

FEATURES

- Compact, open body linear high bay offers energy efficient performance
- Easy center-ballast cover allows tool-less access without lamp or reflector removal
- Extremely low profile—only 2" overall height allows fixture to be installed without concern about obstructions
- Reflector options include upright (recommended) or solid top with either narrow or wide distribution
- Rotary locking lampholders secure lamp in position and conceal contacts
- Easy field-installed accessories or factory-installed options for sensors, wire guards, lenses
- Quick and simple hanging systems including chain, tong, pipe hanger, or aircraft mounting
- Suitable for operation in up to a 45°C (113°F) ambient environment

PROJECT INFORMATION

Project Name _____

Type _____

Catalog No. _____

Date _____

CONSTRUCTION

Code gauge steel construction for a durable construction to withstand shipping and job site handling. End caps include hemmed edges for ease of handling. Fixture includes easy access to electrical components via removal channel cover. Tool-less access with one quarter-turn fastener. Oversized access plate conveniently mounted on back of channel for easy access to wiring compartment.

REFLECTOR

Your choice of multi-faceted specular aluminum which provides precise control for aisle lighting, high mounting heights, white aluminum for general area, or lower mounting heights. Includes a 25-year reflector warranty. Reflectors are available in solid top or with upright component. Silver reflectors provided with a narrow distribution. White reflectors provided with a wide distribution. Reflectors are securely mounted to fixture housing with screws. Reflector removal is not required to gain access to electrical components.

BALLASTS

Energy efficient, thermally protected, automatic resetting, Class P, high power factor, sound rated A, magnetic or electronic ballasts. CEE NEMA Premium compliant.

ELECTRICAL

Standard class "P", thermally protected, autoresetting HPF ballast, sound rated A. CEE NEMA Premium compliant. All ballast leads extend a minimum of 6" through access location. NEC/CEC-compliant ballast disconnect is standard.

FINISH

Steel surfaces are painted with high-gloss baked white enamel, applied over iron phosphate pre-treatment for maximum adhesion and rust resistance.

MOUNTING

Mounting options include aircraft cable, tong hanger, pipe hanger, or chain.

CERTIFICATION

All luminaires are built to UL 1598 standards and bear appropriate UL and cUL or CSA labels. Damp location labeling is standard.

ORDERING INFORMATION

EXAMPLE LHA4-654-NU-24EPU

LHA 4 - 6											
SIZE	LAMP TYPE	UPLIGHT	BALLAST FACTOR	VOLTAGE	OPTIONS						
4 4'	32 4', T8 54 4', T5HO	ST Solid Top U Uplight	BLANK 0.88BF for T8, 1.0BF for T5HO HL 1.18BF High Lumen T8, N/A for T5HO Lamp Type	U 120V-277V 347 347V 480 480V	GLR Fast Blow Fuse F3C5 3-Conductor Cord F4C5 4-Conductor Cord C6TL15 6' Cord and Twist-Lock™ Plug 15A (Add Voltage: 1=120, 2=277) C6TL20 6' Cord and Twist-Lock™ Plug 20A (Specify Voltage 1=120, 2=277) C6P151 6' Cord and Straight Blade Plug 15A, 120V SP Side Panels Installed ² EL141 1100-1400 Lumens, T8 1-Lamp EL5H 725-1250 Lumens, T5HO 1-Lamp WG Flat Wire Guard ² CA Clear Acrylic Lens ² CP Clear Polycarbonate Lens ² CAWG Clear Acrylic Lens and Flat Wire Guard CPWG Clear Polycarbonate Lens and Flat Wire Guard TC Steel Top/Side Covers Installed ² OS1360 Factory Installed Occupancy/Daylight Sensor, with 360° lens, 120/277/347V, 1 Relay OS2360 Factory Installed Occupancy/Daylight Sensor, with 360° lens, 120/277/347V, 2 Relay OS1A Factory Installed Occupancy/Daylight Sensor, with Aisle lens, 120/277/347V, 1 Relay OS2A Factory Installed Occupancy/Daylight Sensor, with Aisle lens, 120/277/347V, 2 Relay OS480360 Factory Installed Occupancy/Daylight Sensor, with 360° lens, 480V, 1 Relay OS480A Factory Installed Occupancy/Daylight Sensor, with Aisle lens, 480V, 2 Relay						
MODEL	NO. OF LAMPS IN CROSS SECTION	REFLECTOR	BALLAST	LAMPS INSTALLED							
LHA Industrial Fluorescent High Bay	6 Six	N Narrow Distribution W Wide Distribution	LHA4-654 24EP (1) 2-Lamp & (1) 4-Lamp Electronic T5HO, Programmed Start LHA4-632 3EU (2) 3-Lamp Electronic T8, Instant Start 3EP (2) 3-Lamp Electronic T8, Programmed Start 24E (1) 2-Lamp & (1) 4-Lamp Electronic T8, Instant Start 24EP (1) 2-Lamp & (1) 4-Lamp Electronic T8, Programmed Start	T8 F0835 32 Watt, 82 CRI, 3500K F0841 32 Watt, 82 CRI, 4100K F0850 32 Watt, 82 CRI, 5000K T5HO F554835 54 Watt, 85 CRI, 3500K F554841 54 Watt, 85 CRI, 4100K F554850 54 Watt, 85 CRI, 5000K							
ACCESSORIES (ORDER SEPARATELY)											
LHVTH Tong Hanger (Pair)	LHVW64 Wire Guard Cage, 4-Lamp, White	LHVW66 Wire Guard Cage, 6-Lamp, White	LHVQMS Aircraft Cable, 5' (Pair)	LHVQM10 Aircraft Cable, 10' (Pair)	LHVSPM5 Single Point Mounting, includes pair of 5' aircraft cables	LHVOS1360 Occupancy/Daylight Sensor, with a 360° lens, 120/277/347V	LHVOS2360 Occupancy/Daylight Sensor, with a 360° lens, 120/277/347V	LHVOS480360 Occupancy/Daylight Sensor, with a 360° lens, 480V	C6TL15-120 Cord and Plug Kit (white), 6 ft., Twist Lock NEMA L5-15P, 15 amp, 120V	C6TL15-277 Cord and Plug Kit (white), 6 ft., Twist Lock NEMA L7-15P, 15 amp, 277V	C6P15-120 Cord and Plug Kit (white), 6 ft., Straight Blade NEMA 5-15P, 15 amp, 120V

¹ Use programmed start ballast. Not recommended for use with instant start. For more occupancy/daylight harvesting sensor accessories contact your Columbia Lighting representative.

² Side panels/top covers or shielding options increase height to 27/8".

PHOTOMETRIC DATA

Test ITL68009 Test Date 3/22/11

LUMINAIRE DATA

Luminaire	LHA4-632-NU-EHL LHA Fluorescent High Bay, Industrial 21" x 48" 6-lamp with specular reflector and uplight
Ballast	(2) GE332MAX-H-42T
Ballast Factor	1.18
Lamp	F32T8
Lumens per Lamp	2950
Watts	215
Mounting	Pendant
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.23 90° = 0.96
Luminous Opening in Feet	Length: 3.99 Width: 1.69 Height: 0.00

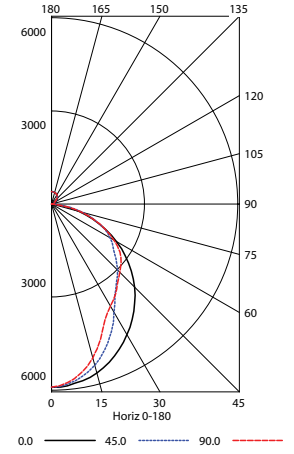
AVG. LUMINANCE (Candela/Sq. M.)

	0.0	22.5	45.0	67.5	90.0
0	9412	9412	9412	9412	9412
30	8945	8503	7415	6975	6993
40	8673	7720	6791	6889	6887
45	8540	7201	6784	6899	7016
50	8329	6683	6698	7075	7261
55	8046	6343	6735	7325	7492
60	7681	6184	6941	7330	7384
65	7226	6051	7063	7256	7180
70	6529	6021	6842	6898	6707
75	5619	6094	6402	6260	6106
80	4348	5580	5405	4863	4587
85	2216	3975	2656	1685	1355

COEFFICIENTS OF UTILIZATION (%)

RCR	80			70			50			0		
	RW	70	50	30	10	70	50	30	10	50	30	10
1	94	89	86	83	91	87	84	81	82	79	77	68
2	85	78	72	67	82	76	71	66	72	67	64	57
3	78	69	62	56	75	67	60	55	63	58	53	48
4	71	61	53	47	69	59	52	47	56	50	46	41
5	65	54	47	41	63	53	46	40	51	44	39	36
6	60	49	41	36	58	48	41	35	46	39	35	31
7	56	45	37	32	54	44	36	31	42	35	31	28
8	52	41	33	28	51	40	33	28	38	32	28	25
9	49	37	30	26	47	37	30	25	35	29	25	22
10	46	35	28	23	44	34	27	23	33	27	23	20

INDOOR CANDELA PLOT



ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	4180	23.6	27.1
0-40	6589	37.2	42.7
0-60	11304	63.9	73.3
0-90	14358	81.1	93.0
0-180	15431	87.2	100.0

RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

ENERGY DATA

Total Luminaire Efficiency	87.2%
Luminaire Efficacy Rating (LER)	85
IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$2.82 based on 3000 hrs. and \$0.08 per KWH

LUMINAIRE DATA

Luminaire	LHA4-654-NU-24EP LHA Fluorescent High Bay, Industrial 21" x 48" 6-lamp with specular reflector and uplight
Ballast	B254PUNVHB-D, B454PUNVHB-E
Ballast Factor	1.00
Lamp	F54T5
Lumens per Lamp	4450
Watts	347
Mounting	Pendant
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.22 90° = 0.94
Luminous Opening in Feet	Length: 3.99 Width: 1.69 Height: 0.00

AVG. LUMINANCE (Candela/Sq. M.)

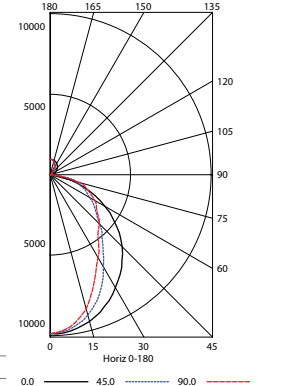
	0.0	22.5	45.0	67.5	90.0
0	15749	15749	15749	15749	15749
30	14926	14233	12215	11052	10934
40	14460	12803	10461	9696	9613
45	14274	11856	9854	9601	9746
50	13897	10810	9310	9638	9608
55	13239	9810	9245	9401	9766
60	12505	9073	9022	9967	10235
65	11596	8227	9314	10145	10357
70	10184	7874	9479	10613	11005
75	8481	7592	10158	11860	12033
80	6178	7750	10471	8706	8154
85	2784	6521	3224	806	293

COEFFICIENTS OF UTILIZATION (%)

RCR	80			70			50			0		
	RW	70	50	30	10	70	50	30	10	50	30	10
1	96	92	88	85	93	89	86	83	85	82	79	70
2	88	81	75	70	85	78	73	68	74	70	66	59
3	80	71	64	58	77	69	63	57	66	60	56	50
4	74	63	56	50	71	62	55	49	59	53	48	43
5	68	57	49	43	66	55	48	43	53	47	42	38
6	63	51	44	38	61	50	43	38	48	42	37	33
7	58	47	39	34	57	46	39	33	44	37	33	30
8	54	43	35	30	53	42	35	30	40	34	29	27
9	51	39	32	27	49	39	32	27	37	31	27	24
10	48	36	30	25	46	36	29	25	34	29	24	22

Test ITL68011 Test Date 3/23/11

INDOOR CANDELA PLOT



ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	6969	26.1	29.2
0-40	10806	40.5	45.3
0-60	17745	66.5	74.3
0-90	22256	83.4	93.2
0-180	23878	89.4	100.0

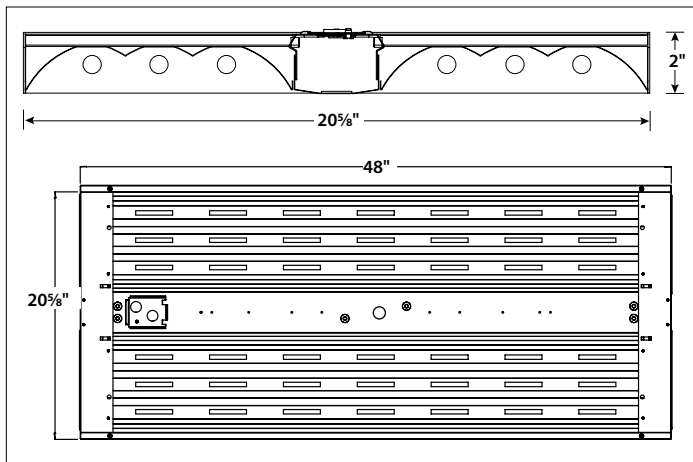
RCR = Room Cavity Ratio

RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

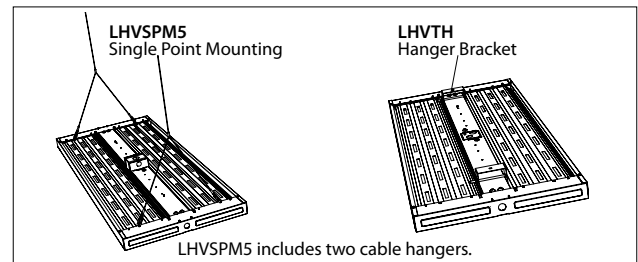
ENERGY DATA

Total Luminaire Efficiency	89.4%
Luminaire Efficacy Rating (LER)	69
IESNA RP-1-2004 Compliance	Noncompliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$3.48 based on 3000 hrs. and \$0.08 per KWH

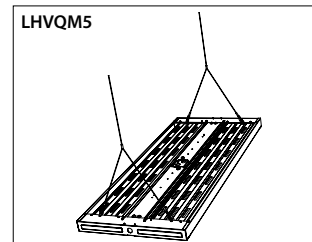
DIMENSIONAL DATA



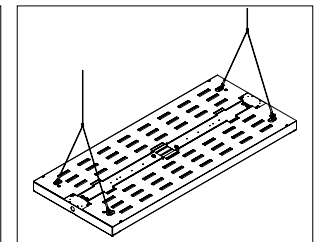
OPTIONAL HANGER BRACKETS



LHA AIRCRAFT CABLE



LHA TOP COVER



NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.