

Lumination™ LED Luminaires

LIS Series with Replaceable Light Engine



Project name _____

Date _____

Type _____

Product Description:

GE's Lumination LED fixtures with reveal® TriGain™ technology - LIS Series Suspended Series are designed to offer lighting designers enhanced CRI and R9 without sacrificing efficiency. With R9 greater than 90, these fixtures optimally display objects like produce, fabric, skintones and artwork - all with a remarkably efficient 158 lumens per watt, reducing maintenance and operating costs. Available in 7% and 12% upright versions as well.

Performance Summary:

Distribution Patterns: Medium
Delivered Lumen Output: 4,200-24,000 lm
System Input Power: 34-182 W
Efficacy: Up to 158 LPW
Input Voltage: 120-277V; 347V
Standard Dimming Control: 0-10V
CCT: 3000K, 3500K, 4000K & 5000K
Typical CRI: 83-90
Color Consistency: 4 Step MacAdam Ellipse
Input Frequency (Hz): 50-60Hz
Power Factor: >0.9* (See details below)
Dimensions: 10 x 49 x 8 inches (258 x 1256 x 191 mm) 4 ft
 10 x 97 x 8 inches (258 x 2473 x 191 mm) 8 ft
Mounting: Suspension (see Accessories Table below)
Weight: <20 lbs
IC Rating: Non-IC Rated
Warranty: 5 Years standard
Rated Life: L70 @ 90,000 hours for Trigain only (CRI code = P)
 L85 @ 75,000 hours (CRI code = S)
Storage Temperature: -40°C to 70°C
Operating Temperature: -10° up to 35° C
Removable Light Engine: Available

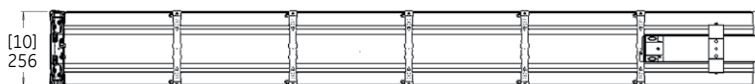
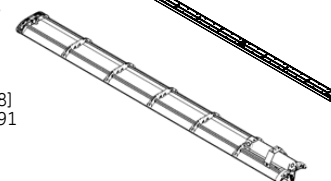
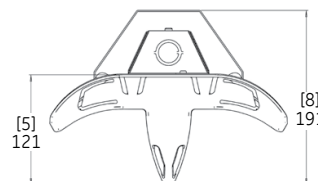


Integrated sensor option

Product Dimensions mm (inches):

COmFIGuRa TIOn	4 FT	8 FT
Length "L" (Inches)	49	97
Length "L" (MM)	1256	2473
Length "L" w/SENSOR (Inches)	56	104
Length "L" w/SENSOR (MM)	1432	2642

LIS Replaceable Light Engine



Daintree
WIRELESS CONTROLS

reveal®
TriGain™
technology from GE

a product of
ecomagination™

Maximum Run Length per 1 power drop:

Supply Voltage	Lumen Code							
	[42] [84]	[62] [A2] [52] [A0]	[65] [85] [A3] [A7]	[A1] [A2] [B1] [B4]				
120V	192'	160'	80'	60'				
277V or 347V	400'	320'	188'	132'				

Certified by:



Please refer to the DLC QPL website for the latest and most complete information.
www.designlights.org/Qpl

Ordering Information:

LIS

CS WHITE

FAMILY	FIXTURE TYPE	GENERATION	VOLTAGE	NOMINAL LUMENS	DISTRIBUTION	CRI	CCT	CONTROLS	MOUNTING	FINISH	OPTIONS
LIS	C4* = Continuous 4ft C8* = Continuous 8ft I4 = Independent 4ft I8 = Independent 8ft *Starter kit required (see accessory page below)	B = Replaceable light engine* C = Replaceable light engine* *Specify generation "C" for 83 CRI. Specify generation "B" for 90 CRI. *Generation "B" is not available in lumen [62]	O = 120-277 VAC D = 347 VAC	4 FT Only 42 = 4200 52 = 5200 62 = 6250 65 = 6500 85 = 8500 A1 = 10500 A2 = 12000 8 FT Only 84 = 8400 A0 = 10400 A2 = 12500 A3 = 13000 A7 = 17000 B1 = 21000* B4 = 24000*	D1 = 100% Direct D8 = 12% Uplight D9 = 7% Uplight	P = 90CRI 8 = 83CRI Note: 90 CRI available with the below lumen levels: 4ft-(42 & 52 only) 8ft -(84 & A0 only) In the 3500K and 4000K CCT only.	30 = 3000K 35 = 3500K 40 = 4000K 50 = 5000K	VQ = 0-10V VT = 0-10V, Daintree Networks S1 = on/off occ. sensor S2 = 0-10V, on/off occ. & daylight harvesting sensor* *Note: Order programming remote (197634) *S1&S2 controls only available with 120V/277V input voltage	CS = (See accessories page below for further accessory/ mounting options which have to be ordered separately*) *2 mounting brackets come included with each fixture	WHITE = White	Blank if no options A = Branch Circuit* EL = Emergency Light* BP = Bulk Pack BC = Black End Cap GC = Grey End Cap RC = Red End Cap HE = High Efficiency Fixture*** P10 = 10 ft (14AWG 5cond) Power Cord White* P20 = 20 ft (14AWG 5cond) Power Cord White* R10 = RELOC 277V 10 ft 3C* R10 = RELOC 277V 10 ft 3C* SPL = Sample with 6 ft cord and 120Vac wall plug* WP = White Painted *EL option is only available with the below lumen levels: 4ft -(42, 52, 62, 65 & 85 only) 8ft -(84, A0, A2, A3 & A7 only). *EL option not available with 347V *EL option VQ Controls only *A option not available for 14' & 18' fixture type *Only 1 cord option (SPL, R10, P10 or P20 per SKU) *Cord options (SPL, R10, P10, P20) not available with EL or A options Cord options (SPL, R10, P10, P20) not available with -EL & A options, -347V input voltage, -C4 & C8 fixture type **RC, BC, GC options only available with I4 & I8 fixture type ***HE only available with -120/277V input voltage, -83CRI, -Lumen codes [42 or 52] for 4ft. or [84 or A0] for 8ft.

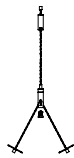

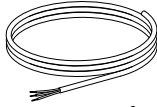
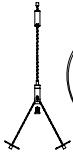
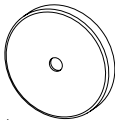
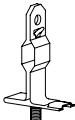
*Starter Kit:


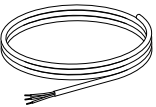
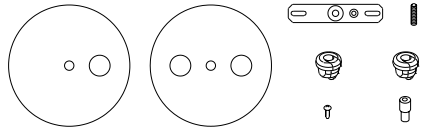
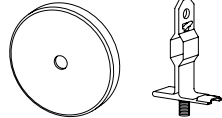







Kit SKUs	Kit Quantity	Kit includes (per continuous row)	
93018007-White	1	1 x starter power harness	1 x starter dimming harness
93022791-White	10	2 x end caps for both sides of row	

Please contact the Fixture Technical Support team for technical questions. lightingprodinfo@ge.com
 or 1-888-694-3533, Option #2

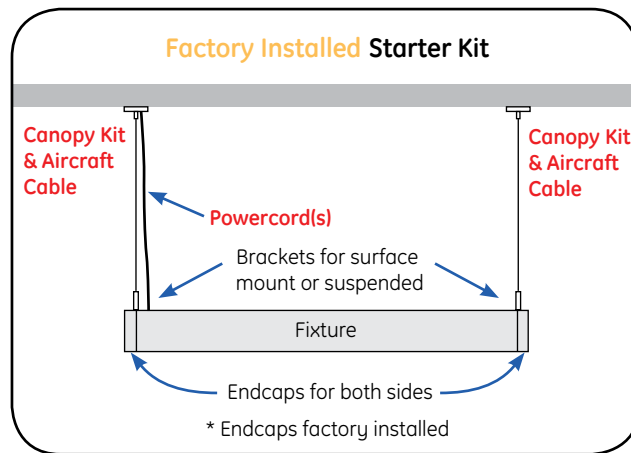
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Accessories		Product Code
Sample SKU: LISI4B042D1P40VQCSWHTESPL		93073490
Power Cord Kit - Options		<p>93083221: POWER CORD KIT, LIS,14AWG-5COND,10FT,BLK</p> <p>93083222: POWER CORD KIT, LIS,14AWG-5COND,10FT,WHT</p> <p>93083223: POWER CORD KIT, LIS,14AWG-5COND,20FT,BLK</p> <p>93083224: POWER CORD KIT, LIS,14AWG-5COND,20FT,WHT</p>
<p>Suspended Kits - Mounting Open/unfinished Ceiling</p> <p>Set of 10' mounting cables</p> 		<p>93035285: Pair of 10' aircraft cables</p> <p>93116031: Pair of 20' aircraft cables</p>
<p>Suspended Kits - Mounting + Power Open/Ufinished Ceiling</p> <p>Set of 10' mounting cables</p>  <p>Power feed cable</p> <p>1. Dimming leads not included; #14-4 gauge; includes black, white, green and red (for additional circuits)</p> 		<p>93115897: Pair of 10' aircraft cables; 10' white power cord¹</p> <p>93115898: Pair of 20' aircraft cables; 20' white power cord¹</p> <p>93115899: Pair of 10' aircraft cables; 10' black power cord¹</p> <p>93115900: Pair of 20' aircraft cables; 20' black power cord¹</p>
<p>Suspended Kits - Mounting Finished Ceiling</p> <p>Set of 10' mounting cables</p>    <p>Upper Mounting Kit (x2)</p>		<p>93115708: Pair of 10' aircraft cables; White canopy cover, upper mounting x2</p> <p>93115709: Pair of 20' aircraft cables; White canopy cover, upper mounting x2</p> <p>93115710: Pair of 10' aircraft cables; Black canopy cover, upper mounting x2</p> <p>93115711: Pair of 20' aircraft cables; Black canopy cover, upper mounting x2</p>

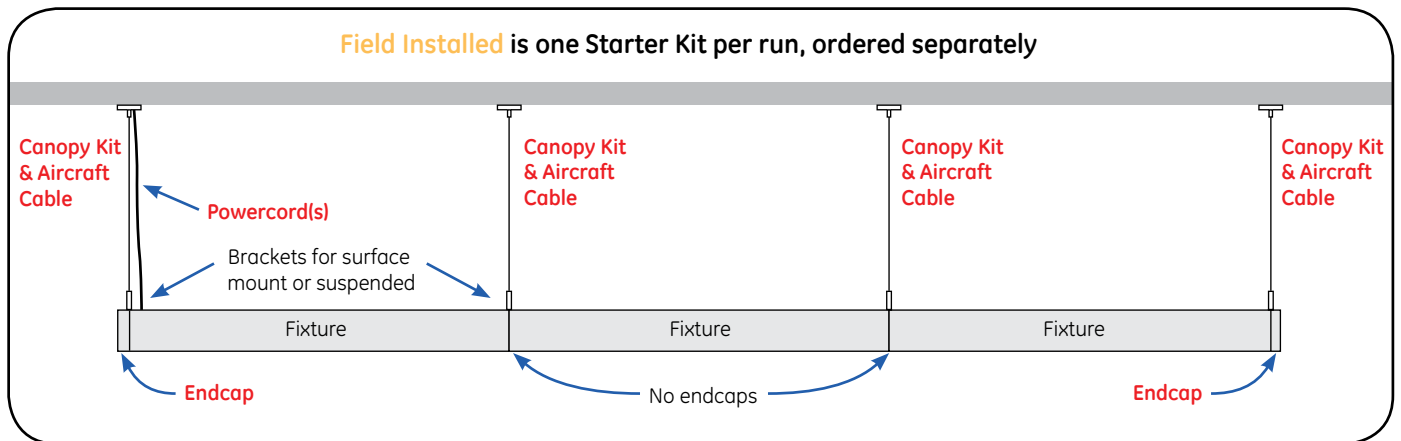
Accessories		Product Code
<div>Suspended Kits - Mounting + Power Finished Ceiling</div> <div><div><p>Set of 10' mounting cables</p></div><div><p>Power feed cable #14-4 gauge; includes black, white, green and red (for additional circuits)</p></div><div><p>Canopy Kit (x1)</p></div><div><p>Upper Mounting Kit (x2)</p></div></div>		<p>93115847: White canopy kit (x1); White upper mounting kit (x2); 10' aircraft cables; 10' white power cord¹</p> <p>93115848: White canopy kit (x1); White upper mounting kit (x2); 20' aircraft cables; 20' white power cord¹</p> <p>93115849: Black canopy kit (x1); Black upper mounting kit (x2); 10' aircraft cables; 10' black power cord¹</p> <p>93115850: Black canopy kit (x1); Black upper mounting kit (x2); 20' aircraft cables; 20' black power cord¹</p> <p><small>1. Dimming leads not included; #14-4 gauge; includes black, white, green and red (for additional circuits)</small></p>
<div>Starter Kit (1 row)</div>	<div><p>Pair for start and finish of row</p></div>	<p>White: 93018007 (kit quantity = 1) Grey: 93081607 (kit quantity = 1) Black: 93081606 (kit quantity = 1) Red: 93081609 (kit quantity = 1)</p>
<div>Starter Kit (10 row)</div>	<div><p>Pair for start and finish of row</p></div>	<p>White: 93022791 (kit quantity = 10) Grey: 93081608 (kit quantity = 10) Black: 93081245 (kit quantity = 10) Red: 93081610 (kit quantity = 10)</p>
<div>Extra suspension brackets</div> <div>Use if extra brackets are required. See diagram on next page - brackets included with each fixture.</div>	<div></div>	<p>94210 - Standard Bracket (10pcs) 93088000 - Anti-Snaking brackets (10pcs)</p>

Independent



- **RED** indicates items that must be ordered as options or accessories.

Continuous Run



- **RED** indicates items that must be ordered as options or accessories. The starter, when suspended, is normally the only fixture in the row with (2) suspension hangers. The rest of the run may be suspended from a single hanger.

Photometric Data: LISI8 Series

L-IS-X8-BX84DIP40-VQCS-WHTE-XX

CANDLE POWER Summary			
angle	0°	45°	90°
45°	3876	4368	4659
55°	3906	4717	4919
65°	3926	4995	4964
75°	3866	4988	4225
85°	3389	2511	2399

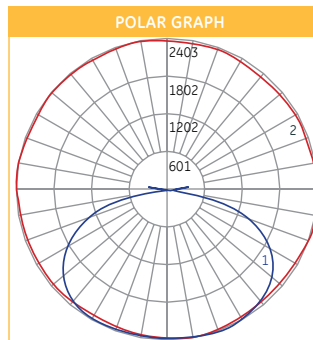
ZONAL LUMEN Summary	
zone	Lumens
0-10	227.53
10-20	666.91
20-30	1044.13
30-40	1331.00
40-50	1491.13
50-60	1477.78
60-70	1252.06
70-80	787.23
80-90	207.36
90-100	67.52
100-110	29.05
110-120	9.49
120-130	2.05
130-140	1.79
140-150	1.76
150-160	1.62
160-170	1.14
170-180	0.43

COEFFICIENTS OF UTILIZATION																				
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%		
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101	101	99		
1	107	102	98	93	105	100	96	92	95	92	89	91	88	86	87	85	83	81		
2	97	88	81	74	94	86	79	73	82	76	71	79	74	70	75	71	68	65		
3	88	76	68	61	85	75	67	60	71	64	59	68	62	58	66	61	56	54		
4	80	67	58	51	77	66	57	50	63	55	49	60	54	48	58	52	48	45		
5	73	59	50	43	71	58	49	43	56	48	42	54	47	41	52	46	41	39		
6	67	53	44	37	65	52	43	37	50	42	36	48	41	36	47	40	35	33		
7	62	48	39	32	60	47	38	32	45	38	32	44	37	32	42	36	31	29		
8	58	44	35	29	56	43	34	29	41	34	28	40	33	28	39	32	28	26		
9	54	40	31	26	52	39	31	26	38	31	25	37	30	25	36	29	25	23		
10	50	37	29	23	49	36	28	23	35	28	23	34	27	23	33	27	22	21		

NOTE: Floor Cavity Reflectance : 20%

ZONAL LUMEN Summary			
zone	Lumens	% of Lamp	% of Fixture
0-20	894.44	N.A.	10.40
0-30	1938.57	N.A.	22.50
0-40	3269.58	N.A.	38.00
0-60	6238.49	N.A.	72.50
0-80	8277.78	N.A.	96.30

Total Luminaire Efficiency = N.A. %



Product Specifications:

Construction:

- Fully recyclable heatsink
- IP Rating: IP20
- Impact Resistance: IK=2

Electrical System:

- Class 2, replaceable, high efficiency LED driver rated for 50,000 hours when used within operating conditions.
- Audible Noise – Per 29CFR 1910 sub part G: <24 dba (1 foot)
- THD: <20%
- PF > 0.9 except for the following conditions:
 - 4ft SKU with [A3] lumen
 - 4ft SKU with [EL] option
- Transient Protection: 100 kHz ring wave, 2.5 kV level
- Environmental Testing: High Temperature High Humidity: 60°C / 90% (non-condensing)
- Electronic Vibration Testing: Multi Axis, Random Vibration Profile: 2-2000 Hz, 5Gs on electronics
- Compliant with the material restriction requirements of RoHS

Installation:

- When ordering Lumination IS Series LED Luminaires 2 mounting brackets are included with each fixture.
- Additional mounting brackets can be ordered if needed, depending upon mounting and spacing of application.

Emergency battery Option:

- Luminaires with the "EL" option code come equipped with an IOTA Engineering ILB-SLHE-10 emergency battery back-up system to provide egress lighting during power interruptions.
- To calculate delivered lumens for an EL equipped luminaire use the following formula:

Emergency mode Lumens = P x LPW

"P" is the output power of the emergency system (10W for "EL")

"LPW" is the efficacy of the system as determined from the performance data

- For more information refer to www.iotaengineering.com/ILB/ILBPCManual.pdf

For more information and access to all of our resources, including our design tool visit: www.currentbyge.com

Performance Tables:

REVEAL TRIGAIN, CRI = 90+

DIMENSION	OPTICAL CODE	CCT	LUMENS	POWER	LPW
4 FT	42P35	3500	4000	34	117.6
4 FT	42P40	4000	4200	34	123.5
4 FT	52P35	3500	5000	43	116.3
4 FT	52P40	4000	5200	43	120.9
8 FT	84P35	3500	8000	66	121.2
8 FT	84P40	4000	8400	66	127.3
8 FT	A0P35	3500	9900	84	117.9
8 FT	A0P40	4000	10,400	84	123.8

*NOTE:

- 5W increment for EL option
- CRI = 90+ Reveal® TriGain™

CRI = 83

DIMENSION	OPTICAL CODE	CCT	LUMENS	POWER	LPW
4 FT	42840	4000	4200	31	135.5
4 FT	52840	4000	5200	38	136.8
4 FT	62840	4000	6250	48.5	128.9
4 FT	65840	4000	6500	43.2	150.5
4 FT	85840	4000	8500	58.3	145.8
4 FT	A1840	4000	10500	75	140
4 FT	A2840	4000	12300	89.6	137.3
8 FT	84840	4000	8400	60	140.0
8 FT	A0840	4000	10400	78	133.3
8 FT	A2840	4000	12500	96	130.2
8 FT	A3840	4000	13000	86.5	150.3
8 FT	A7840	4000	17000	113	150.4
8 FT	B1840	4000	21100	150	140.7
8 FT	B4840	4000	24500	182	134.6

*NOTE:

- Lumen Multiplier = 0.95 for CCT = 3000K
- Lumen Multiplier = 0.97 for CCT = 3500K
- Lumen Multiplier = 1.02 for CCT = 5000K
- 5 Watt increment for EL option
- CRI = 83

HIGH EFFICIENCY (HE) OPTION

DIMENSION	OPTICAL CODE	CCT	LUMENS	POWER	LPW
4 FT	42840	4000	4200	27	155
4 FT	52840	4000	5200	34	153
8 FT	84840	4000	8400	53	158
8 FT	A0840	4000	10400	66	158

*NOTE:

- HE option ONLY
- Lumen multiplier: CCT = 3500K -> 0.97
- CCT = 5000K -> 1.02
- Not available in [T] CRI
- Only available for following lumen code: [42] & [52] for 4ft., [84] & [A0] for 8ft.

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