L70 point is greater than 240,000 hours.

Our multi-volt (110-277 VAC) proprietary LED drivers with active power factor correction and a discontinuous current mode of operation deliver efficiencies up to 94%, a PF=0.996 and THD < 6%. Built with premium components, the life expectancy is greater than 140,000 hours. Also available in 0-10V dimming.

Ten Year Replacement Warranty.

With these levels of quality, efficiency and cool operating temperatures we are able to provide a complete system replacement warranty for a full ten years with no pro-rating or exhaustive list of exclusions. In addition, we are the only company that guarantees against color shifting within the stated L70 lifetimes.

Fast, simple installation, only one tool required.


The complete system has been designed to cut installation time and complexity to an absolute minimum. Freedom to locate the LED strips and the driver within the fixture allows optimizing the fit for each application. The installer simply positions the strips as desired in the fixture and fastens them into place with three TEK screws zipped in with a cordless driver. This provides a positive mechanical attachment while the aluminum extrusion ensures excellent thermal management.

In 5 simple steps the retrofit is complete.

- Remove exiting tubes and ballast
- Install new LED Driver
- Fasten Stripit Kit[®] to the fixture
- Connect jumpers to the PCB Board
- Connect input power

Installation time is less than 10 minutes per fixture!

Specifications and Features

Dimensions	21.75" X 2.5" LED strips in Alum. Extrusions
Available Kelvin Colors	3500K, 4100K, 5000K
Efficacy	150 Lumens Per Watt
CRI	> 82
R9	> 5 @ 4100K
Duv	Duv < 0.0019
Voltage	120 ~ 277VAC 50-60 Hz
LED Drivers	9, 12, 14, 18, 22, 28, 36, 44, 72, 88 watts 0-10v Dimming - 20, 36, 44, 72, 88 Battery Backup also available
Power Factor / THD	PF>0.99, THD < 6%
Power Connections	Pre-terminated leads with polarized plugs to connect driver to strips, PH connectors
PCB construction	Aluminum core, molecularly bonded to extrusion
LED Elements	144 SMD LEDs per 2' strip
Color Temperature	3500K, 4100K, 5000K +/- 200'K
	E347929, E363806, E 357319, E362805, E341042
Native Beam Angle	180°
Lens Options	Lambertian, Soft Bat-Wing, DLC Bat-Wing, 60°, 45°, 25°, Side-Throw, Custom
Sensors	Daylighting, Photocell and Occupancy Sensors available upon request
Operating Temperature	-40° F to 110° F
Certifications	UL, cUL, RU, 1993, 1598, 1598(B), 1598(C) 8750, FCC, CE, RoHS
DesignLights Consortium	Yes
Warranty	10 Years for External Driver and Strips Full replacement Warranty, no Pro-rating warranty@redbirdled.com
Rated Lifetime	> 100,000 Hrs (TM21 L70 > 240,000 hrs)

Patents Pending

Illumination Levels

The following is guideline to the estimated light levels (Foot Candles) in a standard office/classroom environment with an 8' to 10' ceiling height.

Size of Space	Sq. ft.	Fixtures per space	Recommended wattage	Delivered Lumens	Est. Foot Candles	Watts Per Sq. Ft
10' x 10'	100	2	36	5400	54	0.36
10' x 12'	120	2	44	6600	55	0.37
10' x 15'	150	3	54	8100	54	0.36

Estimating foot candle levels: Take the total delivered lumens and divide by the square footage in the space. This will give you an approximate reading on what the foot candle levels will be after the retrofit.

Note: This is to be used as an estimating tool only and is not a guaranty. We always recommend performing field testing to ensure actual results.

List of Drivers

Standard (Non Dimmable)		Dimmable 0-10v	
Wattage	Max Lumens	Wattage	Max Lumens
9	1,350	22	3,300
12	1,800	36	5,400
14	2,100	44	6,600
18	2,700	72	10,800
22	3,300	88	13,200
28	4,200		
36	5,400		
44	6,600		
72	10,800		
88	13,200		
Suggested Configurations		Wattage options	
1-2' strip		9,12	
2-2' strips		12,14,18 & 22	
3-2' strips		18,22,28 & 36	
4-2' strips		22,28,36,& 44	
6-2' strips		22,28,36,& 44,72	
8-2' strips		36,44,72 & 88	

The above chart are just a few of the possible configurations. The Stripit kit® can be connected end to end for up to 16' and is perfect for Soffit and Cove lighting. Note: not to exceed 12 watts per 2' strip.

Ordering Information

Size	Form	Color Temp	DIM
S2-4 (2 foot-# pcs)	36W (power)	50K (5000 K CCT)	DIM

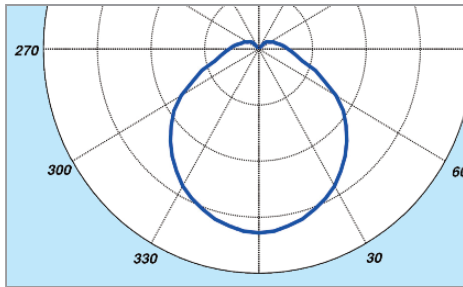
Ordering Example: **S2-4-36W-50K-DIM**
includes 4 pcs of the 2' strips @5000K CCT, a single 0-10 volt dimmable 36 watt driver with two pre-terminated leads to connect PS to Strips and two pcs 3" jumpers to connect two strips together.



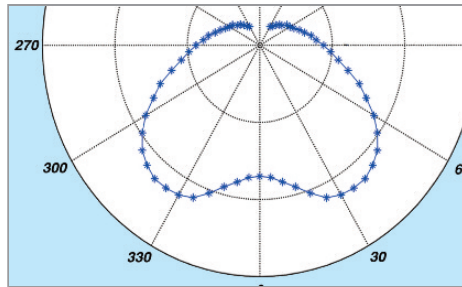
Three 2' strips in a 2x2 prismatic troffer utilizing an 18W driver without diffusers. This Stripit Kit[®] replaced two 32 watt U bend fluorescent tubes. Lights levels increased by 23% while reducing energy consumption by 72%.

Three 2' strips in a 2x2 parabolic troffer utilizing a 22W driver with diffusers. This Stripit Kit[®] replaced two F40 4 pin U-Tube lamps (40W ea). Lights levels increased by 19% with a 72% reduction in energy.

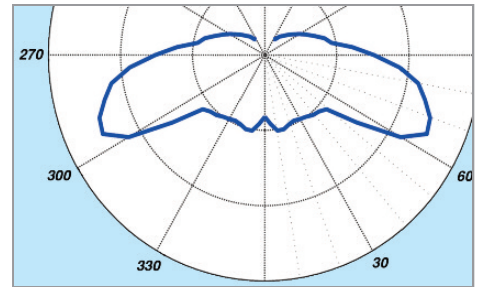
Integral Optics Beam Forming Options



Standard Lambertian pattern Diffuser for general purpose retrofit applications



Soft BatWing pattern optimized for De-lamping Retrofit applications



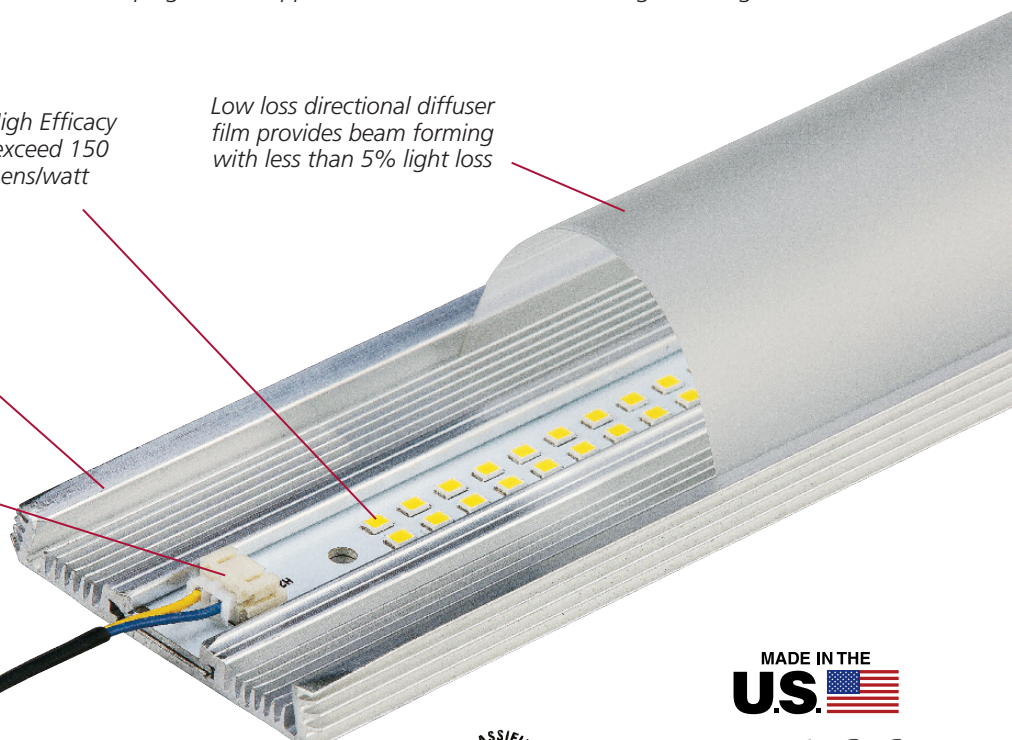
Sharp cutoff DLC compliant Parking Garage Batwing Pattern

Ultra High Efficacy LEDs exceed 150 Lumens/watt

Low loss directional diffuser film provides beam forming with less than 5% light loss

6063 T5 Aluminum Extrusion provides excellent thermal management for long life and efficient operation

Polarized Power Delivery Plug. Only connects in one position ensuring an error free installation.



RedBird LED

www.RedBirdLED.com phone (678)RED-BIRD (678-733-2473) contact info@redbirdled.com



PROJECT	NOTES
CATALOG NO.	

Rev. 11/18/13

DL-S LED SITE LUMINAIRE

DESCRIPTION

The Daylight **S** series is a brilliant LED site and roadway luminaire that combines cutting edge optics and thermal management, with architectural flare, and function. These high performance site and roadway luminaires can meet standards no others can, while providing unmatched energy savings of up to 90%. These lights are optimal for commercial, industrial, retail, schools, and municipal facilities where aesthetics, performance, and durability are a must. This design allows for pole and surface mount installations, and easily replaces 70-1,000W HPS or Metal Halide systems.



CHARACTERISTICS

Optical: 100-115* lm/Watt, 2700K–6000K, CRI 70 (patent pending optics)

Electrical: 120 –277V, 347V, or 480V AC @ 700 mA or 12-30V DC, 20 to 300w models available

Mechanical: Aluminum housing, 12" W x 13-30" L by 2 1/4" high, powder coated

Certifications/Ratings: CETL/CUL, ROHS, IP65 rated, DLC Listed

Reliability: "EncapsLED" heat sink for superior cooling and durability (patent pending)

Warranty: 5 years

Options: Dimming (D); Motion Sensor (M); Twist Lock (T)



PERFORMANCE

Model #	System Wattage	5,000k Lumens	Model #	System Wattage	5,000k Lumens
DL-S-20w	23	2,300	DL-S-160w	172	17,200
DL-S-30w	33	3,300	DL-S-170w	182	18,200
DL-S-40w	44	4,400	DL-S-180w	193	19,300
DL-S-50w	54	5,400	DL-S-190w	203	20,300
DL-S-60w	65	6,500	DL-S-200w	214	21,400
DL-S-70w	75	7,600	DL-S-210w	224	22,400
DL-S-80w	86	8,600	DL-S-220w	235	23,500
DL-S-90w	96	9,600	DL-S-230w	245	24,500
DL-S-100w	107	10,700	DL-S-240w	256	25,600
DL-S-110w	117	11,700	DL-S-250w	266	26,600
DL-S-120w	128	12,800	DL-S-260w	277	27,700
DL-S-130w	138	13,800	DL-S-270w	287	28,700
DL-S-140w	149	14,900	DL-S-280w	298	29,800
DL-S-150w	161	16,100	DL-S-300w	319	31,900

*Premium edition

For ordering or technical inquiries, contact:

Tom@LLSLight.com, 860.770.6023



District Note; Manufacturer to provide a 10 year warranty. Product is DLC approved. Product must weight less than 40 lbs and use existing pole structural attachments. A photometric study must be provided.

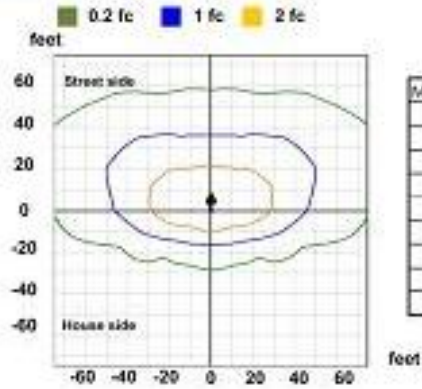


USA Made



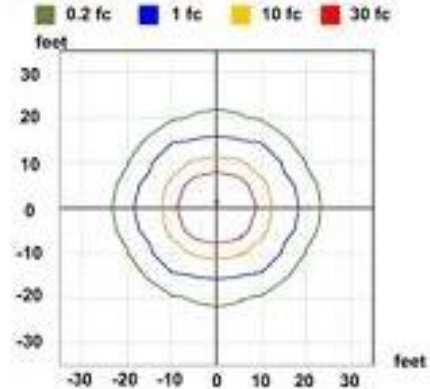
DISTRIBUTION DIAGRAMS (120W)

Type 3

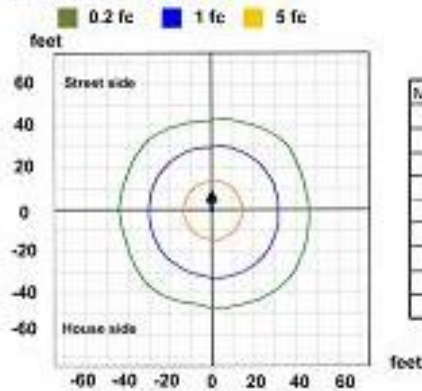


Mounting Height (fc)	Multiplier
10	6.250
15	2.778
20	1.563
25	1.000
30	0.694
35	0.510
40	0.391
45	0.309
50	0.250

Type 5N (50 degrees)

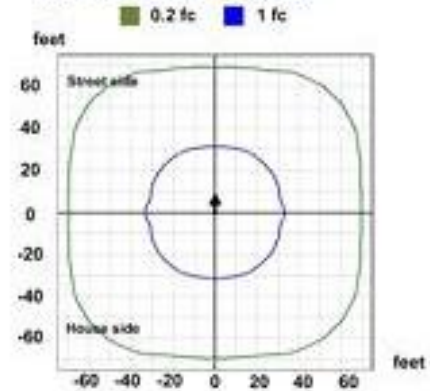


Type 5R, (100 degrees)



Mounting Height (fc)	Multiplier
30	6.250
15	2.778
20	1.563
25	1.000
30	0.694
35	0.510
40	0.391
45	0.309
50	0.250

Type 5W (130 degrees)



Example: Replacement of 250w HPS/MH
Type 3 distribution



250w HPS
(296 system watts)

VS



DL-S-50w
(54 system watts)

For ordering or technical inquiries, contact:
Tom@LLSLight.com, 860.770.6023



MOUNTING BRACKETS

D – Direct End
To square pole or wall



S-Slipfitter
To 2" tenon



C-Conduit
To 3/4" conduit/surface



ADAPTORS

AD1
Direct to round pole



AS1
Slipfit to wall/square pole



AS2
Slipfit to round pole



ORDERING INFO

Model#	Mount	Adaptor	Color Temp	Distribution Type	Finish	Options	Voltage
DL-S- wattage (20 – 300w)	<i>Direct (D)</i>	<i>AD1-Direct to Round</i>	<i>2,700- 6000k</i>	<i>3</i>	<i>White Bronze Black Silver</i>	N - None P - Photocell D – Dimming S -Smart	120-277V 347-480V
	<i>Slipfit (S)</i>	<i>AS1-Slipfit to Square</i>		<i>5n</i>			
	<i>Slipfit Top (ST)</i>	<i>AS2-Slipfit to round</i>		<i>5r</i>			
	<i>Conduit (C)</i>			<i>5w</i>			
<i>Example: DL-S-120w-S-5000-5r-BR-N-277v</i>							

For ordering or technical inquiries, contact:
Tom@LLSLight.com, 860.770.6023





PROJECT	NOTES
CATALOG NO.	

Rev. 11/18/13

DL-B LED HIGH/LOW BAY LUMINAIRE

DESCRIPTION

The Daylight B series is a high performance low profile LED High/Low Bay luminaire that combines cutting edge optics and thermal management, with function. This design allows for pendant, wall, or surface mount installations, and easily replaces 70-1,000W HPS or Metal Halide systems.



CHARACTERISTICS

Optical: 100-115* lm/Watt, 2700K–6000K, CRI 70 (patent pending optics)

Electrical: 120 –277V, 347V, or 480V @ 700 mA, 20 to 300w models available

Mechanical: Aluminum housing, 12" W x 13-30" L by 2 ¼" high, powder coated

Certifications/Ratings: CETL/CUL, ROHS, IP65 rated, DLC Listed

Reliability: "EncapsLED" heat sink for superior cooling and durability (patent pending)

Warranty: 5 years

Options: Dimming (D); Motion Sensor (M); Smart System (S)



PERFORMANCE

Model #	System Wattage	5,000k Lumens	Model #	System Wattage	5,000k Lumens
DL-B-60w	65	6,500	DL-B-180w	193	19,300
DL-B-70w	75	7,600	DL-B-190w	203	20,300
DL-B-80w	86	8,600	DL-B-200w	214	21,400
DL-B-90w	96	9,600	DL-B-210w	224	22,400
DL-B-100w	107	10,700	DL-B-220w	235	23,500
DL-B-110w	117	11,700	DL-B-230w	245	24,500
DL-B-120w	128	12,800	DL-B-240w	256	25,600
DL-B-130w	138	13,800	DL-B-250w	266	26,600
DL-B-140w	149	14,900	DL-B-260w	277	27,700
DL-B-150w	161	16,100	DL-B-270w	287	28,700
DL-B-160w	172	17,200	DL-B-280w	298	29,800
DL-B-170w	182	18,200	DL-B-300w	319	31,900



USA Made



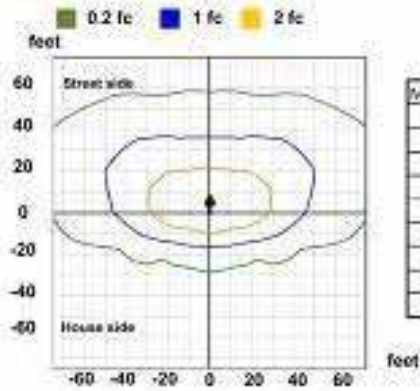
Upon Request, *Premium edition

For ordering or technical inquiries, contact:

District Note; Manufacturer to provide a 10 year warranty. Product is DLC approved. Product must weight less than 35 lbs and use existing gymnasium structural attachments. A photometric study must be provided.

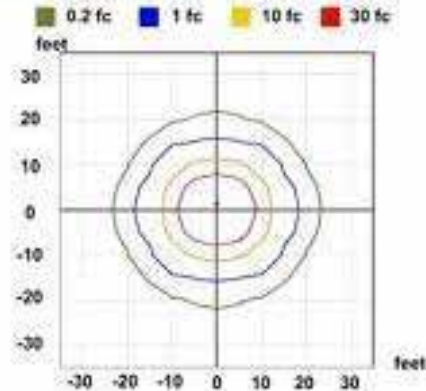
DISTRIBUTION DIAGRAMS (120W)

Type 3

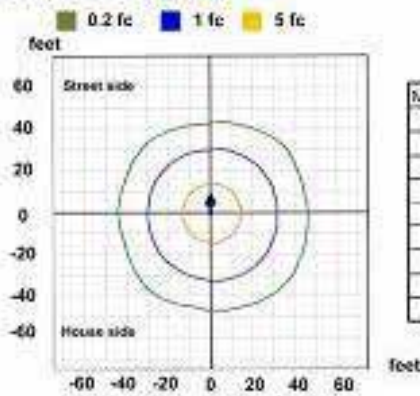


Mounting Height (ft)	Multiplier
10	6.250
15	2.778
20	1.563
25	1.000
30	0.694
35	0.520
40	0.391
45	0.309
50	0.250

Type 5N (50 degrees)

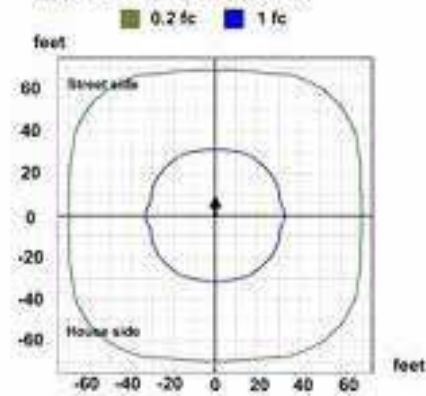


Type 5R (100 degrees)



Mounting Height (ft)	Multiplier
10	6.250
15	2.778
20	1.563
25	1.000
30	0.694
35	0.520
40	0.391
45	0.309
50	0.250

Type 5W (130 degrees)



Model#	Mount	Adaptor	Color Temp	Distribution Type*	Finish	Options	Voltage
DL-B-wattage (60 – 300w)	Wall (w) Surface (S) Conduit (C)	AS2-Slipfit to square	2,700- 6000k	3 5n 5r 5w	White Bronze Black Silver	N-None D – Dimming M-Motion S-Smart	120-277V 347-480V
Example: DL-B-120w-S-5000-5r-BR-N-277v							

For ordering or technical inquiries, contact: