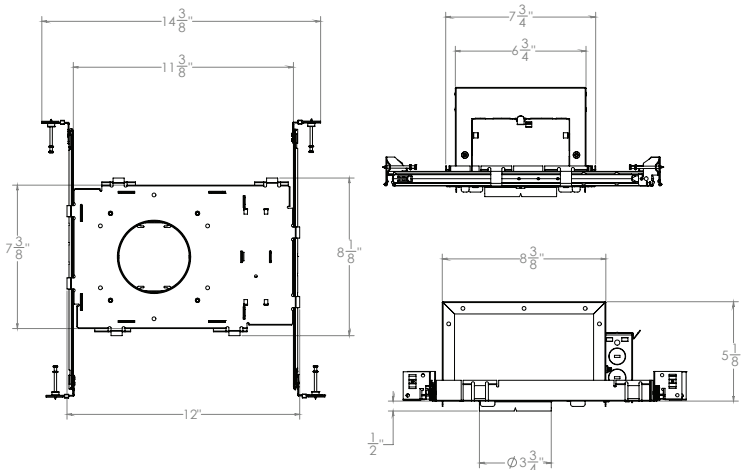




TRIM OPTIONS



NOMINAL LUMENS	DELIVERED LUMENS	WATTAGE
2000	1769	20.4 W
1500	1637	18.2 W
1200	1347	13.7 W
900	1023	9.9 W

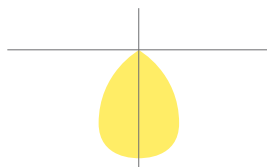
Delivered lumen varies base on trim and distribution options.
Based on 4000K, 90+ CRI. Actual wattage may vary +/- 5%

FEATURES

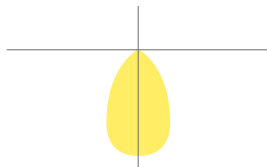
Achieve all of your lighting application objectives with only one universal high-performance architectural housing. The Fusion A3-LED is a 3" LED Universal Downlight that can accept, Round and Square Trims for both trim and trim-less applications (using an A3S-TL for round or A3R-TL for square trim-less mud ring). The universal functionality and fully adjustable of the A4 Downlight can be utilized as a Recessed directional, accent, wet location shower, and downlight. The Fusion A3 series is ideal for retail, hospitality, commercial, and high-end residential applications. Designed for new construction installations and suitable for use in IC and Non IC applications. Plus, the Eco-friendly Elite LED system features 70% lumen maintenance at 100,000 hours life, with Energy Star and California Title-24.

LUMENS	900, 1200, 1500, 2000 (Custom lumen packages available)
CCT & DYNAMIC PLATFORMS	27K, 30K, 35K, 40K, 50K Dims to Warm
CRI	90+ Standard
COLOR QUALITY	2 Step MacAdam Ellipse
DISTRIBUTIONS	ND-Narrow MD-Medium WD-Wide
TRIM OPTIONS	Trim, Trimless, Wall Wash, Baffle and Adjustable
REFLECTOR COLORS	WH (White)
FLANGE COLORS	WH (White)
DIMMING	0-10V Flicker Free 1% Dimming Standard (DIM10), LUTH, LUTFTB, LUT2W, ELDO10.1, ELDODMX.1, ELDODALI.1, DIMTR
EMERGENCY	10W - Bodine BSL310 20W - Bodine BSL20
LIFETIME	100,000 Hours
PHOTOMETRIC TESTS	In Accordance with IES LM79-08, LM80 and TM-30, TM-21

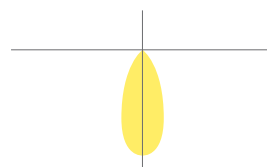
WD: WIDE
Candlepower Distribution Curve



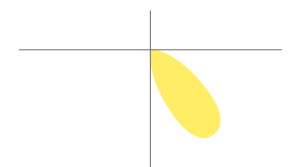
MD: MEDIUM
Candlepower Distribution Curve



ND: NARROW
Candlepower Distribution Curve



WALL WASH
Candlepower Distribution Curve



Reference IES files for additional distribution curve information.



HOUSING:

Thermally protected, specification grade adjustable recessed housing. For new construction insulated ceilings where housing will be in direct contact with insulation. Die-formed all aluminum construction matte black painted for maximum heat dissipation, rust protection and glare free illumination.

LED LIGHT ENGINE:

High color rendering of 90+ CRI and guaranteed color consistency with a binning of a 2 step MacAdam Ellipse Scale. Available in: 2700K, 3000K, 3500K, 4000K and 5000K CCT. Also Available in Dims to Warm (from 1800K to 3000K)

OPTICS:

A4 offers a narrow (ND) medium(MD) and Wide (WD) distribution options to achieve any prescribed design.

COLLAR BRACKET:

Adjusts vertically and can accommodate any ceiling from 1/2" up to 1" thickness. Please consult factory for custom or thicker ceiling applications. Integral laser beam slots allow the use of guide strings or leveling laser guns to ensure that all luminaires are installed in an level and straight plane.

ELECTRICAL/ TRANSFORMER:

Junction box and Driver can be accessed from below the ceiling and above the ceiling. Junction Box is Listed for through branch circuit wiring, 18 AWG 90° C supply Conductors, and has four 1/2" KOs, one 3/4" KO and four Romex knockouts with true pry-out slots and strain clamps.

MOUNTING:

Preinstalled bar hangers allow housing to be positioned and locked at any point within a 24" joist span. They can be positioned on either the long or short axis of the housing and can be shortened for 12" joists. They contain a double-headed real nail for secure attachment into the joist. Bar hanger nails are installed on a 20° downward angle for better contact, and the 90° pivoting mounting plate makes installation fast and accurate. Bar hangers can fit onto T-Bar spline with additional slots and holes for special mounting methods if necessary. Butterfly brackets are also provided and are constructed from 18-gauge steel and can be adjusted vertically. Butterfly brackets may be installed with 3/4" or 1-1/2" lathing channel, 1/2" EMT, or optional C-Channel mounting bars are available.

LED DYNAMIC PLATFORM OPTIONS



Dims to Warm with Smart Dimming Technology. At 100% full brightness the luminaire is at 3000K. When dimmed to 1%, the light transitions to 1800K, creating a warm ambiance within the space. (Click here for more details)

DIMMING & DRIVER INFORMATION

DIM10 - Flicker Free 1% Dimming Standard (DIM10) 0-10V dimming on either MVOLT 120, 277 or 347V.

LUT2W - Lutron LTEA2W Hi-Lume 1%. 2-wire LED driver (120V forward phase only).

LUTH - Lutron LDE1 Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology.

ELD010.1 - EldoLED SoloDrive 0-10V. Dimming down to 0.1%.

DALI - DALI DT6, DT8 dimming down to 1%.

ELDODMX - EldoLED PowerDrive dimming down to 0.1%.

Please see EldoLED website for wiring diagrams and a list of compatible DMX and DALI control systems.

DIMST - Step Dimming

LABELS:

c-UL-us listed for damp location.

c-UL-us listed for feed Through Wiring.

c-UL-us listed for direct contact with insulation.

WARRANTY:

Fusion A4 Recessed luminaires are covered by Fusion's 5 year limited warranty. As a system, we stand behind our entire products from housing to bar hangers.

HOUSING

	TYPE	LUMEN	DIMMING	VOLTAGE	EMERGENCY OPTIONS	MOUNTING OPTIONS
HIGH PERFORMANCE	A3-LED	☐ 900L ☐ 1200L ☐ 1500L ☐ 2000L	☐ DIM10 ☐ DIMTR ☐ LUTH ☐ LUT2W ☐ ELD010.1 ☐ DALI .1 ☐ ELDODMX .1	☐ 120 ☐ 277 ☐ 347 ☐ MVOLT (DIM10 only)	☐ EMG-LED Typical lumen output of the fixture is up to 1000L in emergency mode. Contact the factory for details.	☐ Blank-Standard bar hangers (included) ☐ BP31 - 27" C-channel bar hangers. ☐ RIF - RIF filter.
	A3-LED-IC	☐ 900L				

TRIM OPTIONS

ROUND TRIM	LUMENS	OPTICS	CCT	FINISH
☐ A3-F-1302 (Reflector trim) ☐ A3-F-1301 (Baffle trim) ☐ A3-F-1363 (Adjustable)	☐ 900L ☐ 1200L ☐ 1500L ☐ 2000L	☐ ND ☐ MD ☐ WD	☐ 27K-90 ☐ 30K-90 ☐ 35K-90 ☐ 40K-90 ☐ 50K-85	☐ W-WH ☐ SN-SN ☐ CL-WH ☐ BK-BK
SQUARE TRIM				
☐ A3-F-1398 (Reflector Trim) ☐ A3-F-1397 (Wall Wash) ☐ A3-TL-1398 (Reflector Trim-less) ☐ A3-F-1364 (Adjustable)	☐ 900L ☐ 1200L ☐ 1500L ☐ 2000L	☐ ND ☐ MD ☐ WD	☐ 27K-90 ☐ 30K-90 ☐ 35K-90 ☐ 40K-90 ☐ 50K-85	TRIM ☐ W-WH ☐ SN-SN ☐ CL-WH ☐ CL-DBZ ☐ BK-BK TRIMLESS ☐ WH ☐ SN ☐ CL ☐ BK

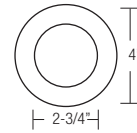
W-WH(White-White), SN-SN(Satin Nickel-Satin Nickel), CL-WH(Clear-White)
BK-BK(Black-Black), DBZ (Dark Bronze)

Round Flanged Trims

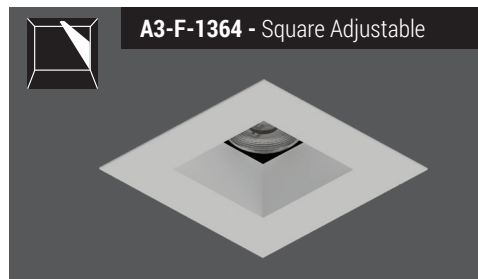
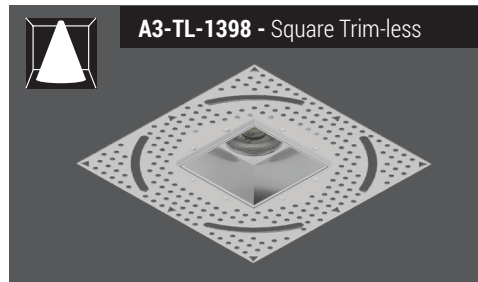
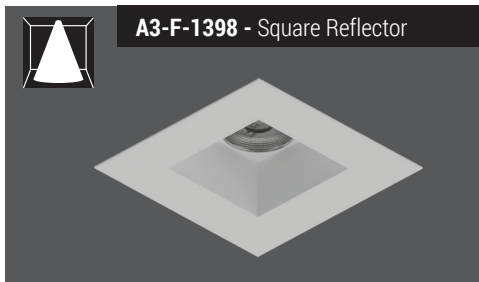


TRIM OPTION:

Post painted powder coated Die-Cast trim available in white and custom colors. Please consult factory for custom paint color options. Trims attach to the housing with piano springs for snug fit and zero light leakage.

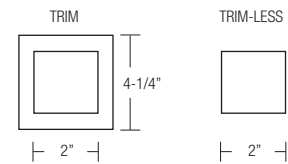


Square Flanged Trims and Trim-less



TRIM OPTION:

Post painted powder coated Die-Cast trim available in white and custom colors. Please consult factory for custom paint color options. Trims attach to the housing with piano springs for snug fit and zero light leakage.



A3-LED-900L-ND-DIMTR-40K-90-A3-F-1301

TEST NO.: **EL0718101**

INPUT WATTS: **9.9**

LUMENS: **1056**

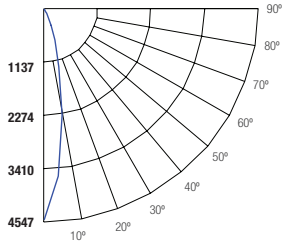
CRI: **90**

EFFICACY: **107**

CCT: **4000K**

SPACING CRITERIA: **0.42**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	734.61	71.70	69.50
0-30	936.93	91.50	88.70
0-40	1014.73	99.10	96.10
0-60	1050.33	102.60	99.40
0-80	1055.45	103.10	99.90
0-90	1056.35	103.20	100.00

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	4979	9307	15909
55°	1734	2712	2853
65°	1669	1705	2079
75°	1083	1422	1625
85°	1207	2690	3016

Lumens Per Zone

Zone	Lumens
0-10	320.21
10-20	414.39
20-30	202.32
30-40	77.80
40-50	28.53
50-60	7.08
60-70	3.39
70-80	1.72
80-90	0.90

Candela Tabulation

0	0
0	4547.07
5	3624.78
15	1289.25
25	376.22
35	95.93
45	16.07
55	4.54
65	3.22
75	1.28
85	0.48
90	0.02

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

RC	70%	80%	70%	50%	30%	10%	50%	30%	10%	30%	10%	10%	30%	10%	0%
RW	70%	80%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	0%
ROOM CAVITY RATIO	0	123	123	123	123	120	120	120	120	115	115	115	110	110	103
1	118	116	114	112	112	118	114	112	110	110	108	107	106	105	102
2	114	110	106	104	104	112	108	105	102	105	102	100	102	100	98
3	110	104	100	97	108	103	99	96	100	97	95	95	98	95	93
4	106	100	95	92	104	99	94	91	96	93	90	95	95	92	89
5	102	95	91	87	101	95	90	87	93	89	86	91	88	85	80
6	99	92	87	83	97	91	86	83	89	86	83	88	85	82	77
7	95	88	83	80	94	87	83	80	86	82	79	85	82	79	74
8	92	85	80	77	91	84	80	77	83	79	77	82	79	76	72
9	90	82	77	74	89	82	77	74	81	77	74	80	76	74	70
10	87	79	75	72	86	79	75	72	78	74	71	78	74	71	67

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

A3-LED-900L-MD-DIMTR-40K-90-A3-F-1301

TEST NO.: **EL0718100**

INPUT WATTS: **9.9**

LUMENS: **1002**

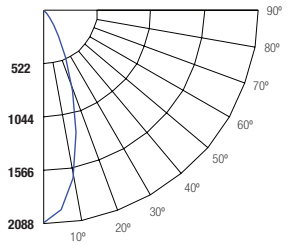
CRI: **90**

EFFICACY: **101**

CCT: **4000K**

SPACING CRITERIA: **0.62**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	541.66	54.80	54.00
0-30	804.25	81.40	80.20
0-40	930.58	94.20	92.90
0-60	991.65	100.40	98.90
0-80	1000.86	101.30	99.90
0-90	1002.21	101.40	100.00

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	8923	15135	26502
55°	3098	4908	5511
65°	3100	3090	3815
75°	1998	2395	2582
85°	2539	3419	3720

Lumens Per Zone

Zone	Lumens
0-10	181.20
10-20	360.46
20-30	262.60
30-40	126.33
40-50	48.54
50-60	12.53
60-70	6.18
70-80	3.02
80-90	1.35

Candela Tabulation

0	0
0	2087.95
5	1972.22
15	1244.67
25	508.25
35	168.80
45	28.80
55	8.11
65	5.98
75	2.36
85	1.01
90	0.02

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

	RC	80%				70%				50%				30%			10%			0%
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%	
ROOM CAVITY RATIO	0	121	121	121	121	118	118	118	118	113	113	113	108	108	108	104	104	104	101	
	1	116	113	111	108	113	111	109	107	107	105	103	103	102	100	99	98	97	96	
	2	110	106	102	99	108	104	101	98	101	98	96	98	96	94	95	93	92	90	
	3	106	100	95	91	104	98	94	91	96	92	89	93	90	88	91	88	86	85	
	4	101	94	89	85	99	93	88	84	91	87	83	89	85	83	87	84	82	80	
	5	97	89	84	80	95	88	83	79	86	82	79	85	81	78	83	80	77	76	
	6	92	84	79	75	91	84	78	75	82	78	74	81	77	74	79	76	73	72	
	7	89	80	75	71	87	80	74	71	78	74	70	77	73	70	76	72	70	68	
	8	85	76	71	67	84	76	71	67	75	70	67	74	70	67	73	69	66	65	
	9	82	73	68	64	81	72	67	64	72	67	64	71	66	63	70	66	63	62	
10	79	70	65	61	78	69	64	61	69	64	61	68	64	61	67	63	60	59		

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

A3-LED-900L-WD-DIMTR-40K-90-A3-F-1301

TEST NO.: **EL0718102**

INPUT WATTS: **10**

LUMENS: **950**

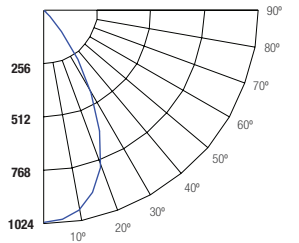
CRI: **90**

EFFICACY: **95**

CCT: **4000K**

SPACING CRITERIA: **0.88**

Candle Power Distribution (Candelas)



Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	348.90	37.00	36.70
0-30	644.23	68.30	67.80
0-40	844.84	89.50	88.90
0-60	936.79	99.30	98.60
0-80	948.25	100.50	99.80
0-90	949.89	100.70	100.00

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	11999	24026	39050
55°	4087	6382	5496
65°	3997	3898	4074
75°	2607	2937	3030
85°	3368	3720	3921

Lumens Per Zone

Zone	Lumens
0-10	95.51
10-20	253.38
20-30	295.33
30-40	200.61
40-50	76.03
50-60	15.92
60-70	7.65
70-80	3.81
80-90	1.64

Candela Tabulation

0	0
0	1023.81
5	1012.84
15	910.21
25	641.00
35	286.49
45	38.73
55	10.70
65	7.71
75	3.08
85	1.34
90	0.04

Coefficients of Utilization - Zonal Cavity Method
Effective Floor Cavity Reflectance 0.20

	RC	80%				70%				50%				30%			10%			0%
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%	
ROOM CAVITY RATIO	0	120	120	120	120	117	117	117	117	112	112	112	107	107	107	103	103	103	101	
	1	114	111	108	106	111	109	107	104	105	103	101	101	100	98	98	96	95	94	
	2	108	103	99	95	106	101	97	94	98	95	92	95	92	90	92	90	88	87	
	3	102	96	91	86	100	94	90	86	92	88	84	89	86	83	87	84	82	80	
	4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74	
	5	92	83	77	73	90	82	77	72	80	76	72	79	75	71	77	73	70	69	
	6	87	78	72	67	86	77	71	67	76	70	67	74	70	66	73	69	66	64	
	7	83	73	67	63	81	72	67	62	71	66	62	70	65	62	68	65	61	60	
	8	79	69	63	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56	
	9	75	65	59	55	74	64	58	55	63	58	54	62	58	54	62	57	54	53	
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	49		

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

A3-LED-1200L-ND-DIMTR-40K-90-A3-F-1301

TEST NO.: **EL0718104**

INPUT WATTS: **13.7**

LUMENS: **1391**

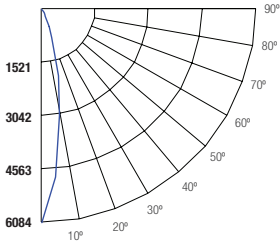
CRI: **90**

EFFICACY: **102**

CCT: **4000K**

SPACING CRITERIA: **0.42**

Candle Power Distribution (Candelas)



Cone of Light			
2	1521	0.8	0.8
4	380	1.5	1.6
6	169	2.3	2.3
8	95.1	3	3.1
10	60.8	3.8	3.8
12	42.3	4.6	4.7
BEAM DIA. MEASURED AT 50% OF NADIR F.C.			

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	973.20	72.20	70.00
0-30	1235.79	91.70	88.90
0-40	1336.82	99.20	96.10
0-60	1383.01	102.60	99.40
0-80	1389.64	103.10	99.90
0-90	1390.82	103.20	100.00

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	20488	10137	7011
55°	3988	3113	2253
65°	2846	1996	2125
75°	2150	1761	1447
85°	3997	3444	1131

Lumens Per Zone

Zone	Lumens
0-10	427.45
10-20	545.75
20-30	262.59
30-40	101.03
40-50	37.06
50-60	9.13
60-70	4.39
70-80	2.25
80-90	1.17

Candela Tabulation

0	0
0	6084.01
5	4805.39
15	1964.55
25	539.95
35	172.54
45	66.13
55	10.44
65	5.49
75	2.54
85	1.59
90	1.12

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

	RC	80%				70%				50%				30%			10%			0%
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%	
ROOM CAVITY RATIO	0	123	123	123	123	120	120	120	120	115	115	115	110	110	110	105	105	105	103	
	1	118	116	114	112	116	114	112	110	110	108	107	106	105	104	102	101	101	99	
	2	114	110	106	104	112	108	105	103	105	102	100	102	100	98	99	98	96	95	
	3	110	105	100	97	108	103	99	96	101	97	95	98	96	93	96	94	92	91	
	4	106	100	95	92	104	99	95	91	97	93	90	90	95	92	89	93	90	88	
	5	102	96	91	87	101	95	90	87	93	89	86	91	88	86	90	87	85	84	
	6	99	92	87	84	98	91	87	83	90	86	83	88	85	82	87	84	82	81	
	7	96	88	84	80	94	88	83	80	87	83	80	85	82	79	84	81	79	78	
	8	93	85	80	77	92	85	80	77	84	80	77	83	79	76	82	79	76	75	
	9	90	82	78	75	89	82	77	74	81	77	74	80	77	74	79	76	74	73	
10	87	80	75	72	86	79	75	72	78	75	72	78	74	72	77	74	71	70		

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

A3-LED-1200L-MD-DIMTR-40K-90-A3-F-1301

TEST NO.: **EL0718103**

INPUT WATTS: **13.7**

LUMENS: **1321**

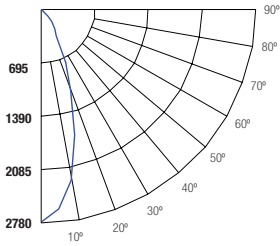
CRI: **90**

EFFICACY: **96**

CCT: **4000K**

SPACING CRITERIA: **0.62**

Candle Power Distribution (Candelas)



Cone of Light			
2	695	1.3	1.3
4	174	2.6	2.6
6	77.2	3.9	3.9
8	43.4	5.2	5.2
10	27.8	6.6	6.6
12	19.3	7.8	7.9
BEAM DIA. MEASURED AT 50% OF NADIR F.C.			

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	719.36	55.30	54.50
0-30	1063.61	81.70	80.50
0-40	1227.9	94.30	93.00
0-60	1307.06	100.40	99.00
0-80	1319.01	101.30	99.90
0-90	1320.77	101.50	100.00

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	36246	18679	12157
55°	7215	6161	4087
65°	4992	3929	4209
75°	3369	2954	2590
85°	4902	4248	2187

Lumens Per Zone

Zone	Lumens
0-10	241.28
10-20	478.07
20-30	344.25
30-40	164.29
40-50	62.96
50-60	16.20
60-70	8.02
70-80	3.94
80-90	1.76

Candela Tabulation

0	0
0	2780.31
5	2622.27
15	1702.41
25	765.05
35	303.92
45	116.99
55	18.89
65	9.63
75	3.98
85	1.95
90	0.93

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

	RC	80%				70%				50%				30%				10%				0%
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%			
ROOM CAVITY RATIO	0	121	121	121	121	118	118	118	118	113	113	113	108	108	108	104	104	104	101			
	1	116	113	111	108	113	111	109	107	107	105	103	103	102	100	99	98	98	96			
	2	110	106	102	99	108	104	101	98	101	98	96	98	96	94	95	93	92	90			
	3	106	100	95	91	104	98	94	91	91	96	92	89	93	90	88	91	89	87	85		
	4	101	94	89	85	99	93	88	85	91	87	84	89	85	83	87	84	82	80			
	5	97	89	84	80	95	88	83	79	86	82	79	85	81	78	83	80	77	76	74		
	6	93	84	79	75	91	84	79	75	82	78	74	81	77	74	80	76	73	72	72		
	7	89	80	75	71	88	80	75	71	78	74	71	77	73	70	76	73	70	69	69		
	8	85	77	71	67	84	76	71	67	75	70	67	74	70	67	73	69	66	65	65		
	9	82	73	68	64	81	73	68	64	72	67	64	71	67	64	70	66	63	62	62		
10	79	70	65	61	78	70	65	61	69	64	61	68	64	61	67	63	61	60	60			

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

A3-LED-1200L-WD-DIMTR-40K-90-A3-F-1301

TEST NO.: **EL0718105**

INPUT WATTS: **13.7**

LUMENS: **1252**

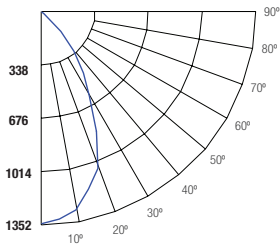
CRI: **90**

EFFICACY: **91**

CCT: **4000K**

SPACING CRITERIA: **0.88**

Candle Power Distribution (Candelas)



Cone of Light			
2	338	2.2	2.2
4	84.5	4.4	4.5
6	37.6	6.6	6.7
8	21.1	8.8	9
10	13.5	11	11.2
12	9.39	13.2	13.5
BEAM DIA. MEASURED AT 50% OF NADIR F.C.			

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	459.62	36.90	36.70
0-30	847.55	68.10	67.70
0-40	1113.02	89.40	88.90
0-60	1235.14	99.30	98.60
0-80	1250.3	100.50	99.80
0-90	1252.42	100.70	100.00

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	54057	33687	17437
55°	7860	8483	5538
65°	5728	5142	5516
75°	4148	3741	3360
85°	5329	4700	2891

Lumens Per Zone

Zone	Lumens
0-10	126.10
10-20	333.52
20-30	387.93
30-40	265.47
40-50	101.01
50-60	21.11
60-70	10.12
70-80	5.03
80-90	2.13

Candela Tabulation

	<u>Q</u>
0	1352.10
5	1327.81
15	1172.52
25	841.97
35	472.74
45	174.48
55	20.58
65	11.05
75	4.90
85	2.12
90	0.73

A3-LED-1500L-ND-DIMTR-40K-90-A3-F-1301

INPUT WATTS: **18**

LUMENS: **1690**

CRI: **90**

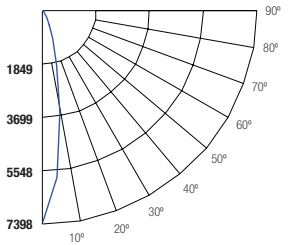
EFFICACY: **94**

CCT: **4000K**

TEST NO.: **EL0718107**

SPACING CRITERIA: **0.42**

Candle Power Distribution (Candelas)



Cone of Light			
2	1849	0.8	0.8
4	462	1.5	1.6
6	205	2.3	2.3
8	116	3	3.1
10	74	3.8	3.9
12	51.4	4.6	4.7
(FT.) Distance to Plane	(FC) Initial Footcandle at Nadir	(FT.) Beam Vert. Spread	(FT.) Beam Horiz. Spread

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	1183.85	72.30	70.00
0-30	1502.26	91.70	88.90
0-40	1624.93	99.20	96.10
0-60	1680.92	102.60	99.40
0-80	1688.95	103.10	99.90
0-90	1690.38	103.20	100.00

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	7275	14413	24569
55°	2697	4098	4793
65°	2582	2582	3421
75°	1676	2209	2590
85°	1860	4248	4851

Lumens Per Zone

Zone	Lumens
0-10	520.22
10-20	663.63
20-30	318.42
30-40	122.66
40-50	44.96
50-60	11.04
60-70	5.31
70-80	2.72
80-90	1.42

Candela Tabulation

0	0
0	7397.98
5	5874.24
15	1969.71
25	560.84
35	142.61
45	23.48
55	7.06
65	4.98
75	1.98
85	0.74
90	0.04

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC	70%	50%	30%	10%	0%
RW	70%	50%	30%	10%	0%
0	123	123	123	123	120
1	118	116	114	112	110
2	114	110	107	104	103
3	110	105	100	97	108
4	106	100	95	92	104
5	102	96	91	87	101
6	99	92	87	84	98
7	96	88	84	80	94
8	93	85	80	77	92
9	90	82	78	75	89
10	87	80	75	72	86

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

A3-LED-1500L-MD-DIMTR-40K-90-A3-F-1301

INPUT WATTS: **18.1**

LUMENS: **1605**

CRI: **90**

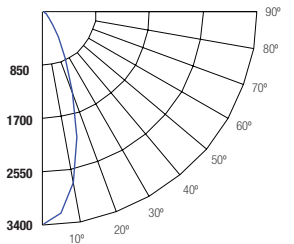
EFFICACY: **89**

CCT: **4000K**

TEST NO.: **EL0718106**

SPACING CRITERIA: **0.60**

Candle Power Distribution (Candelas)



Cone of Light			
2	850	1.3	1.3
4	213	2.6	2.6
6	94.4	3.9	3.9
8	53.1	5.2	5.2
10	34	6.5	6.5
12	23.6	7.8	7.8
(FT.) Distance to Plane	(FC) Initial Footcandle at Nadir	(FT.) Beam Vert. Spread	(FT.) Beam Horiz. Spread

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	877.35	55.50	54.70
0-30	1294.39	81.80	80.60
0-40	1492.79	94.40	93.00
0-60	1588.29	100.40	99.00
0-80	1602.81	101.30	99.90
0-90	1604.95	101.50	100.00

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	14459	24370	43334
55°	4927	7864	8811
65°	5013	4956	6096
75°	3267	3919	4114
85°	4173	5580	5982

Lumens Per Zone

Zone	Lumens
0-10	294.83
10-20	582.52
20-30	417.05
30-40	198.40
40-50	75.88
50-60	19.62
60-70	9.75
70-80	4.77
80-90	2.14

Candela Tabulation

0	0
0	3400.18
5	3240.20
15	2081.65
25	832.82
35	264.33
45	46.67
55	12.90
65	9.67
75	3.86
85	1.66
90	0.06

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC	70%	50%	30%	10%	0%
RW	70%	50%	30%	10%	0%
0	121	121	121	121	118
1	116	113	111	109	113
2	111	106	102	99	108
3	106	100	95	91	104
4	101	94	89	85	93
5	97	89	84	80	91
6	93	85	79	75	88
7	89	80	75	71	84
8	85	77	71	68	80
9	82	73	68	64	77
10	79	70	65	61	74

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

A3-LED-1500L-WD-DIMTR-40K-90-A3-F-1301

INPUT WATTS: **18.2**

LUMENS: **1509**

CRI: **90**

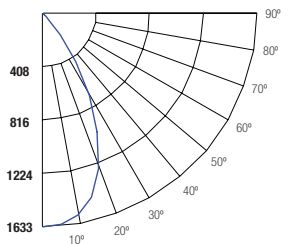
EFFICACY: **83**

CCT: **4000K**

TEST NO.: **EL0718108**

SPACING CRITERIA: **0.88**

Candle Power Distribution (Candelas)



Cone of Light			
2	408	2.2	2.2
4	102	4.4	4.5
6	45.3	6.6	6.7
8	25.5	8.7	9
10	16.3	10.9	11.2
12	11.3	13.1	13.5
(FT.) Distance to Plane	(FC) Initial Footcandle at Nadir	(FT.) Beam Vert. Spread	(FT.) Beam Horiz. Spread

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	555.68	37.10	36.80
0-30	1023.26	68.30	67.80
0-40	1341.74	89.50	88.90
0-60	1488.07	99.30	98.60
0-80	1506.41	100.50	99.80
0-90	1509.00	100.70	100.00

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	19711	40013	64693
55°	6711	10828	9797
65°	6526	6454	7024
75°	4241	4918	4952
85°	5530	6183	6385

Lumens Per Zone

Zone	Lumens
0-10	152.35
10-20	403.34
20-30	467.58
30-40	318.48
40-50	120.90
50-60	25.43
60-70	12.26
70-80	6.08
80-90	2.58

Candela Tabulation

0	0
0	1632.58
5	1617.90
15	1454.05
25	996.23
35	448.53
45	63.62
55	17.57
65	12.59
75	5.01
85	2.20
90	0.07

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC	70%	50%	30%	10%	0%
RW	70%	50%	30%	10%	0%
0	120	120	120	120	117
1	114	111	108	106	111
2	108	103	99	95	106
3	102	96	91	86	100
4	97	89	83	79	95
5	92	83	77	73	90
6	87	78	72	67	86
7	83	73	67	63	81
8	79	69	63	58	77
9	75	65	59	55	74
10	71	61	55	51	70

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

A3-LED-2000L-ND-DIMTR-40K-90-A3-F-1301

INPUT WATTS: **20.4**

LUMENS: **1827**

CRI: **90**

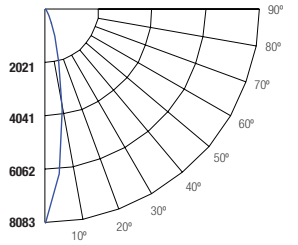
EFFICACY: **90**

CCT: **4000K**

TEST NO.: **EL0718110**

SPACING CRITERIA: **0.40**

Candle Power Distribution (Candelas)



Cone of Light			
Beam Dia. (ft.)	Beam Dia. (m)	Beam Dia. (ft.)	Beam Dia. (m)
2	2021	0.8	0.8
4	505	1.5	1.6
6	225	2.3	2.4
8	126	3	3.1
10	80.8	3.8	3.9
12	56.1	4.5	4.7

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	1281.64	72.40	70.10
0-30	1623.35	91.70	88.80
0-40	1755.23	99.20	96.10
0-60	1816.81	102.70	99.40
0-80	1825.77	103.20	99.90
0-90	1827.31	103.30	100.00

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	7532	16070	30629
55°	3056	4706	5546
65°	2877	2950	3955
75°	1820	2446	2971
85°	1961	4675	5429

Lumens Per Zone

Zone	Lumens
0-10	564.92
10-20	716.72
20-30	341.71
30-40	131.88
40-50	49.16
50-60	12.42
60-70	5.96
70-80	3.00
80-90	1.53

Candela Tabulation

Q	Q
0	8082.95
5	6236.84
15	2078.81
25	587.47
35	147.44
45	24.31
55	8.00
65	5.55
75	2.15
85	0.78
90	0.04

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC	80%				70%				50%				30%				10%				0%			
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	123	123	123	123	123	120	120	120	120	115	115	115	110	110	110	105	105	105	105	105	105	105	105	103
1	118	118	118	118	118	116	116	116	116	110	110	110	102	102	102	98	98	98	98	98	98	98	98	99
2	114	110	107	104	104	112	108	105	103	105	102	100	98	96	94	96	94	92	91	91	91	91	91	91
3	110	105	101	97	97	108	103	100	97	101	98	95	98	96	94	96	94	92	91	91	91	91	91	91
4	106	100	95	92	92	104	99	95	91	97	93	90	95	92	89	93	90	88	87	87	87	87	87	87
5	102	96	91	88	88	101	95	90	87	93	89	86	91	88	86	90	87	85	84	84	84	84	84	84
6	99	92	87	84	84	98	91	87	83	90	86	83	88	85	82	87	84	82	81	81	81	81	81	81
7	96	88	84	80	80	95	88	83	80	87	83	80	86	82	79	84	81	79	78	78	78	78	78	78
8	93	85	81	77	77	92	85	80	77	84	80	77	83	79	77	82	79	76	75	75	75	75	75	75
9	90	82	78	75	75	89	82	78	74	81	77	74	80	77	74	80	76	74	73	73	73	73	73	73
10	87	80	75	72	72	86	79	75	72	79	75	72	78	74	72	77	74	72	71	71	71	71	71	71

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

A3-LED-2000L-MD-DIMTR-40K-90-A3-F-1301

INPUT WATTS: **20.5**

LUMENS: **1718**

CRI: **90**

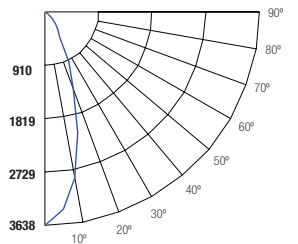
EFFICACY: **84**

CCT: **4000K**

TEST NO.: **EL0718109**

SPACING CRITERIA: **0.60**

Candle Power Distribution (Candelas)



Cone of Light			
Beam Dia. (ft.)	Beam Dia. (m)	Beam Dia. (ft.)	Beam Dia. (m)
2	910	1.3	1.3
4	227	2.6	2.6
6	101	3.9	3.9
8	56.9	5.2	5.2
10	36.4	6.6	6.5
12	25.3	7.9	7.8

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	938.70	55.40	54.60
0-30	1385.5	81.80	80.70
0-40	1597.91	94.40	93.00
0-60	1699.89	100.40	99.00
0-80	1715.37	101.30	99.90
0-90	1717.69	101.50	100.00

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	42650	21449	14280
55°	8601	7543	5183
65°	6070	4997	5329
75°	4258	3716	3250
85°	6259	5354	2765

Lumens Per Zone

Zone	Lumens
0-10	315.24
10-20	623.46
20-30	446.80
30-40	212.41
40-50	81.09
50-60	20.89
60-70	10.38
70-80	5.10
80-90	2.32

Candela Tabulation

Q	Q
0	3638.48
5	3395.91
15	2140.93
25	928.42
35	357.15
45	137.66
55	22.52
65	11.71
75	5.03
85	2.49
90	1.21

Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 0.20

RC	80%				70%				50%				30%				10%				0%			
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	121	121	121	121	121	118	118	118	118	113	113	113	108	108	108	104	104	104	104	104	104	104	104	101
1	116	113	111	109	109	113	111	109	107	107	105	104	103	102	100	99	98	98	98	98	98	98	98	96
2	111	106	102	98	98	108	104	101	98	101	98	96	98	96	94	95	94	92	90	90	90	90	90	90
3	106	100	95	91	91	104	98	94	91	96	92	89	93	90	88	91	89	87	85	85	85	85	85	85
4	101	94	89	85	85	99	93	88	85	91	87	84	89	85	83	87	84	82	80	80	80	80	80	80
5	97	89	84	80	80	95	88	83	79	86	82	79	85	81	78	83	80	77	76	76	76	76	76	76
6	93	85	79	75	75	91	84	79	75	82	78	74	81	77	74	80	76	73	72	72	72	72	72	72
7	89	80	75	71	71	88	80	75	71	79	74	71	77	73	70	76	73	70	69	69	69	69	69	69
8	85	77	71	68	68	84	76	71	67	75	70	67	74	70	67	73	69	67	65	65	65	65	65	65
9	82	73	68	64	64	81	73	68	64	72	67	64	71	67	64	70	66	64	62	62	62	62	62	62
10	79	70	65	61	61	78	70	65	61	69	64	61	68	64	61	67	64	61	60	60	60	60	60	60

RC - Ceiling Cavity Reflectance

RW - Wall Reflectance

A3-LED-2000L-WD-DIMTR-40K-90-A3-F-1301

INPUT WATTS: **20.4**

LUMENS: **1623**

CRI: **90**

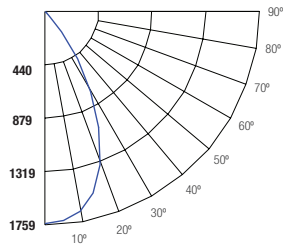
EFFICACY: **80**

CCT: **4000K**

TEST NO.: **EL0718111**

SPACING CRITERIA: **0.88**

Candle Power Distribution (Candelas)



Cone of Light			
Beam Dia. (ft.)	Beam Dia. (m)	Beam Dia. (ft.)	Beam Dia. (m)
2	440	2.2	2.2
4	110	4.4	4.5
6	48.9	6.5	6.7
8	27.5	8.7	8.9
10	17.6	10.9	11.2
12	12.2	13.1	13.4

BEAM DIA. MEASURED AT 50% OF NADIR F.C.

Zonal Lumens Summary

Zone	Lumens	%Lamp	%Fixt
0-20	598.33	37.10	36.90
0-30	1101.25	68.30	67.80
0-40	1443.56	89.50	88.90
0-60	1601.03	99.30	98.60
0-80	1620.74	100.50	99.80
0-90	1623.48	100.70	100.00

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0°	Average 45°	Average 90°
45°	19794	42665	70174
55°	7188	11749	10595
65°	6884	6926	7594
75°	4503	5282	5350
85°	5832	6636	6887

Lumens Per Zone

Zone	Lumens
0-10	1