DESCRIPTION

4 inch LED recessed narrow, medium, or wide beam downlight designed for glare free even illumination. Featuring a two-stage diffused reflector system producing smooth distribution with excellent light control and low aperture brightness. Lumen packages range from 1000 to 6000 with color temperatures of 2400K, 2700K, 3000K, 3500K, 4000K, and 5000K. VividTune: 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.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Lower Shielding Reflector
Painted die cast aluminum or spun aluminum lower reflector with a lensed upper optical chamber providing superior lumen output with minimal source brightness. Spun reflectors are offered in all Portfolio Alzak® finishes. Available with non-conductive polymer trim. Reflector is retained with two torsion springs holding the flange tight to the finished ceiling surface. Plaster lathing ring accessory offered for flush reflector transition.

Plaster Frame / Collar
Die cast aluminum 1-1/2" deep collar accommodates ceiling materials up to 2". Universal mounting bracket accepts 1/2" EMT, C channel and bar hangers and adjusts 5" vertically from above and below the ceiling.

Junction Box
Listed for (8) #12 AWG (four in, four out) 90°C conductors and feed thru branch wiring. (4) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs. Lever connectors for simple push in wiring.

Thermal
Aluminum heat sink conducts heat away from the LED module for optimal performance and long life.

LED
Chip on board with a multitude of highly efficient white LED's, combined with a high reflectance upper reflector and convex transitional lens produce 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 3-step MacAdam ellipses. Quick disconnect allows for tool-less replacement of LED engine from below ceiling. Available in 80, 90 or 97 CRI.
D2W™ – dim-to-warm shifts CCT from 3000K to1850K 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.

Connected Lighting Systems
Factory installed WaveLinx tile mount sensor kit and Field installed WaveLinx accessory tile mount sensor kit.
The WTA WaveLinx tile mount sensor kit offers daylight dimming, PIR motion sensing control, and optional RLTS - Real Time Location Services available. (Refer to WaveLinx system specifications and application guides for details)
The WTA WaveLinx kit includes control module that mounts on the luminaire electrical junction box via 1/2" knock-out, and tilemount sensor with direct-mount spring clips or for octagon ceiling box with included mounting bracket. (Field mount kit ordered and installed separately).

Enlighted wireless tile mount sensor and relay accessory enables wireless control using a tile mount sensor accessory.

Distributed low voltage power system combines power, lighting, and controls with ease of installation.

Code Compliance
Thermally protected and cULus listed for wet locations with covered ceiling. IP66 rated when used with IP66 gasket kit accessory. Optional City of Chicago environmental air (CCEA) marking for plenum applications. EMI/RFI emissions per FCC 47CFR Part 18 Class B consumer limits. 2000 lumen and abover are Non-IC rated - Insulation must be kept 3" from top and sides of housing. IC rated up to 1500 lumens. 5000 lumen and above are marked spacing and must follow spacing requirements. RoHS Compliant. Photometric testing completed in accordance with IES LM 79. Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11.

Warranty
5-year warranty

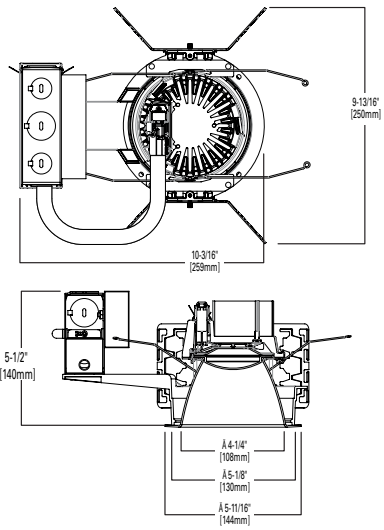


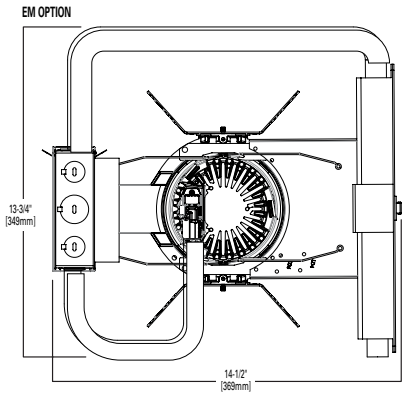
LD4B EU4B 4LBW 4LBM 4LBN

1000-6000 Lumen LED

Narrow, Medium, or Wide Beam

New Construction





VividTune color tuning solutions

D2W™

ENERGY STAR

Can be used to comply with T24 California Non-Residential Lighting Controls requirements

RoHS Compliant

Refer to ENERGY STAR® Qualified Products List. Can be used to comply with California Title 24 High Efficacy requirements.

SAMPLE NUMBER: LD4B15D010IEMBOD

Housing	Lumens[1]	Voltage	Driver	Options[3]
LD4B=LED Downlight 4" Nominal Aperture **LD4BCP**=LED Downlight 4" Nominal Aperture, Chicago Plenum	**10**=1000 lumens **15**=1500 lumens **20**=2000 lumens **30**=3000 lumens **40**=4000 lumens **50**=5000 lumens[15] **60**=6000 lumens[15]	**Blank**=120-277V **3**=347V (step down transformer)	**1000-4000** **D010**=0-10V Dimming, 1% to 100%, 120V-277V **D010TR**=0-10V or Line Voltage Dimming, 5% to 100%, 120V-277V **DE010**=0-10V Linear Dimming, 0% to 100%, 120V-277V **D5LT**=Fifth Light® (DALI) Logarithmic Dimming, 0% to 100%, 120V-277V **DMX**=DMX/RDM Logarithmic Dimming, 0% to 100%, 120V-277V[13] **DL2**=Lutron® Hi-Lume Forward Phase Dimming, 1% to 100%, 120V Only **DLE**=Lutron Ecosystem dimming 1% to 100%, 120V-277V **DLV**=Low voltage dimming driver (1-100%) for use with DLVP system (3000 lumen and below)[3,14] **5000-6000** **D010TE**=0-10V 1% or trailing edge 10%, 120-277V (120V only with trailing edge dimming) **Tunable white 1000-2000 Lumens[16]** **1DE010W2N2050**=0-10V dimming, 0% to 100%, 120V, 2000K - 5000K **1DE010W2N2765**=0-10V dimming, 0% to 100%, 120V, 2700K - 6500K **1D5LTW2N2050**=Fifth Light (DALI), 0% to 100%, 120, 2000K - 5000K **1D5LTW2N2765**=Fifth Light (DALI), 0% to 100%, 120V, 2700K - 6500K **2DE010W2N2050**=0-10V dimming, 0% to 100%, 277V, 2000K - 5000K **2DE010W2N2765**=0-10V dimming, 0% to 100%, 277V, 2700K - 6500K **2D5LTW2N2050**=Fifth Light (DALI), 0% to 100%, 277V, 2000K - 5000K **2D5LTW2N2765**=Fifth Light (DALI), 0% to 100%, 277V, 2700K - 6500K	**EMBOD**=Bodine® Emergency Module with Remote Test Switch **EMBOD7ST** =Bodine® Emergency Module with Self Test Remote Test Switch **EM7**=7W Emergency Module with Remote Test Switch **EM14**=14W Emergency Module with Remote Test Switch **IEMBOD**=Bodine® Emergency Module with Integral Test Switch **IEM7**=7W Emergency Module with Integral Test Switch **IEM14**=14W Emergency Module with Integral Test Switch **EMV7**=7W Low Voltage Emergency Module with Remote Test Switch[4] **EMV14**=14W Low Voltage Emergency Module with Remote Test Switch[4] **IEMV7**=7W Low Voltage Emergency Module with Integral Test Switch[4] **IEMV14**=14W Low Voltage Emergency Module with Integral Test Switch[4] **WTA**=Factory installed WaveLinx Sensor Kit (WTA = WaveLinx wireless sensor kit for daylight dimming, PIR motion sensing, and optional RLTS - Real Time Location Services, use with D010 only)[14] **LWTPD1**=Factory installed Enlighted wireless sensor kit

SAMPLE NUMBER: EU4B10208035

Power Module	Lumen Levels[1]	CRI	Color		
EU4B=4" Universal LED Module	**1020**=1000, 1500, 2000 lumens **3040**=3000-4000 lumens **5000**=5000 lumens[15] **6000**=6000 lumens[15] **1015IC**=1000, 1500 lumen IC rated	**80**=80 CRI Minimum **90**=90 CRI Minimum **97**=97 CRI Minimum	**80 CRI** **27**=2700K **30**=3000K **35**=3500K **40**=4000K **50**=5000K	**90 CRI** **24**=2400K **27**=2700K **30**=3000K **35**=3500K **40**=4000K **50**=5000K	**97 CRI** **27**=2700K **30**=3000K
	Dim 2 Warm **109030D2W**=1000 lumen, 90 CRI, Dim 2 Warm, IC rated **159030D2W**=1500 lumen, 90 CRI, Dim 2 Warm, IC rated **209030D2W**=2000 lumen, 90 CRI, Dim 2 Warm **309030D2W**=3000 lumen, 90 CRI, Dim 2 Warm		**Tunable white[16]** **1020W2N902050** =1000, 1500, 2000 lumens, 90 CRI, tunable white 2000K-5000K **1020W2N902765** =1000, 1500, 2000 lumens, 90 CRI, tunable white 2700K-6500K		

SAMPLE NUMBER: 4LBM1LIE

Trim	Distribution[5]	Flange	Finish	Options
4LB=4" LED	**N**=Narrow (30° Beam), Spun Aluminum **M**=Medium (50° Beam), Spun Aluminum **W**=Wide (75° Beam), Spun Aluminum **S**=Shallow (75° Beam), Spun Aluminum **PS**=Non-conductive Shallow (75° Beam), Injection Molded white[11] **CS**=Cast Shallow (75° Beam), Die Cast Aluminum **BA**=Baffle, Spun Aluminum[7]	**0**=White Polymer Trim Ring **1**=Self-flanged[12] **2**=White Painted Self-flanged	**LI**=Specular Clear[10] **H**=Semi-Specular Clear[10] **WMH**=Warm Haze[10] **WH**=Wheat[10] **GPH**=Graphite Haze[10] **B**=Specular Black[10] **MW**=Matte White **MB**=Matte Black[9] **MMS**=Matte Metallic Silver[8]	**E**=Integral Emergency Test Switch Hole[6]

Accessories

HSA4=Slope Adapter for 4" Aperture Housings, Specify Slope in 5° increments
TRM4=Metal Trim Ring, Specify Color[2]
TRR4=Rimless Trim Ring[2]
LGSKT4IP66=IP66 Gasket Kit
PRR4=Rimless Plaster Ring for Flush Mount[2]

Bar Hangers
HB26=C-channel Bar Hanger, 26" Long, Pair
HB50=C-channel Bar Hanger, 50" Long, Pair
RMB22=Wood Joist Bar Hanger, 22" Long, Pair

Transformers
H347=347 to 120V Step Down Transformer, 75VA
H347200=347 to 120V Step Down Transformer, 200VA

Connected Lighting Systems
PORLWTPD1=Enlighted wireless sensor kit (0-10V only) field installed[14]
WTA=WaveLinx wireless sensor kit for daylight dimming, PIR motion sensing, and optional RLTS - Real Time Location Services, use with D010 only (Refer to WaveLinx system specifications and guides for details) Field installed.[14]

Notes:
1 Nominal Lumens will vary depending on selected color, driver and reflector finish.
2 Order spun trim with polymer trim ring or die cast with rimless flange (Consult specification sheet for color ordering information and options).
3 Not available with Chicago Plenum.
4 ULus approved only.
5 Beam angles are nominal with LI finish trims.
6 Only available with Narrow and Medium Spun Aluminum trims. Required for use with all IEMBOD, IEM7, and IEM14 housings.
7 Only available with Matte White and Matte Black Finishes.
8 Only available on CS distribution.
9 Available only on BA and CS distributions.
10 Not available on PS, CS or BA distributions.
11 Matte white and self flanged only, 2000 lumen max.
12 Flange is same finish as the reflector.
13 DMX fixtures default to full on upon loss of DMX signal.
14 Refer to system specifications for additional information, features, and benefits. Order either factory installed option or accessory. Use with 0-10V driver.
15 Product is marked spacing and must be installed with the following minimum spacing
- Center to center of adjacent luminaires: 36"
- Center of luminaire to side of building member: 18"
- Minimum overhead: ½"
16 Non-IC

ENERGY

ENERGY DATA
Sound Rating: Class A standards
(Values at non-dimming line voltage)
Minimum Starting Temperature: -30°C (-22°F)
EMI/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

1000 Lumen D010		1500 Lumen D010	
Input Power: 11W	THD: <14%	Input Power: 15.5W	THD: <13%
120V Input Current: 0.09A	277V Input Current: 0.04A	120V Input Current: 0.13A	277V Input Current: 0.06A

2000 Lumen D010		3000 Lumen D010	
Input Power: 21.2W	THD: <9%	Input Power: 27.6W	THD: <10%
120V Input Current: 0.18A	277V Input Current: 0.08A	120V Input Current: 0.23A	277V Input Current: 0.10A

4000 Lumen D010		5000 Lumen D010TE	
Input Power: 41.6W	THD: <13%	Input Power: 57.9W	THD: <14%
120V Input Current: 0.35A	277V Input Current: 0.15A	120V Input Current: 0.49A	277V Input Current: 0.22A

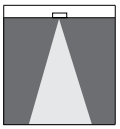
6000 Lumen D010TE	
Input Power: 59.7W	THD: <14%
120V Input Current: 0.50A	277V Input Current: 0.22A

	120V		277V	
Lumens	Inrush (A)	Duration (ms)	Inrush (A)	Duration (ms)
1000 Lumen D010	1.02	0.041	2.18	0.021
1500 Lumen D010	1.02	0.042	2.24	0.064
2000 Lumen D010	1.02	0.077	2.43	0.027
3000 Lumen D010	1.15	0.067	3.26	0.027
4000 Lumen D010	1.2	0.088	3.9	0.03
5000 Lumen D010TE	5.1	0.132	10.2	0.153
6000 Lumen D010TE	5.4	0.123	10.8	0.154

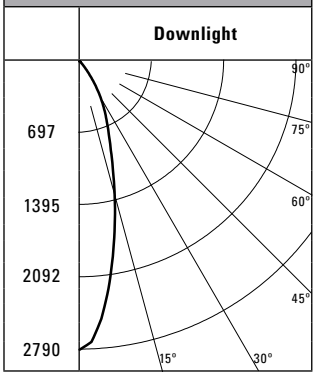
PHOTOMETRY

NARROW (30° BEAM)

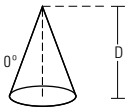
Test Number	P201208
Housing	LD4B15D010
Module	EU4B10208035
Trim	4LBN1LI
Lumens	1128
Efficacy	78.9 Lm/W
SC	0.5



CANDLEPOWER DISTRIBUTION



CONE OF LIGHT



D	FC	L	W
5.5'	92	2.6	2.6
7'	57	3.4	3.4
8'	44	3.8	3.8
9'	34	4.4	4.4
10'	28	4.8	4.8
12'	19	5.8	5.8

CANDELA TABLE

Degrees Vertical	Candela
0	2790
5	2550
15	1421
25	667
35	266
45	32
55	3
65	1
75	0
85	0
90	0

ZONAL LUMEN SUMMARY

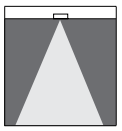
Zone	Lumens	% Fixture
0-30	926	82.1
0-40	1094	97
0-60	1127	99.9
0-90	1128	100
90-180	0	0
0-180	1128	100

LUMINANCE

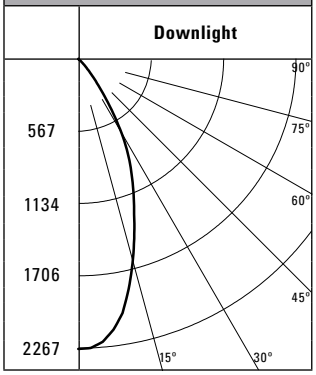
Average Candela Degrees	Average 0° Luminance
45	489
55	55
65	26
75	0
85	0

MEDIUM (50° BEAM)

Test Number	P201206
Housing	LD4B15D010
Module	EU4B10208035
Trim	4LBM1LI
Lumens	1481
Efficacy	103.6 Lm/W
SC	0.71



CANDLEPOWER DISTRIBUTION



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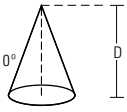


D	FC	L	W
5.5'	75	3.8	3.8
7'	46	5	5
8'	35	5.6	5.6
9'	28	6.4	6.4
10'	23	7	7
12'	16	8.4	8.4

CANDELA TABLE

Degrees Vertical	Candela
0	2267
5	2227
15	1690
25	1027
35	409
45	70
55	8
65	3
75	1
85	0
90	0

ZONAL LUMEN SUMMARY

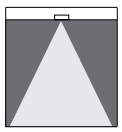
Zone	Lumens	% Fixture
0-30	1144	77.3
0-40	1406	95
0-60	1477	99.7
0-90	1481	100
90-180	0	0
0-180	1481	100

LUMINANCE

Average Candela Degrees	Average 0° Luminance
45	1072
55	151
65	77
75	42
85	0

WIDE (75° BEAM)

Test Number	P201204
Housing	LD4B15D010
Module	EU4B10208035
Trim	4LBW1LI
Lumens	1518
Efficacy	106.2 Lm/W
SC	1.3



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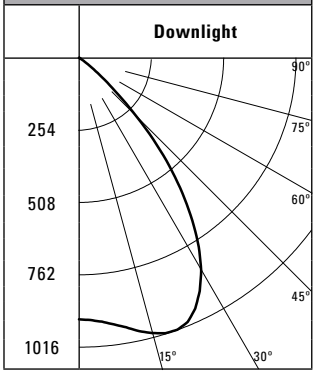

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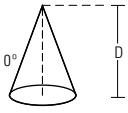


D	FC	L	W
5.5'	30	7	7
7'	19	9	9
8'	14	10.4	10.4
9'	11	11.6	11.6
10'	9	13	13
12'	6	15.6	15.6

CANDELA TABLE

Degrees Vertical	Candela
0	914
5	925
15	998
25	977
35	707
45	286
55	30
65	4
75	1
85	0
90	0

ZONAL LUMEN SUMMARY

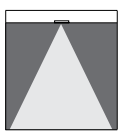
Zone	Lumens	% Fixture
0-30	816	53.8
0-40	1252	82.5
0-60	1513	99.7
0-90	1518	100
90-180	0	0
0-180	1518	100

LUMINANCE

Average Candela Degrees	Average 0° Luminance
45	4372
55	574
65	100
75	42
85	0

SHALLOW (75° BEAM)

Test Number	P201210
Housing	LD4B15D010
Module	EU4B10208035
Trim	4LBCS1MMS
Lumens	1497
Efficacy	104.7 Lm/W
SC	1.16



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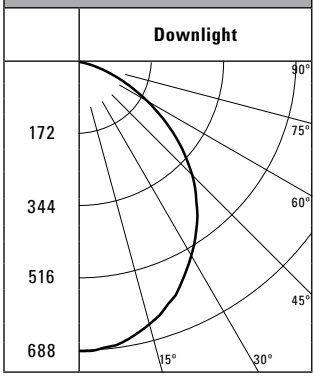

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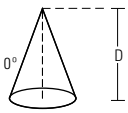


D	FC	L	W
5.5'	23	6.2	6.2
7'	14	8	8
8'	11	9.2	9.2
9'	9	10.4	10.4
10'	7	11.6	11.6
12'	5	13.8	13.8

CANDELA TABLE

Degrees Vertical	Candela
0	688
5	682
15	645
25	577
35	486
45	380
55	253
65	126
75	32
85	1
90	0

ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0-30	512	34.2
0-40	816	54.5
0-60	1333	89
0-90	1497	100
90-180	0	0
0-180	1497	100

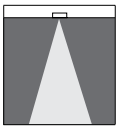
LUMINANCE

Average Candela Degrees	Average 0° Luminance
45	5827
55	4771
65	3226
75	1339
85	124

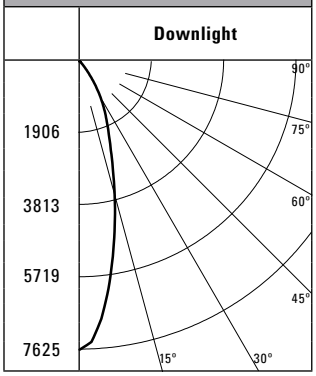
PHOTOMETRY

NARROW (25° BEAM)

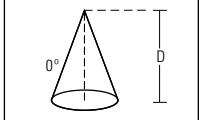
Test Number	PP201209
Housing	LD4B40D010
Module	EU4B30408035
Trim	4LBN1LI
Lumens	3083
Efficacy	73.8 Lm/W
SC	0.5



CANDLEPOWER DISTRIBUTION



CONE OF LIGHT



D	FC	L	W
5.5'	252	2.6	2.6
7'	156	3.4	3.4
8'	119	3.8	3.8
9'	94	4.4	4.4
10'	76	4.8	4.8
12'	53	5.8	5.8

CANDELA TABLE

Degrees Vertical	Candela
0	7625
5	6969
15	3883
25	1822
35	727
45	87
55	8
65	3
75	0
85	0
90	0

ZONAL LUMEN SUMMARY

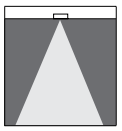
Zone	Lumens	% Fixture
0-30	2531	82.1
0-40	2989	97
0-60	3080	99.9
0-90	3083	100
90-180	0	0
0-180	3083	100

LUMINANCE

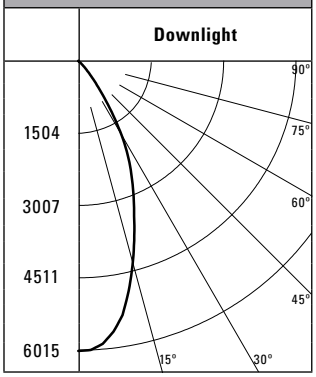
Average Candela Degrees	Average 0° Luminance
45	1337
55	149
65	67
75	0
85	0

MEDIUM (50° BEAM)

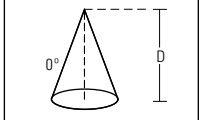
Test Number	P201207
Housing	LD4B40D010
Module	EU4B30408035
Trim	4LBM1LI
Lumens	3929
Efficacy	94 Lm/W
SC	0.71



CANDLEPOWER DISTRIBUTION



CONE OF LIGHT



D	FC	L	W
5.5'	199	3.8	3.8
7'	123	5	5
8'	94	5.6	5.6
9'	74	6.4	6.4
10'	60	7	7
12'	42	8.4	8.4

CANDELA TABLE

Degrees Vertical	Candela
0	6015
5	5909
15	4484
25	2725
35	1085
45	186
55	21
65	8
75	3
85	0
90	0

ZONAL LUMEN SUMMARY

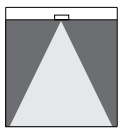
Zone	Lumens	% Fixture
0-30	3036	77.3
0-40	3731	95
0-60	3918	99.7
0-90	3929	100
90-180	0	0
0-180	3929	100

LUMINANCE

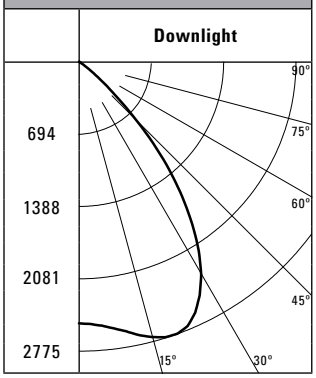
Average Candela Degrees	Average 0° Luminance
45	2844
55	400
65	205
75	113
85	0

WIDE (75° BEAM)

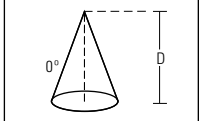
Test Number	P201205
Housing	LD4B40D010
Module	EU4B30408035
Trim	4LBW1LI
Lumens	4148
Efficacy	99.2 Lm/W
SC	1.3



CANDLEPOWER DISTRIBUTION



CONE OF LIGHT



D	FC	L	W
5.5'	83	7	7
7'	51	9	9
8'	39	10.4	10.4
9'	31	11.6	11.6
10'	25	13	13
12'	17	15.6	15.6

CANDELA TABLE

Degrees Vertical	Candela
0	2499
5	2528
15	2727
25	2670
35	1933
45	780
55	83
65	11
75	3
85	0
90	0

ZONAL LUMEN SUMMARY

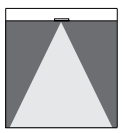
Zone	Lumens	% Fixture
0-30	2230	53.8
0-40	3421	82.5
0-60	4134	99.7
0-90	4148	100
90-180	0	0
0-180	4148	100

LUMINANCE

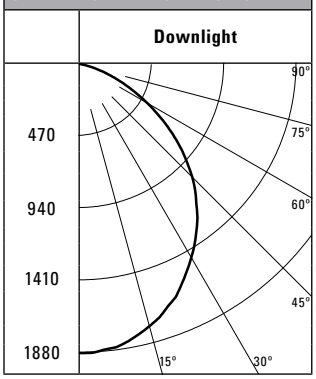
Average Candela Degrees	Average 0° Luminance
45	11948
55	1569
65	274
75	113
85	0

SHALLOW (75° BEAM)

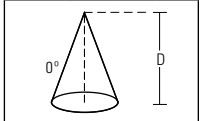
Test Number	P201211
Housing	LD4B40D010
Module	EU4B30508035
Trim	4LBCS1MMS
Lumens	4093
Efficacy	97.9 Lm/W
SC	1.16



CANDLEPOWER DISTRIBUTION



CONE OF LIGHT



D	FC	L	W
5.5'	62	6.2	6.2
7'	38	8	8
8'	29	9.2	9.2
9'	23	10.4	10.4
10'	19	11.6	11.6
12'	13	13.8	13.8

CANDELA TABLE

Degrees Vertical	Candela
0	1880
5	1864
15	1763
25	1578
35	1329
45	1040
55	691
65	344
75	87
85	3
90	0

ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0-30	1400	34.2
0-40	2230	54.5
0-60	3645	89
0-90	4093	100
90-180	0	0
0-180	4093	100

LUMINANCE

Average Candela Degrees	Average 0° Luminance
45	15933
55	13046
65	8819
75	3657
85	323

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Specifications and dimensions subject to change without notice.