

DESCRIPTION

2-inch LED recessed downlight with excellent light control and low aperture brightness. Offered with 15°, 25°, 40°, 55° or wall wash optic producing a smooth distribution. Lumen packages ranging from 500 to 2000 with color temperatures of 2400K, 2700K, 3000K, 3500K, 4000K and 5000K, in 80, 90 or 97CRI. Dim to warm technology – similar to halogen at full power, the 3000K LED warms smoothly as dimmed to 1850K creating a rich warm glow within the space. Tunable white technology - adjust the color temperature from warm white to cool white while independently controlling intensity.

SPECIFICATION FEATURES

Lower Reflector

Round or square painted die cast aluminum or round anodized aluminum lower reflector with a lensed upper optical chamber providing superior lumen output with minimal source brightness. Anodized reflectors are offered in all Portfolio Alzak® finishes. Plaster lathing ring accessory offered for flush reflector transition.

Trim Retention

Reflector is retained with three or four pressure springs holding the flange tight to the finished ceiling surface.

Optic

TIR optic in 15°, 25°, 40, 55° or wall wash provides smooth beam without color separation. Media holder fits onto upper reflector and holds up one lens media. For non-lens trims only.

Plaster Frame / Collar

New Construction

Galvanized steel plaster frame designed for ceiling thickness from 1/2 to 1-1/4-inch.

Retrofit

Installs from below.

Universal Mounting Bracket

Accepts 1/2" EMT, C channel and bar hangers.

Junction Box

(4) 1/2" trade size pry outs positioned to allow straight conduit runs. Listed for (4) #12AWG (two in, two out) 90°C conductors and feed thru branch wiring. Lever connectors for simple push in wiring.

Thermal

Forged aluminum heat sink conducts heat away from the LED COB for optimal performance and long life.

LED

Chip on board with a multitude of highly efficient white LED's, combined with TIR optic produces an even distribution with no pixilation. Lumen output shall not decrease by more than 10% over the minimum life of 55,000 hours (L90 > 55,000 hours). Auto resetting, thermally protected, LED's are turned off when safe operating temperatures are exceeded. Color variation within 2-step MacAdam ellipses. Flexible disconnect allows for replacement of LED engine from below ceiling. Available in 80, 90 or 97 CRI. D2W™ – dim-to-warm shifts CCT from 3000K to 1850K as fixture dims mimicking halogen sources. W2N - Tunable white CCT range 2700K to 6500K or 2000K to 5000K, 90 CRI.

Driver

Standard 120-277V 0-10V dimming driver provides flicker free dimming from 100% to 1%. Optional 120V leading edge, <1% 0-10V, Fifth Light, DMX or Lutron® Ecosystem. Driver can be serviced from above or through the aperture with standard D010 driver. Other drivers require above ceiling access. Distributed low voltage power system combines power, lighting, and controls with ease of installation.

Connected Lighting System Options

Two WaveLinX connected systems to choose from. Refer to WaveLinX system specifications and application guides for details.

WaveLinX Wireless System Tilemount Sensor Kit

- WaveLinX Wireless WTA tile mount sensor kit offers daylight dimming, PIR motion sensing, scene and zone configuration, automatic commissioning; and optional

Catalog

Project

Comments

Prepared by

Type

Date

RLTS - RealTime Location Services available.

WaveLinX Lite System Tilemount Sensor Kit

- WaveLinX Lite WTK tile mount sensor kit offers daylight dimming and PIR motion sensing, scene and grouping configuration.

WaveLinX Tilemount Kits Application

- The WTA and WTK tilemount kits include a control module mounted on the luminaire junction box via 1/2" knock-out, and a tilemount sensor on 54-inch whip; for ceiling installation by direct-mount spring clips or via mounting bracket in octagon ceiling boxes.
- The WTA and WTK tilemount kits may be ordered as factory installed on the luminaire, or ordered separately as a field installed accessory kit.

Code Compliance

Thermally protected and cULus listed for protected damp locations with open trims and cULus listed for protected wet locations with lensed trims. EMI/RFI emissions per FCC 47CFR Part 18 Class B consumer limits. Optional City of Chicago environmental air (CCEA) marking for plenum applications. 1500 lumen and above are Non-IC rated - Insulation must be kept 3" from top and sides of housing. IC-rated up to 1000 lumens (except wall wash). RoHS Compliant. Photometric testing completed in accordance with IES LM 79 and TM-30 standards. Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11.

Warranty

5-year warranty



LD2B EU2B 2LB

500, 1000, 1500, 2000 Lumens

LED

2-Inch

Spun or Die Cast Aluminum

Downlight or Wall Wash

New Construction or Retrofit

2x4 and 2x6



Can be used to comply with California Title 24 High Efficacy requirements. Certified to California Title 20 Appliance Efficiency Database.

ENERGY

ENERGY DATA	
Sound Rating: Class A standards	
(Values at non-dimming line voltage)	
Minimum Starting Temperature: -30°C (-22°F)	
EM/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)	
Input Voltage: UNV (120V - 277V)	
Power Factor: >0.90	
(at nominal input 120-277 VAC & 100% of Rated Output Power)	
Input Frequency: 50/60Hz	

500 Lumen D010		1000 Lumen D010	
Input Power: 7.38W	THD: <14.4%	Input Power: 11W	THD: <13.8%
120V Input Current: 0.06A	277V Input Current: 0.03A	120V Input Current: 0.086A	277V Input Current: 0.042A

1500 Lumen D010		2000 Lumen D010	
Input Power: 15.05W	THD: <13.0%	Input Power: 21.2W	THD: <8.6%
120V Input Current: 0.13A	277V Input Current: 0.06A	120V Input Current: 0.18A	277V Input Current: 0.081A

Lumens	120V		277V	
	Inrush (A)	Duration (ms)	Inrush (A)	Duration (ms)
500 Lumen D010	0.64	0.05	1.4	0.04
1000 Lumen D010	1.02	0.041	2.18	0.021
1500 Lumen D010	1.02	1.02	2.24	0.064
2000 Lumen D010	1.02	0.077	2.43	0.027

ORDERING INFORMATION

SAMPLE NUMBER: LD2B15D010

Housing	Lumens ¹	Voltage	Driver	Options
LD2B=2" New Construction Downlight LDRT2B=2" Remodel Downlight limit to 1500 lumen ¹³ LD2BCP=2" LED Downlight Nominal Aperture, Chicago Plenum ¹²	5=500 lumens ¹⁶ 10=1000 lumens 15=1500 lumens 20=2000 lumens	Blank=120-277V 3=347V 0-10V only 1000-2000 lumens	500 - 2000 Lumens D010=0-10V Dimming, 1% to 100%, 120V-277V DLV=Low voltage dimming driver (1-100%) for use with DLVP system⁶ 1000 - 2000 Lumens D010TR=0-10V or Line Voltage Dimming, 1% to 100%, 120V-277V DE010=0-10V Linear Dimming, 0% to 100%, 120V-277V⁶ D5LT=Fifth Light® (DALI) Logarithmic Dimming, 0% to 100%, 120V-277V⁶ DMX=DMX/RDM Logarithmic Dimming, 0% to 100%, 120V-277V^{6,9} DMXC5=DMX/RDM Logarithmic Dimming, 0% to 100%, 120V-277V, with RJ45 connection^{6,9} DL2=Lutron® Hi-Lume Forward Phase Dimming, 1% to 100%, 120V Only⁶ DLE=Lutron Ecosystem dimming 1% to 100%, 120V-277V⁶ Tunable White D5LTW2N2050 = Fifth Light (DALI) 0-100%, 120-277V, 2000K-5000K D5LTW2N2765 = Fifth Light (DALI) 0-100%, 120-277V, 2000K-5000K DE010W2N2050 =0-10V dimming, 0-100%, 120-277V, 2000K-5000K DE010W2N2765 0-10V dimming, 0-100%, 120-277V, 2700K-6500K	EMBOD=Bodine® Emergency Module with Remote Test Switch⁶ EMBOD7ST=Bodine® Emergency Module with Self Test Remote Test Switch⁶ EM7=7W Emergency Module with Remote Test Switch⁶ EM14=14W Emergency Module with Remote Test Switch⁶ EMV7=7W Low Voltage Emergency Module with Remote Test Switch⁶ EMV14=14W Low Voltage Emergency Module with Remote Test Switch⁶ WTA = Factory installed WaveLinX sensor Kit^{10 14} WTK = Factory installed WaveLinX Lite Sensor Kit^{10 15}

SAMPLE NUMBER: EU2B158035

Power Module	Lumen Levels / Distribution ¹ / Optic	CRI	Color		
EU2B=2" Universal LED Module	05SP15=500 lumen 15° IC Rated	80=80 CRI minimum	80 CRI	90 CRI	97 CRI
	05WW=500 lumen wall wash IC Rated ⁶	90=90 CRI minimum	27=2700K	24=2400K	27=2700K
	10SP15=1000 lumen 15° IC Rated	97=97 CRI minimum	30=3000K	27=2700K	30=3000K
	10WW=1000 lumen wall wash Non-IC Rated ⁸		35=3500K	30=3000K	
	0510NFL25=500 and 1000 lumen 25° IC Rated		40=4000K	35=3500K	
	0510FL40=500 and 1000 lumen 40° IC Rated		50=5000K	40=4000K	
	0510WFL55=500 and 1000 lumen 55° IC Rated			50=5000K	
	15NFL25=1500 lumen 25° Non IC Rated				
	15FL40=1500 lumen 40° Non IC Rated				
	15WFL55=1500 lumen 55° Non IC Rated				
15WW=1500 lumen wall wash Non IC Rated ⁸					
20NFL25=2000 lumen 25° Non IC Rated					
20FL40=2000 lumen 40° Non IC Rated					
20WFL55=2000 lumen 55° Non IC Rated					

SAMPLE NUMBER: 2LBD1LI

Trim	Reflector	Flange	Finish
2LB=2" LED	D=Round downlight spun reflector SW=Round lensed Wall Wash, Spun Aluminum, Splay black oculus SWW=Round lensed Wall Wash, Spun Aluminum, Splay white oculus DL=Round Downlight lensed spun reflector DC=Round Cast Downlight² DLC=Round Lensed cast downlight² PIN=Round Pinhole downlight black oculus³ PINW=Round Pinhole downlight white oculus³ DSQC=Square Cast Downlight² DSQLC=Square Lensed cast shallow downlight²	1=Self-flanged⁷ 2=White Painted Self-flanged¹¹ 3=Rimless³ Blank=Pinhole	LI=Specular Clear⁴ H=Semi-Specular Clear⁴ WMH=Warm Haze⁴ WH=Wheat⁴ GPH=Graphite Haze⁴ B=Specular Black⁴ MW=Matte White MB=Matte Black³ MMS=Matte Metallic Silver³

Accessories

RPR2=Round plaster lathing ring (order with rimless option)

Bar Hangers

HB26=Pair C-channel bar hanger, 26" long

RMB22=Pair wood joist bar hanger 22" long

Connected Lighting Systems¹⁰WTA = Field installed WaveLinX sensor Kit¹⁴WTK = Field installed WaveLinX Lite Sensor Kit¹⁵

L100 lenses - optical lenses

L110N=Diffuse Sandblasted Lens: Provides an even beam spread - especially useful in wall washing.
L111=Soft Focus Lens: Smooths irregular beam pattern while maintaining high controlled illumination levels and beam angles.

L113=Prismatic Spread Lens: Provides a symmetrical broadening of lamp beam. Suitable when a wide, uniform light distribution is required.

L115=Linear Spread Lens: Fans out the beam 55° (27-1/2° to each side) to produce a wide rectangular pattern.

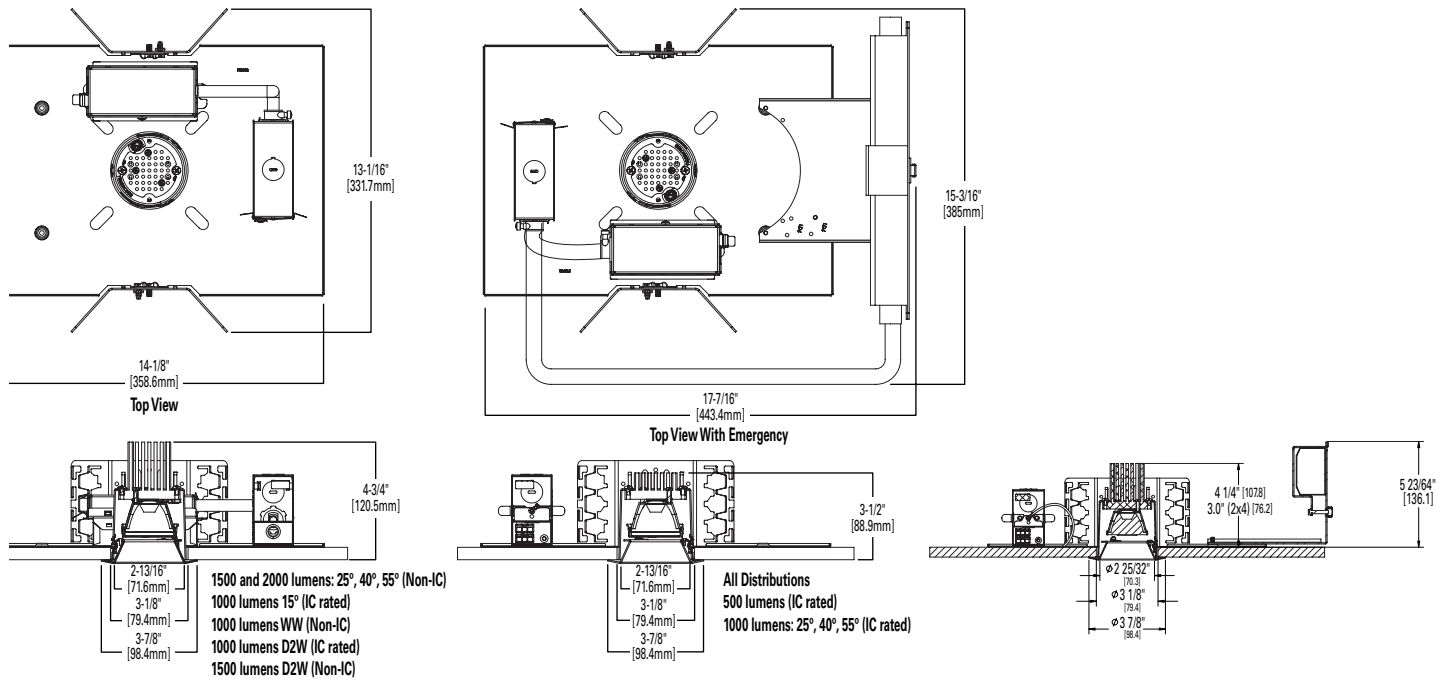
L100MB=Black finished metal hexagonal-cell louver - controls light spill while retaining lamp optics.

Notes:

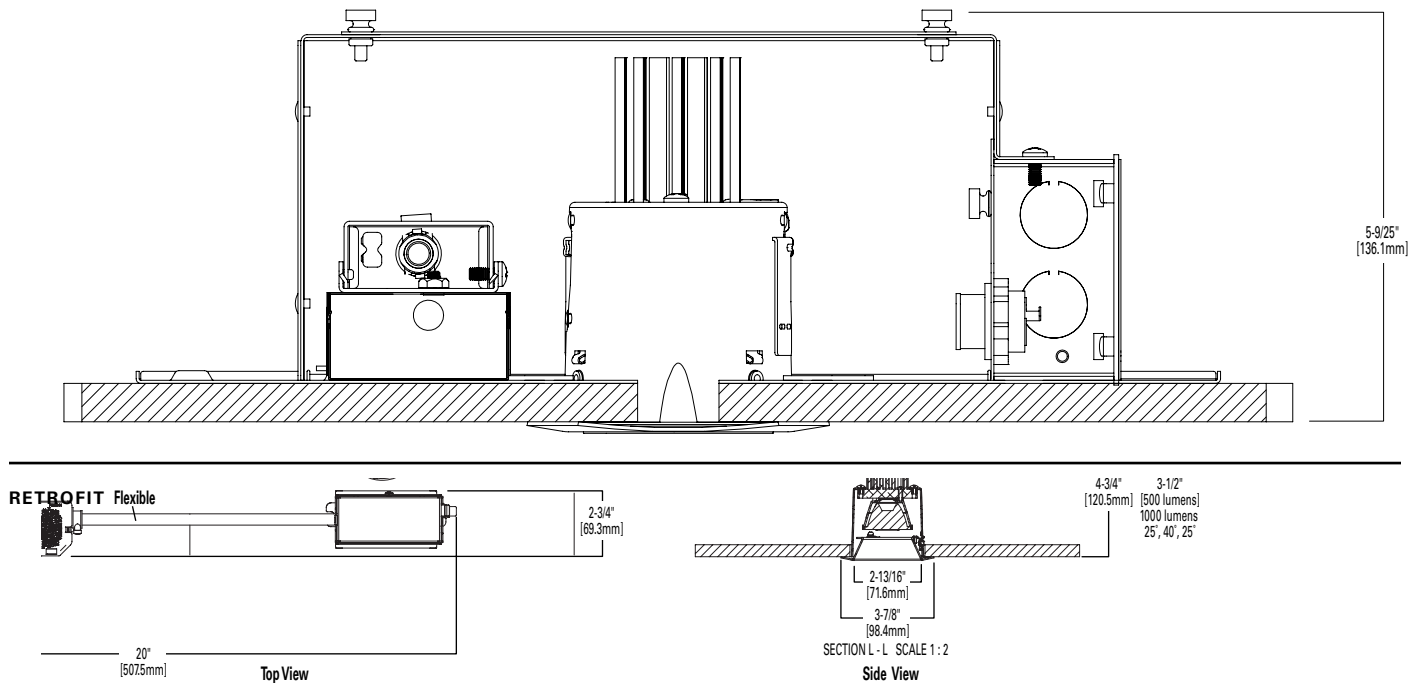
- Nominal Lumens will vary depending on selected distribution, color, driver and reflector finish.
- Only available with Matte White, Matte metallic silver and Matte Black Finishes.
- Available on DC, DLC and PIN.
- Not available on DC or PIN.
- DMX, D5LT, DE010, DLC, Lutron, connected and emergency module drivers require accessible ceiling.
- Flange is the same finish as reflector.
- Order with 2LBSW Wall Wash trim.
- DMX fixtures default to full on upon loss of DMX signal.
- Refer to system specifications for additional information, features, and benefits. Order either factory installed option or accessory. Use with 0-10V driver.
- Not available with Wall Wash.
- Limited to 1000 lumens.
- Available with D010 driver only.
- WTA = WaveLinX wireless sensor kit for daylight dimming, PIR motion sensing, and optional RLTS - Real Time Location Services, use with 0-10V only.
- WTK = WaveLinX Lite tile mount sensor kit for daylight dimming, PIR motion sensing, use with D010 only (Refer to WaveLinX Lite system specifications)
- Limited to D010 and D010A drivers.

DIMENSIONS

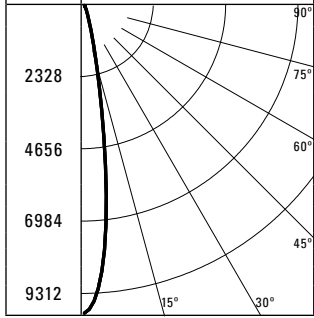
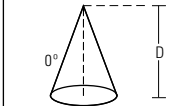
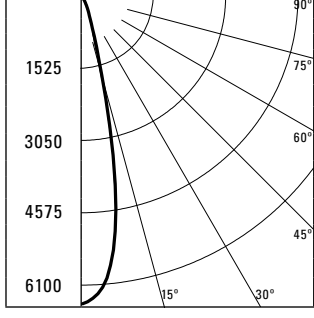
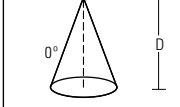
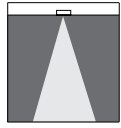
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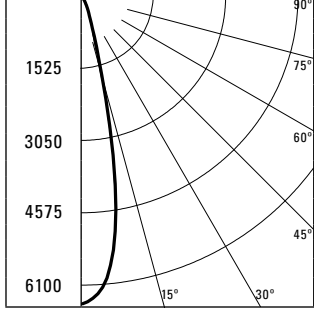
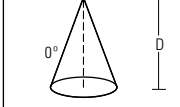
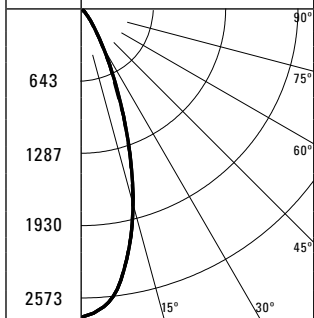
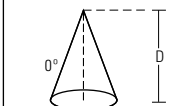



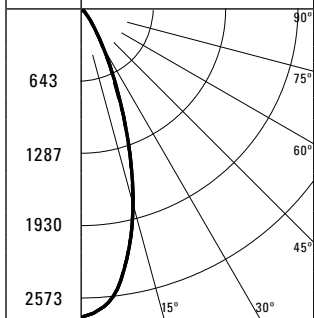
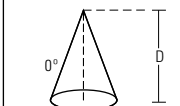
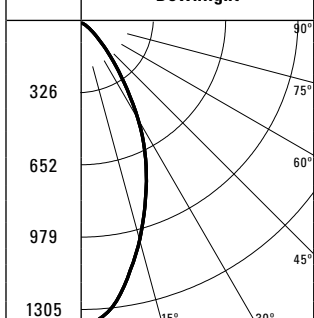
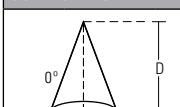
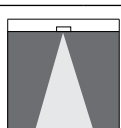
CHICAGO PLENUM

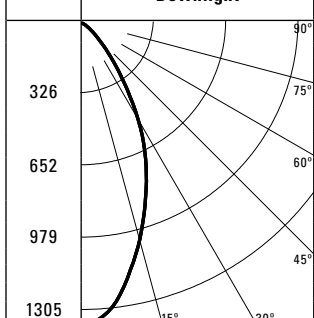
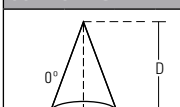
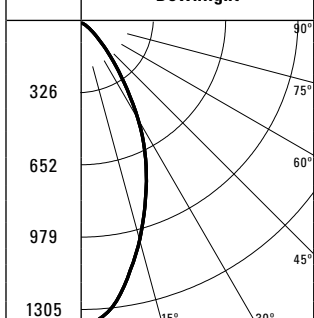
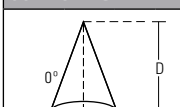
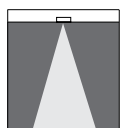


PHOTOMETRY

SPOT (15° BEAM)		CANDLEPOWER DISTRIBUTION		CONE OF LIGHT		CANDELA TABLE		ZONAL LUMEN SUMMARY			LUMINANCE					
Test Number	P264029					Degrees Vertical	Candela	Zone	Lumens	% Fixture	Average Candela Degrees	Average 0° Luminance				
Housing	LD2B10D010					0	9316	0-30	945	97	45	4884				
Module	EU2B1010SP158035					5	7438	0-40	965	99.1	55	1720				
Trim	2LBD*LI					15	976	0-60	973	99.9	65	1167				
Lumens	974					25	141	0-90	974	100	75	0				
Efficacy	94.6 Lm/W					65	1	90-180	0	0	85	0				
SC	0.28					75	0	0-180	974	100						
						85	0									
						90	0									

FLOOD (25° BEAM)		CANDLEPOWER DISTRIBUTION		CONE OF LIGHT		CANDELA TABLE		ZONAL LUMEN SUMMARY			LUMINANCE					
Test Number	P218711					Degrees Vertical	Candela	Zone	Lumens	% Fixture	Average Candela Degrees	Average 0° Luminance				
Housing	LD2B10D010					0	6104	0-30	987	96.2	45	3836				
Module	EU2B0510NFL258035					5	5611	0-40	1019	99.3	55	676				
Trim	2LBD*LI					15	1236	0-60	1026	100	65	0				
Lumens	1026					25	229	0-90	1026	100	75	0				
Efficacy	99.6 Lm/W					65	0	90-180	0	0	85	0				
SC	0.39					75	0	0-180	1026	100						
						85	0									
						90	0									

FLOOD (40° BEAM)		CANDLEPOWER DISTRIBUTION		CONE OF LIGHT		CANDELA TABLE		ZONAL LUMEN SUMMARY			LUMINANCE					
Test Number	P218754					Degrees Vertical	Candela	Zone	Lumens	% Fixture	Average Candela Degrees	Average 0° Luminance				
Housing	LD2B10D010					0	2577	0-30	938	90.2	45	10412				
Module	EU2B0510FL408035					5	2467	0-40	1020	98.0	55	2702				
Trim	2LBD*LI					15	1626	0-60	1040	99.9	65	0				
Lumens	1041					25	581	0-90	1041	100	75	0				
Efficacy	101 Lm/W					65	0	90-180	0	0	85	0				
SC	0.59					75	0	0-180	1041	100						
						85	0									
						90	0									

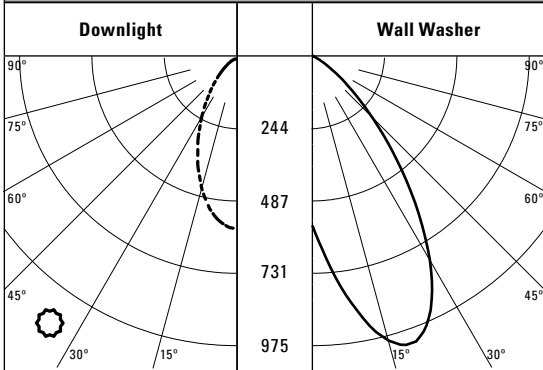
WIDE FLOOD (55° BEAM)		CANDLEPOWER DISTRIBUTION		CONE OF LIGHT		CANDELA TABLE		ZONAL LUMEN SUMMARY			LUMINANCE					
Test Number	P218801					Degrees Vertical	Candela	Zone	Lumens	% Fixture	Average Candela Degrees	Average 0° Luminance				
Housing	LD2B10D010					0	1309	0-30	674	68.5	45	57541				
Module	EU2B0510WFL558035					5	1250	0-40	873	88.7	55	18916				
Trim	2LBD*LI					15	959	0-60	984	99.9	65	0				
Lumens	985					25	644	0-90	985	100	75	0				
Efficacy	95.6 Lm/W					65	0	90-180	0	0	85	0				
SC	0.73					75	0	0-180	985	100						
						85	0									
						90	0									

PHOTOMETRY

WALL WASH

Test Number	P14828
Housing	LD2B10D010
Module	EU2B1010WW8035
Trim	2LBSW*XX
Lumens	742
Efficacy	72 Lm/W

CANDLEPOWER DISTRIBUTION



LEGEND: 0-deg: - - - - -
90-deg: —————

SINGLE UNIT FOOTCANDLES

3' FROM WALL (Distance From Fixture Along Wall)				
DD	●	1'	2'	3'
1'	0.5	0.5	0.3	0.2
2'	4.3	3.3	1.4	0.5
3'	10.1	8.1	4.2	1.6
4'	12.2	10.2	5.9	2.8
5'	10.9	9.4	6.1	3.3
6'	8.6	7.6	5.4	3.2
7'	6.4	5.8	4.4	2.9
8'	4.7	4.4	3.5	2.4
9'	3.4	3.3	2.7	2
10'	2.6	2.4	2.1	1.6

MULTIPLE UNIT FOOTCANDLES

2.5' FROM WALL (Spacing Between Fixtures)						3' FROM WALL (Spacing Between Fixtures)					
●	3'	●	●	4'	●	●	3'	●	●	4'	●
1.3	1.1	1.3	1.2	0.7	1.2	0.7	0.8	0.7	0.6	0.6	0.6
10.7	8.7	10.7	10.2	4.9	10.2	4.8	4.6	4.8	4.5	2.9	4.5
19.2	18	19.2	17.8	11.5	17.8	11.8	12.1	11.8	10.7	8.3	10.7
19.3	19.9	19.3	17.5	14	17.5	15.1	16.1	15.1	13.4	11.9	13.4
15.6	16.9	15.6	13.8	12.8	13.8	14.2	15.7	14.2	12.5	12.3	12.5
11.7	12.9	11.7	10.2	10.4	10.2	11.8	13.2	11.8	10.3	10.7	10.3
8.5	9.5	8.5	7.5	8	7.5	9.2	10.4	9.2	8.1	8.8	8.1
6.3	7	6.3	5.5	6	5.5	7.1	7.9	7.1	6.3	6.9	6.3
4.6	5.1	4.6	4.1	4.6	4.1	5.4	6	5.4	4.8	5.4	4.8
3.5	3.8	3.5	3.1	3.5	3.1	4.2	4.6	4.2	3.7	4.2	3.7