

2/22/2015

## Highbay Fluorescent - Six Lamp Low Profile Design



Project:	
Catalog#:	
Approved by:	

### Description

HFLP series high-bay fluorescent fixture is a great energy saving alternative to traditional HID highbay fixtures. This fixture operates six lamps and comes equipped with Howard ballasts as a standard feature.

### Benefits

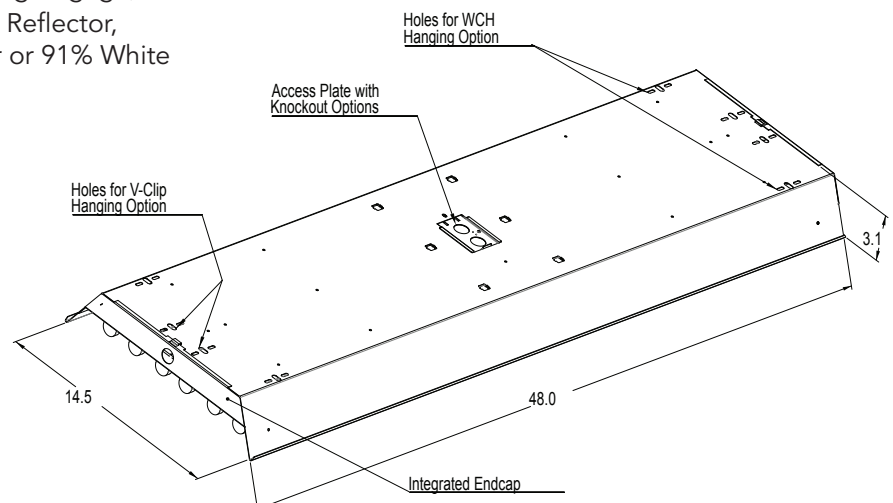
- Energy Saving Compared to HID systems
- Exceptional Color Rendering
- High System Efficiency
- Long Lamp Life
- Instant On/Re-strike Capability
- Howard Ballast and Howard Lamp as a system is covered by Howard Industries Warranty
- Quality Lamp holders
- Computer Designed Reflectors
- System Tested, Designed, Approved, and Manufactured by Howard Industries in Mendenhall Mississippi.
- Compliant with Safety and performance standards.

### Applications

Warehouse	Cafeteria
Manufacturing Facility	Auditorium

### Features

- Easy access ballast through removal of 2 screws and snap out reflector
- Access plate provides access to electrical wiring without the need to open the fixture
- Knock-outs for easy electrical wiring and assembly
- Factory Installed Occupancy Sensor option
- Lamp Installation option available
- Multiple power cord set options, (voltage, length, gage)
- Choice of 86% Standard Specular Aluminum Reflector, 95% Specular Enhanced Aluminum Reflector or 91% White Reflector
- Heavy Duty pre-painted steel construction
- Can be easily mounted by a single person
- Chain and V-Clip Hanging option
- Wire cable hanging option.
- UL Listed for Damp Locations



Specifications subject to change without notice.

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## Ordering Information

Model Family	Reflector	No. of Lamps	Lamp Type/Wattage <sup>(1)</sup>	CRI/CCT	Ballast	Input Volts	Factory Installed Options	Cordset Options	T B A	Pack.
HFLP	E	6	54	A	PS	MV	00A	07	0	I
HFLP	E: Enhanced Specular Aluminum (95%)  A: Specular Aluminum (86%)  W: White reflective (91%)	6	T8 Lamps 28: F28T8 32: F32T8  T5 Lamps 28:F28T5 54: F54T5HO	A: No Lamps CRI CCT F: 85 3000 G: 85 3500 H: 85 4100 I: 85 5000 J: 85 6500	SE: SBF High Eff <sup>(2)</sup> HE: HBF High Eff <sup>(2)</sup> LE: LBF High Eff <sup>(2)</sup>  PS: PRS T5 P8: PRS T8 <sup>(2)</sup>	MV: 120-277v	000: No FIOs A: Occ Sensor <sup>(3) (4)</sup> I: Special Wiring Instructions	00: Standard Disconnect 01: 6' SJT 18/3, no plug 02: 10' SJT 18/3, no plug 03: 6' SJT 18/3 L5-15, twist lock 120v 04: 10' SJT 18/3 L5-15twist lock 120v 05: 6' SJT 18/3 5-15non twist lock 120v 06: 10' SJT 18/3 5-15non twist lock 120v 07: 6' SJT 18/3 L7-15 twist lock 277v 08: 10' SJT 18/3 L7-15 twist lock 277v 11: 16/3, no plug specify length 17: 18/3, no plug specify length 22: 6' SJT 16/3 L7-20 twist lock 277v 23: 6' SJT 18/3 L6-15 twist lock 240v  *Other cordsets available, consult customer service		I: Single B: Bulk <sup>(4)</sup>

(1) Lamp installation available.

(2) High Efficiency ballasts are CEE Listed.

(3) Occupancy Sensors should be used with programmed rapid start ballasts for maximum lamp life.

Standard Occupancy Sensor requires neutral wired fixtures (ex. -120v or -277v).

For phase-to-phase voltage applications (240v) advise Customer Service at time of request.

(4) Bulk packaging is not available when occupancy sensor is ordered as a Factory Installed Option

SE	Standard Ballast Factor High Efficiency Instant Start T8 Ballast
HE	High Ballast Factor High Efficiency Instant Start T8 Ballast
LE	Low Ballast Factor High Efficiency Instant Start T8 Ballast
PS	Program Rapid Start T5 Ballast
P8	Program Rapid Start High Efficiency T8 Ballast

**Sample Ordering Number:**

**HFLP E 6 54 A PS MV 00A 07 I**

HFLP Series Highbay Fluorescent

Enhanced Specular Aluminum Reflector

6-lamps (none installed)

F54T5HO Program Rapid Start Ballast

Multi-volt (120-277v)

Factory Installed Occupancy Sensor

6' SJT 18/3 L7-15 twist lock 277v Cordset

Single Packaging

**RAPID SHIP MODEL  
AVAILABLE FOR NEXT DAY SHIPMENT**

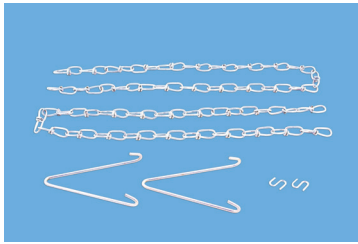
•HFLPA654APSMV000000I

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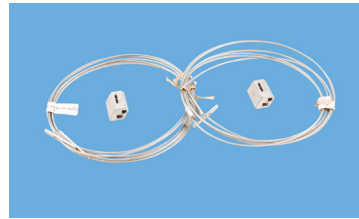


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**Field Installed Accessories**



HF-2CV (2 foot)  
HF-3CV (3 foot)  
Hanging Chain & V-clips

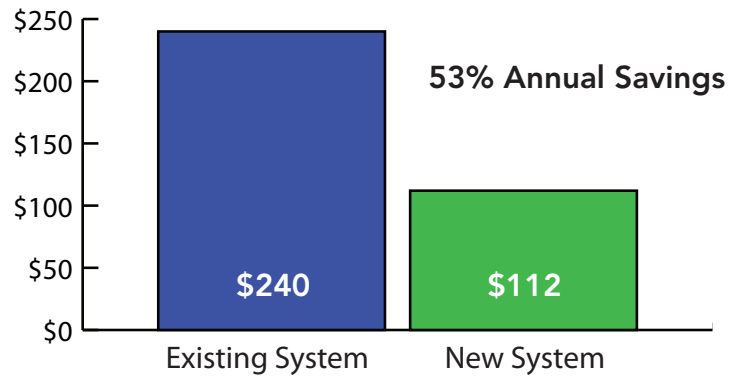


HF-WCH (~5 foot)  
Wire Cable Hanging Kit  
(2 pcs per kit)

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Energy Cost Estimator					
		Existing System		New System	
		400W MH Highbay		HFLPE632ASE High Eff Standard Ballast Fluorescent Highbay	
Hours burned per year	4368	Number of Fixtures	1	Number of Fixtures	1
Cost per kWh\$	0.12	Watts per Fixture (existing system)	458	Watts per Fixture (new system)	214
Energy Cost Estimation		Energy used per year (existing system)	\$240	Energy used per year (new system)	\$112
		Energy saving per year (per fixture)		<b>\$128.00</b>	



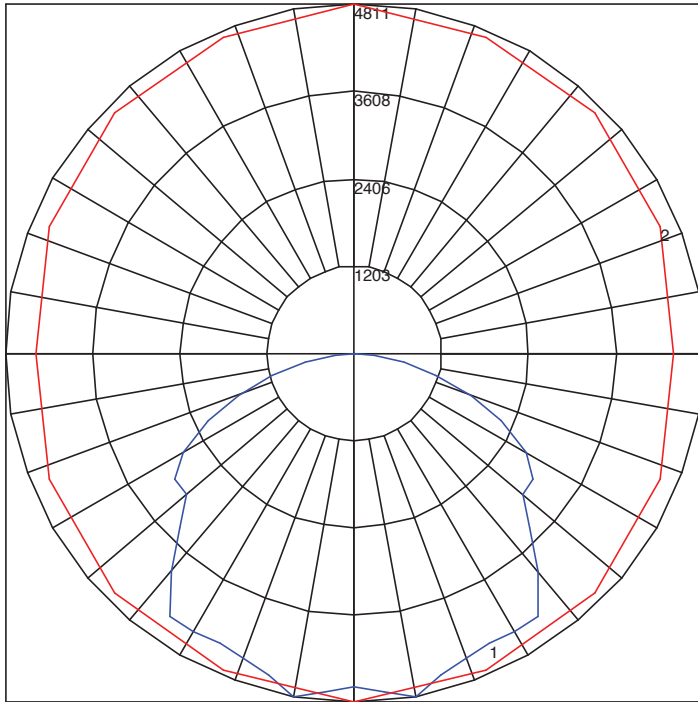
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Highbay Fluorescent

**Photometric Data - 6 Lamp T8 (HFLPE632)**

**Candela Polar Plot**



HFLPE632  
Test Report: HFLP 6L T8 E 2012060.ies  
Spacing Criteria (0-180): 1.28  
Spacing Criteria (90-270): 1.46  
Spacing Criteria (Diagonal): 1.50

Maximum Candela =4811.13

Located At Horizontal Angle = 90, Vertical Angle = 10  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (10) (Through Max. Cd.)

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**Luminaire Efficiencies\***

Reflector Type	T8
Enhanced Specular	88%
Specular	83%
White	84%

\*Luminaire efficiency is the ratio of light output emitted by the luminaire to the light output emitted by its lamps.

**Zonal Lumen Summary**

Zone	Lumens	%Lamp	%Fix
0-30	3738.67	21.50	24.40
0-40	6283.69	36.10	41.00
0-60	11466.81	65.90	74.90
0-90	15250.29	87.60	99.60
0-180	15309.84	88.00	100.00

**Luminance Data (cd/Sq.m)**

Angle In Degrees	Average 0-deg	Average 45-deg	Average 90-deg
45	9238	9392	8522
55	8872	8001	8656
65	8458	7700	7737
75	7986	5972	5362
85	6249	2264	1889

**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
0	105	105	105	105	102	102	102	102	98	98	98	93	93	93	89	89	89	88
1	95	90	86	83	92	88	85	81	85	81	79	81	79	76	78	76	74	72
2	86	78	72	66	83	76	71	66	73	68	64	70	66	62	67	64	61	59
3	78	68	61	55	76	67	60	54	64	58	53	64	56	52	59	55	51	49
4	71	60	52	46	69	59	51	45	57	50	45	54	49	44	52	48	43	41
5	65	53	45	39	63	52	45	39	50	44	38	49	43	38	47	42	38	36
6	60	48	40	34	58	47	39	34	45	39	33	44	38	33	42	37	33	31
7	56	43	35	30	54	43	35	30	41	34	29	40	34	29	39	33	29	27
8	52	39	32	26	50	39	31	26	38	31	26	36	30	26	35	30	26	24
9	48	36	29	24	47	36	28	24	35	28	23	34	28	23	33	27	23	22
10	45	33	26	21	44	33	26	21	32	26	21	31	25	21	30	25	21	19

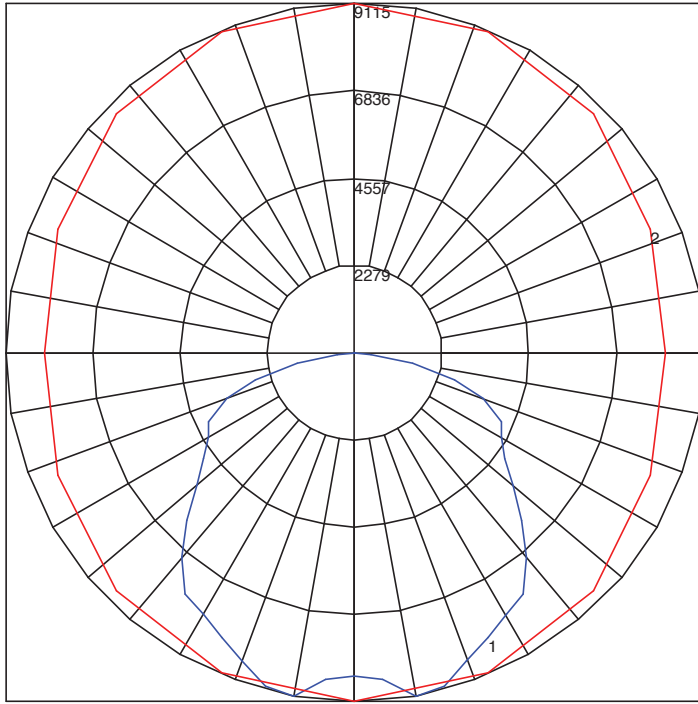
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Highbay Fluorescent

**Photometric Data - 6 Lamp T5 (HFLPE654)**

**Candela Polar Plot**



HFLPE654  
 Test Report: HFLP 6L T5 E 20120606.ies  
 Spacing Criteria (0-180): 1.28  
 Spacing Criteria (90-270): 1.42  
 Spacing Criteria (Diagonal): 1.48

Maximum Candela = 9114.76

Located At Horizontal Angle = 90, Vertical Angle = 10  
 # 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
 # 2 - Horizontal Cone Through Vertical Angle (10) (Through Max. Cd.)

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**Luminaire Efficiencies\***

Reflector Type	T5
Enhanced Specular	92%
Specular	88%
White	88%

\*Luminaire efficiency is the ratio of light output emitted by the luminaire to the light output emitted by its lamps.

**Zonal Lumen Summary**

Zone	Lumens	%Lamp	%Fix
0-30	7008.41	23.40	25.30
0-40	11625.93	38.80	42.00
0-60	20788.50	69.30	75.10
0-90	27649.77	92.20	99.80
0-180	27698.31	92.30	100.00

**Luminance Data (cd/Sq.m)**

Angle In Degrees	Average 0-deg	Average 45-deg	Average 90-deg
45	16898	16401	15511
55	16172	14217	13785
65	14578	12374	14689
75	13039	12108	12289
85	9002	4606	3087

**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
0	110	110	110	110	107	107	107	107	102	102	102	98	98	98	94	94	94	92
1	100	95	91	87	97	93	89	85	89	86	83	85	82	80	82	80	78	76
2	90	82	75	70	88	80	74	69	77	72	67	74	69	66	71	67	64	62
3	82	72	64	57	79	70	63	57	67	61	56	65	59	55	62	58	54	52
4	75	63	55	48	73	62	54	48	60	53	47	57	51	47	55	50	46	44
5	69	56	48	41	67	55	47	41	53	46	41	51	45	40	50	44	40	38
6	63	51	42	36	61	50	42	36	48	41	35	46	40	35	45	39	35	33
7	59	46	38	32	57	45	38	32	44	36	31	42	36	31	41	35	31	29
8	55	42	34	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26
9	51	38	31	25	50	38	30	25	37	30	25	36	29	25	35	29	25	23
10	48	35	28	23	47	35	28	23	34	27	23	33	27	23	32	27	22	21

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