

## GENESIS 4

### 4" High Performance Commercial LED Recessed Series Recessed Downlighting



Job Information	
Project Name	
Type	
Location	
Quantity	
Date	

#### Description

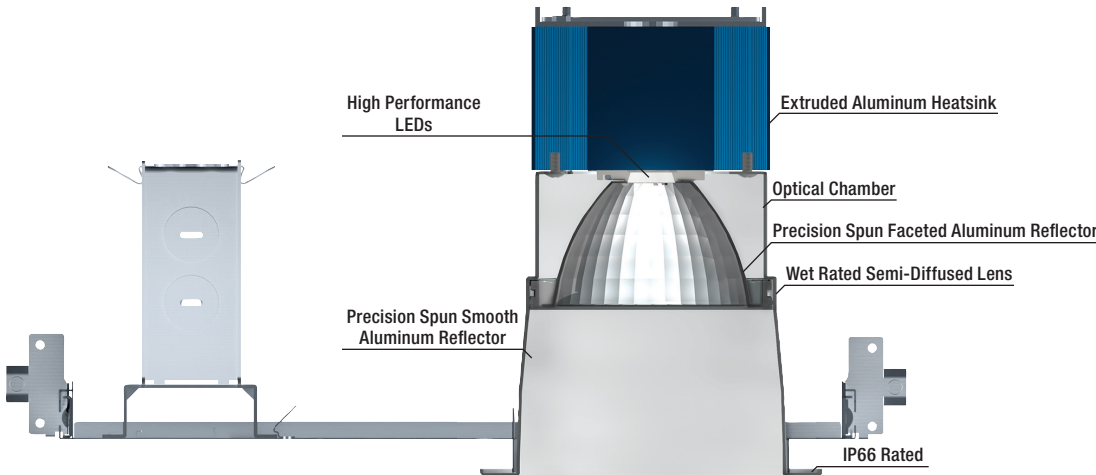
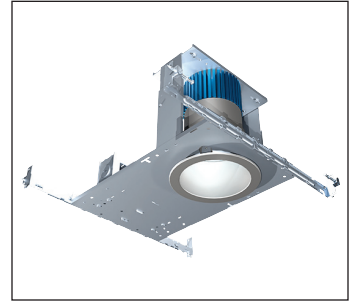
This fixture is a 4" high performance commercial recessed downlight, combining 90 CRI standard high power LEDs, dimmable driver and high reflectivity spun aluminum reflector. Key features are best in class optical control, easy to access field changeable optics, wet location rated IP66 construction and screw operated vertical adjustment.

#### Key Features:

**Upper optical chamber:** Field changeable precision spun faceted aluminum reflector. Available beam angles (18 / 24 / 37 / 55). Optical chamber is sealed by gasketed twist and lock semi-diffuse polycarbonate lens providing wet location rating (IP66) by default.

**Lower optics:** Optical chamber is constructed with precision spun smooth aluminum reflector. Reflector is self flanged parabolic shape providing high angle cut-off and visual comfort. Available in semi-specular, specular and painted finishes.

**Construction:** Reflector is mechanically fastened to heat sink and has screw operated vertical adjustment to ensure secure, safe mechanical sandwich with ceiling material. Compatible with ceiling thicknesses from 1/8" to 2". Passively cooled extruded aluminum heat sink prolongs LED life by ensuring thermal dissipation. Gasketed trim and twist and lock semi-diffuse polycarbonate lens provides wet location rating (IP66) by default.




#### FIXTURE SPECIFICATIONS

Aperture	4" (102mm)
Application	Commercial Recessed
Approved Location	Wet
Auxiliary Output	12V@40mA Option*
Beam Angles	18 / 24 / 37 / 55
Certification	cETLus
CRI	90
Dimming	1% (Standard)*
Emergency Backup	1000 lm for 90 min
Hole Cut Size	4 1/2" (115mm)
IC Rating	@ 1000-1500 lm
Lumen Maintenance	70% @ 50,000 Hrs
Lumens	Up to 4000 @ 90 CRI
Lumens per Watt	Typical 76
Mounting Type	New Construction Remodel Architectural
Multi-Volt	120-277V w/IC Rated
Power	11-58W
Power Factor	> 0.9 (Standard)
Power Supply Type	Constant Current
Reflector Type	Parabolic
Technology	Chip on board LED
THD	<20%
TM-30 Annex E	P2 / V- / F3
Trim Outer Diameter	5 3/8" (136mm)
Voltages	120 / 277 / 347
Warranty	7 Years

\* Refer to "LED Driver Options" for more details.

#### Ordering Guide

GEN04	Light Output <sup>1</sup>	Color Temp.	Beam Angle	Reflector Finish	LED Driver <sup>9</sup>	Emergency Backup	Voltage	Mounting	Shipping
	<b>IA :</b> 1000 lm (IC Rated) <b>IB :</b> 1200 lm (IC Rated) <b>IC :</b> 1500 lm (IC Rated) <b>20 :</b> 2000 lm (Non-IC) <b>25 :</b> 2500 lm (Non-IC) <b>30 :</b> 3000 lm (Non-IC) <b>35 :</b> 3500 lm (Non-IC) <b>40 :</b> 4000 lm (Non-IC Marked)	<b>27 :</b> 2700 K (90+ CRI) <b>30 :</b> 3000 K (90+ CRI) <b>35 :</b> 3500 K (90+ CRI) <b>40 :</b> 4000 K (90+ CRI) <b>57 :</b> 5700 K (90+ CRI) <b>TW :</b> Tunable White (90+ CRI) <sup>10</sup>	<b>S :</b> Spot (18°) <b>N :</b> Narrow (24°) <b>M :</b> Medium (37°) <b>W :</b> Wide (55°) <b>Z :</b> Wall Wash	<b>HC :</b> Semi-specular <b>HW :</b> Semi-specular with White Trim <b>SW :</b> Specular with White Trim <b>WH :</b> White <b>BK :</b> Black <b>HB :</b> Semi-specular with Black Trim	<b>S :</b> TRIAC/ELV/0-10V dimming <sup>2,7</sup> <b>B :</b> Rated -40°C, 0-10V dimming <sup>4</sup> <b>L :</b> Lutron Hi-lume 1% EcoSystem <sup>5,7</sup> <b>Q :</b> Casambi integrated <b>D :</b> DALI <b>M :</b> DMX <sup>7</sup> <b>O :</b> 0-10V w/AUX Output <sup>11</sup> <b>E :</b> Encellium Integrated <b>T :</b> Lutron T-series <sup>7</sup> <b>K :</b> Tunable White Dual 0-10V <sup>7</sup> <b>W :</b> OnCloud Enabled <sup>7</sup> <b>A :</b> Lutron Athena Wireles Node RF only (AWNRF) <b>U :</b> Lutron Athena Tunable White <sup>12</sup>	<b>N :</b> No Emergency Backup <b>E :</b> Emergency Backup, 0-10V, 90 min at 1200lm <sup>8</sup>	<b>X :</b> 120-277V <sup>8</sup> <b>1 :</b> 120V <b>2 :</b> 277V <b>3 :</b> 347V <sup>8</sup>	<b>R :</b> Remodel <b>N :</b> New <b>A :</b> Architectural C-Channel Brackets <b>C :</b> Chicago Plenum New Construction	<b>1 :</b> Ship Complete <b>2 :</b> Ship Rough-in First

#### Notes:

<sup>1</sup> Delivered lumens provided are based on 4000 K @ 90CRI with wide reflector. <sup>2</sup> 4000lm available with 0-10V only. <sup>3</sup> Above ceiling access required. <sup>4</sup> Additional Emergency Backup not available. <sup>5</sup> Ships in 3 weeks or less. <sup>6</sup> Only available with IC Rated Light Outputs. <sup>7</sup> Not available in 347V. <sup>8</sup> Only 0-10V dimming available if "S" Driver selected. <sup>9</sup> Refer to "LED Driver Options" table for

maximum lumen output per driver type. <sup>10</sup> White Tunable control is available only with "W", "K", "T", "D", "Q" drivers. <sup>11</sup> Compatible with Casambi, Encellium and Lutron Athena node (provided by others). <sup>12</sup> Compatible with Dalí2 Type 8. Quick Ship option is available on orders of 75 pieces or less, and will ship within 7 business days. Options must be selected from

Quick Ship section to qualify. For additional options please consult your A-Line representative. All trademarks are the property of their respective owners. Due to our continued efforts to improve our products, product specifications are subject to change without notice.

## Features

### Mounting Frame

Constructed of 22ga galvanized steel for optimum rigidity. Accommodates up to 2" (51mm) ceiling thicknesses. Reflector firmly held in place through twist and lock mechanism. Hanger bars installed on short side.

### Junction Box

Listed for through branch circuit wiring. Maximum of eight, 12AWG 90°C branch-circuit connections (four in and four out). Six 1/2" knockouts with true pry-out slots and four knockouts with Romex® cable clamp. Ground wire is provided on J-Box. Block connectors provided for 0-10V wiring.

### Hanger Bars – New Construction

Rigid hanger bars extend up to 25" (635mm). Score lines on the hanger bars allow for tool-less shortening down to 12" (305mm). Built-in line-up foot allows for accurate housing height during installation. Integrated T-bar clips easily snap onto T-bars.

### Hanger Bars – Architectural C-Channel

Architectural frame bracket accepts C-Channel and EMT conduit. Vertically adjustable.

### LED Characteristics

Fixed CCT high power chips maintain

uniform intensity with a typical 90+ CRI. Also available with White Tunable (2700 K - 5000 K).

### Control

Multiple dimming and control options available, from traditional 0-10V for 1% dimming to fully wireless dimming and tunable white control with our OnCloud solution powered by WiZ. Dimming controls include OnCloud, 0-10V, Lutron EcoSystem, Casambi, DALI, DMX and Encelium, for a full list with more details refer to the "LED Driver Options" table. Auxiliary output option available gives the freedom to power 3rd party devices for extra control. Consult factory for compatible dimmers.

### System Protection

Integral thermal protection provided to avoid overheating or improper installations. Will disconnect if insulation is detected. Insulation must maintain 3" (76mm) clearance from top or sides.

### Electrical

Junction box mounted for ease of maintenance, constant current LED driver with a power factor above 0.9 and THD below 20% standard ensures high efficiency and low systemic harmonic distortion. Class 2 construction. See LED Driver Options for more specific details.

### Reflector

Constructed of spun aluminum, the reflector provides precision distribution of light with low glare.

### Thermal Performance

Extruded aluminum heat sink ensures optimal heat dissipation and LED life.

### LED Optics

Integrated soft lens provides visual comfort.

### Environment

Suitable for use in wet locations.

### Warranty

7-Year warranty.

ONLINE PRODUCT DETAILS AND DOCUMENTATION



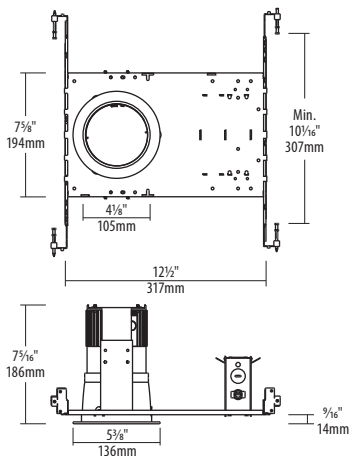
## LED Driver Options

Driver	Maximum Lumen Output		Dimming	Notes
	120/277V	347V		
(S) Standard	4000 lm	N/A	10% TRIAC/ELV   1% 0-10V	TRIAC/ELV only available at 3500lm or below
(B) -40°C	4000 lm	4000 lm	1% 0-10V	Low Temperature Driver
(L) Lutron EcoSystem	3000 lm	N/A	1% EcoSystem	Hi-lume 1% EcoSystem w/Soft-on, Fade-to-Black
(Q) Casambi Integrated*	4000 lm	4000 lm	1% Casambi Module	Casambi Wireless Module included
(D) DALI*	4000 lm	4000 lm	1% DALI	Dali 2.0 rated to -40°C
(M) DMX	4000 lm	N/A	0.1% DMX/RDM	Rated to -40°C
(O) 0-10V w/AUX	4000 lm	4000 lm	1% 0-10V	With 12VDC 40mA Max. Auxiliary output
(E) Encelium Integrated	4000 lm	4000 lm	1% Encelium	Encelium Wireless Light Management System
(T) Lutron T-series*	4000 lm	N/A	1% T-Series 2-Channel	T-Series 2-Channel Tunable White 1%
(K) Tunable White Dual 0-10V*	4000 lm	N/A	0.1% Dual 0-10V	2 Channels isolated 0-10V control
(W) OnCloud Enabled*	4000 lm	N/A	0.1% OnCloud Wi-Fi	OnCloud tunable white Wi-Fi control
(U) Lutron Athena*	4000 lm	4000 lm	1% 0-10V	Lutron Athena Tunable White

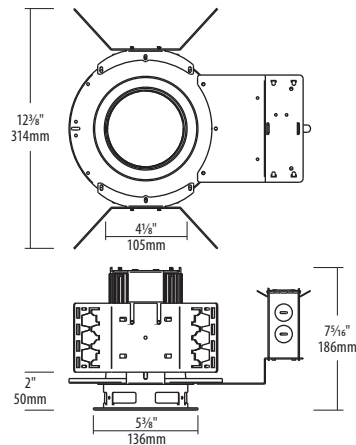
\* Tunable White capable driver.

## Technical Drawings

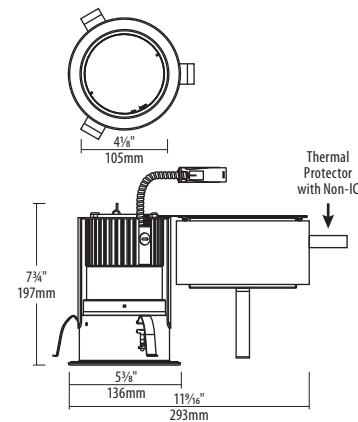
### Mounting: New Construction



### Mounting: Architectural C-Channel Brackets



### Mounting: Remodel (Round)





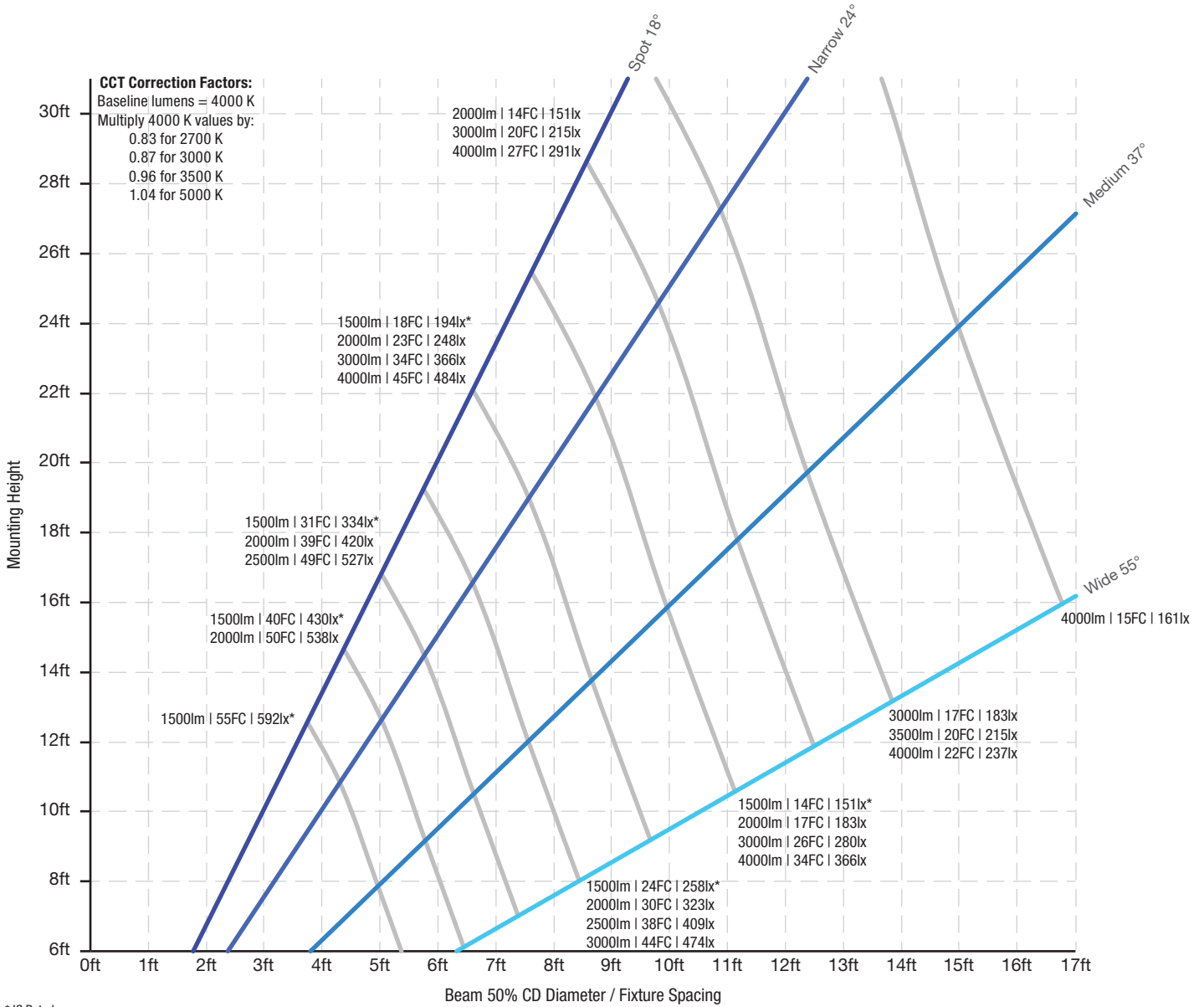
Light Output	Wattage
1A : 1000 lm	11 W
1B : 1200 lm	13 W
1C : 1500 lm	19 W
20 : 2000 lm	28 W
25 : 2500 lm	37 W
30 : 3000 lm	43 W
35 : 3500 lm	52 W
40 : 4000 lm	58 W

	Light Output	Color Temp.	Beam Angle	Reflector Finish	LED Driver	Emergency	Voltage	Mounting	Shipping
GEN04-	IC	27	-	S	HC	S	N	X	R
	20	30		N	SW	B	1	N	A
	25	35		M	WH	L	2	A	C
	30	40		W	BK	Q		C	
	35				HB	O			
	40				HW	E			

Luminaire Budgetary Diagram

Mounting Height vs Fixture Spacing

Sample Reference with 4" White Reflector 90CRI at 4000 K CCT



\* IC Rated

To use Liteline's Luminaire Budgetary Diagram:

1. Determine mounting height above work surface for application on Y axis.
2. Determine appropriate spacing by comparing beam cone size on X axis.
3. Select appropriate beam angle and lumen package from slope line at intersection point.

# Photometry

## CCT Correction Factors :

Baseline lumens = 4000 K

Multiply 4000 K lumen values by:

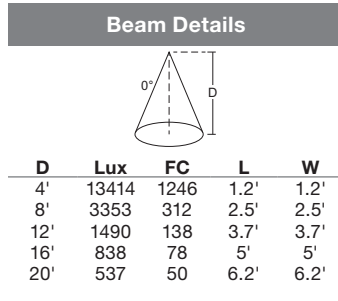
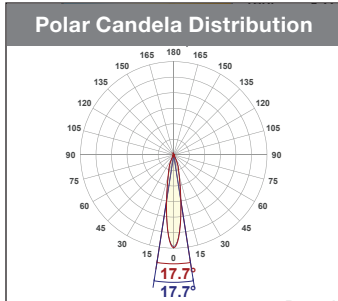
0.83 for 2700 K

0.87 for 3000 K

0.96 for 3500 K

1.04 for 5000 K

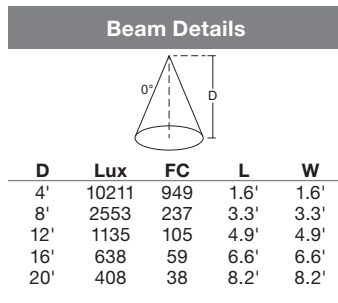
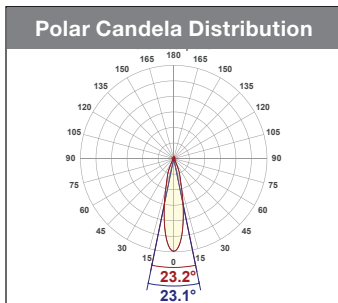
**GEN04-4040-SWHxxxxx** : 4" GENESIS, 4000 lm @ 4000 K with Spot beam spread and white reflector.



### Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	3241	81.25%
0-40	3450	86.49%
0-60	3766	94.41%
60-90	197	4.94%
70-100	84.0	2.11%
90-120	9.54	0.24%
0-90	3963	99.35%
90-180	26.4	0.66%
0-180	3989	100%

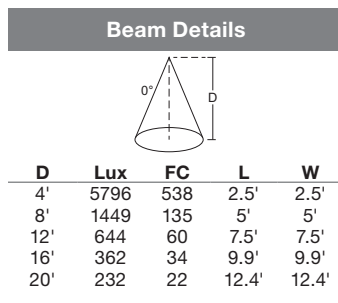
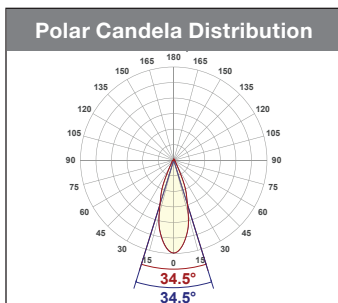
**GEN04-4040-NWHxxxxx** : 4" GENESIS, 4000 lm @ 4000 K with Narrow beam spread and white reflector.



### Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	3237	80.58%
0-40	3457	86.06%
0-60	3787	94.27%
60-90	204	5.08%
70-100	87.1	2.17%
90-120	9.55	0.24%
0-90	3991	99.35%
90-180	26.2	0.65%
0-180	4017	100%

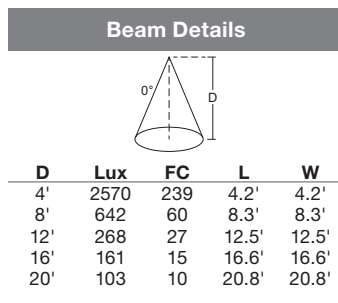
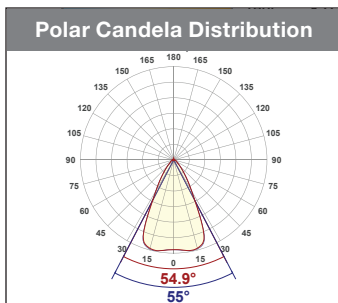
**GEN04-4040-MWHxxxxx** : 4" GENESIS, 4000 lm @ 4000 K with Medium beam spread and white reflector.



### Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	3045	76.62%
0-40	3335	83.92%
0-60	3690	92.85%
60-90	248	6.24%
70-100	114	2.87%
90-120	12.0	0.30%
0-90	3938	99.09%
90-180	36.5	0.92%
0-180	3974	100%

**GEN04-4040-WWHxxxxx** : 4" GENESIS, 4000 lm @ 4000 K with Wide beam spread and white reflector.



### Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	2651	66.64%
0-40	3256	81.85%
0-60	3723	93.59%
60-90	221	5.56%
70-100	101	2.54%
90-120	12.5	0.31%
0-90	3944	99.15%
90-180	34.2	0.86%
0-180	3978	100%