

DESCRIPTION

The HBL series is ideal for high mounting height industrial or retail applications. Advanced optical designs provide maximum performance from either T5 or T8 lamps. Optional uplight component produces excellent ceiling uniformity. HBL's high lumen package allows the benefits of fluorescent to be applied at high mounting heights that were traditionally exclusive to H.I.D. Benefits include exceptional color rendering, high system efficacy, 95% lumen maintenance, long lamp life, instant on/instant re-strike, economical dimming, and uniform brightness control. Typical HBL applications include retail, shopping malls, light industrial and recreational environments.

SPECIFICATION FEATURES

Construction

Channel and end plates are constructed of die formed steel. The channel provides strength, numerous KO's for easy installation, and excellent thermal dissipation without any special or proprietary components. Stiffening brackets add additional strength and rigidity to channel and reflectors.

Electrical

The HBL comes with a standard Class "P" electronic ballast and twist-lock lampholders. UL/cUL listed for high ambient environments up to 55°C (131°F) for all lamp and ballast combinations listed. Suitable for damp locations.

Finish

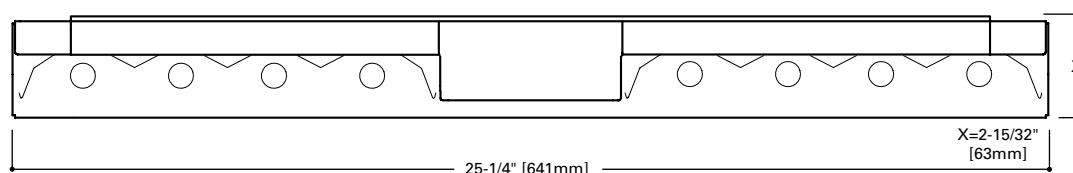
Electrostatically applied baked white enamel finish is preceded by a multistage cleaning cycle, iron phosphate coating with rust inhibitor.

Optics

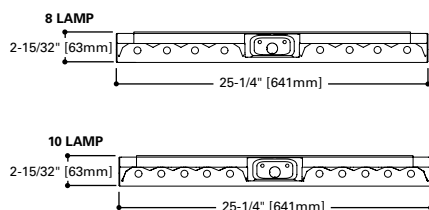
Die formed, segmented optical design optimizes performance across three distributions. Optical choices include a narrow distribution for aisles, medium distribution for assembly and loading areas, or wide distribution for general, open area lighting. An uplight option is offered to permit ceiling uniformity and allow for ample lamp and luminaire heat dissipation.

High Ambient

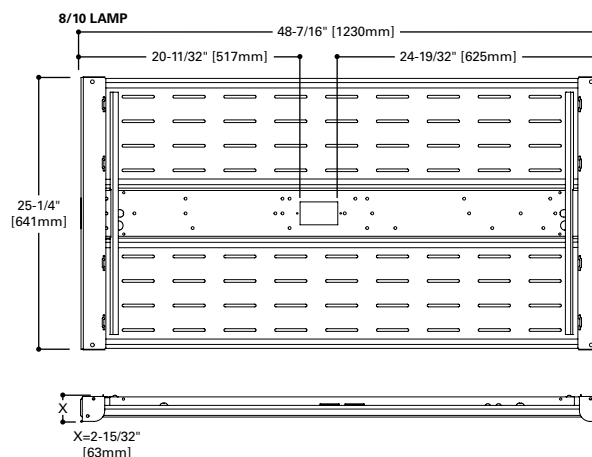
To maximize ballast life, the HBL should be ordered with a high-temperature ballast in ambient environments that typically exceed 40°C (102°F).



LAMP CONFIGURATIONS



DIMENSION TOP VIEW



HBL SERIES

8 OR 10 T5 LAMPS

High-Bay Industrial Open Luminaire



ENERGY DATA

Input Watts:
EB Ballast and STD Lamps
 854=450

Luminaire Efficacy Rating
LER = 71 (Specular Inserts)
Catalog Number: HBL-854T5-UPL

Yearly Cost of 1000 lumens,
3000 hrs at .08 KWH = \$3.38

*Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.

**Consult Pre Sales Technical Support.

LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

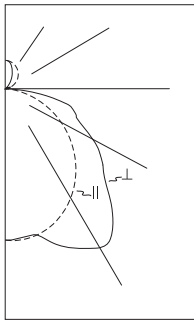
LINEAR DISCONNECT

Safe and convenient means of disconnecting power.



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PHOTOMETRICS



HBL-854T5-M-UPL
Medium Distribution
 (2) Electronic Ballasts
 (8) F54T5 54W lamps
 4400 lumens
 Spacing criterion:
 (H) 1.3 x mounting
 height, (L) 1.7 x
 mounting height
 Efficiency 94.1%
 Test Report:
 HBL854MUPL.IES
 LER = 72
 Yearly Cost of 1000
 lumens, 3000 hrs at
 .08 KWH = \$3.33

Candela			
Angle	Along H	45°	Across L
0	8101	8101	8101
5	8135	8060	8028
10	8068	7954	7962
15	7903	7834	8327
20	7653	7992	8971
25	7307	8309	9421
30	6894	8464	9844
35	6413	8517	9807
40	5871	8537	8950
45	5287	8125	7794
50	4664	7161	6856
55	4024	5999	6218
60	3358	5090	5405
65	2669	4375	4500
70	1983	3445	4026
75	1321	2775	3622
80	730	2289	2329
85	261	967	923
90	7	13	12

Coefficients of Utilization

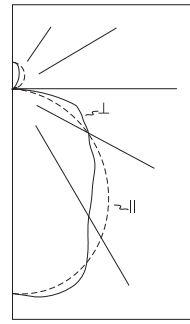
rc	Effective floor cavity reflectance												20%								
	80%				70%				50%				30%				10%				0%
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	110	110	110	110	107	107	107	107	101	101	101	95	95	95	89	89	89	87			
1	100	95	91	87	96	92	88	85	87	83	81	82	79	77	77	75	73	71			
2	90	82	75	69	87	79	73	68	75	70	65	71	66	63	67	63	60	58			
3	82	71	63	57	79	69	62	56	65	59	54	62	56	52	58	54	50	48			
4	74	63	54	47	72	61	53	47	57	51	45	54	49	44	52	47	42	40			
5	68	56	47	40	66	54	46	40	51	44	39	49	42	37	46	41	36	34			
6	63	50	41	35	60	48	40	34	46	39	33	44	37	33	41	36	32	30			
7	58	45	36	30	56	44	36	30	42	34	29	40	33	29	38	32	28	26			
8	54	41	32	27	52	40	32	26	38	31	26	36	30	25	34	29	25	23			
9	50	37	29	24	48	36	29	24	35	28	23	33	27	23	32	26	22	20			
10	47	34	26	21	45	33	26	21	32	25	21	31	25	20	29	24	20	18			

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	6859	19.5	20.7
0-40	12020	34.1	36.3
0-60	22731	64.6	68.6
0-90	30614	87.0	92.4
0-180	33127	94.1	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	10298	15826	15181
55	9662	14405	14931
65	8698	14258	14665
75	7030	14767	19274
85	4124	15281	14586



HBL-854T5-N-UPL
Narrow Distribution
 (2) Electronic Ballasts
 (8) F54T5 54W lamps
 4400 lumens
 Spacing criterion:
 (H) 1.3 x mounting
 height, (L) 1.1 x
 mounting height
 Efficiency 94.0%
 Test Report:
 HBL854NUPL.IES
 LER = 71
 Yearly Cost of 1000
 lumens, 3000 hrs at
 .08 KWH = \$3.38

Candela			
Angle	Along H	45°	Across L
0	10951	10951	10951
5	10984	11064	11145
10	10903	11152	11247
15	10700	11067	11140
20	10369	10834	10744
25	9921	10373	9544
30	9365	9511	8110
35	8714	8103	7342
40	7984	6895	6673
45	7200	6077	6210
50	6376	5356	5669
55	5508	4797	5021
60	4615	4174	4688
65	3690	3565	4228
70	2762	3128	3913
75	1869	2710	3552
80	1035	2266	2342
85	326	996	959
90	8	12	9

Coefficients of Utilization

Effective floor cavity reflectance																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		
RCR																				
0	110	110	110	110	107	107	107	107	101	101	101	95	95	95	90	90	90	88		
1	100	95	91	87	97	93	89	85	87	84	82	83	80	78	78	76	74	72		
2	91	83	76	71	88	81	75	69	76	71	67	72	68	64	68	65	62	60		
3	83	73	65	59	80	71	64	58	67	61	56	64	59	54	60	56	53	50		
4	76	65	56	50	73	63	55	49	60	53	48	57	51	46	54	49	45	43		
5	70	58	49	43	67	56	48	43	54	47	41	51	45	40	49	44	39	37		
6	65	52	44	38	62	51	43	37	48	42	36	46	40	36	44	39	35	33		
7	60	47	39	33	58	46	38	33	44	37	32	42	36	32	40	35	31	29		
8	56	43	35	30	54	42	35	30	41	34	29	39	33	28	37	32	28	26		
9	52	40	32	27	51	39	32	27	37	31	26	36	30	26	34	29	25	23		
10	49	37	29	24	47	36	29	24	35	28	24	33	27	23	32	27	23	21		

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	8780	24.9	26.5
0-40	13886	39.4	42.0
0-60	23440	66.6	70.8
0-90	30822	87.6	93.1
0-180	33096	94.0	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	14024	11837	12096
55	13226	11519	12057
65	12025	11618	13779
75	9946	14421	18902
85	5152	15739	15155

Modular F-Bay Power Supply Option

Cooper Lighting Solutions' F-Bay Modular Power Supply option is available for use with all F-Bay products. The modular power supply allows external fixture access for safe and easy servicing. There is no need to remove lamps or reflectors to disconnect fixture power with F-Bay Modular Power Supply. Access to the individual fixtures power supply allows servicing without turning off all the fixtures, disrupting occupants. F-Bay Modular Power Supply is a time-saver in installation **simply plug & power.**



1. Modular Power Supply Receptacle supplied mounted into fixture Access Plate
2. Modular Power Cord & Plugs in 120, 277, 347, & 480V configurations for easy plug & power into existing supply

No internal fixture access required for installation or disconnecting power

Modular Motion Sensor Option supplied with Mounting Box and Modular Power Supply Receptacle

Code Compliance

- UL/cUL Certified for Make/Break under load (UL2549)
- Meets NEC requirements for ballast disconnect (NEC 410.73G)
- Allows for addition of Occupancy Sensor without hard connections
- Receptacles complete with insulating/dust cap

ORDERING INFORMATION

SAMPLE NUMBER: HBL-854T5-N-UNV-EBT2-UPL-U

Includes V Hangers for rapid installation⁽⁷⁾

Width Blank=26" wide 8 & 10 Lamp (nominal) Series HBL=Linear High Bay No. of Lamps 8=8 Lamps 10=10 Lamps Lamp Type 49T5=49W T5HO (4') Lamps 51T5=51W T5HO (4') Lamps 54T5=54W T5HO Lamp (48" Long) Distribution N=Narrow Beam (Standard) M=Medium Beam W=Wide Beam	Voltage⁽¹⁾ UNV=Universal 120/277 Voltage UNC=Universal 347/480 Voltage 120V=120 Volt 277V=277 Volt 347V=347 Volt Options Lamps Installed L5835=T5HO Lamp, 85CRI 3500K L5841=T5HO Lamp, 85CRI 4100K L5850=T5HO Lamp, 85CRI 5000K GL=Single Element Fuse GM=Double Element Fuse EL=Emergency Installed	Ballast Type^{(3), (6)} T5 Systems EBT=T5 Linear Electronic Program Rapid Start.⁽²⁾ Total Harmonic Distortion < 10% No. of Ballast 1, 2 or 3 EHT=T5 Linear Electronic Program Start High Ambient.^{(2), (3)} Total Harmonic Distortion < 10% No. of Ballast 1, 2 or 3	Options UPL=Uplight Apertures on Reflector MP=Modular Power Receptacle (Used for all Cord or Cord and Plug options)^{(4), (8)} MWS=Modular Wiring System⁽⁵⁾ MS=360° or 180° Motion Sensor installed (120V through 347V or 480V)⁽¹⁾ Accessories (order separately) HBL-SPM=Single Monopoint Hanger w/Hub FH-1=Fixture Hook FL-1=Fixture Loop Y-TOGGLE=Y Mounting Toggle, #2 Cable (Specify 10' or 30') HBAYC-CHAIN/SET/U=(2) V-Hook Hanger, 36" Chain Sets w/S-Hooks MC3=3' Modular Power Cord MPC3=3' Modular Power Cord & Plug (Specify Voltage) MC6=6' Modular Power Cord MPC6=6' Modular Power Cord & Plug (Specify Voltage) MMS=360° or 180° Aisle Motion Sensor with Modular Power Receptacle (120-277V)⁽⁴⁾ MDS6=6' Modular Power Cord with MWS 27DS18/2G06MP Connector⁽⁸⁾ WG/HBL8-4FT-B=8 Lamp Wireguard w/Clips	Packaging U=Unit Pack PALC=Palletize d In Carton
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NOTES: ⁽¹⁾Voltage must be specified when ordered with plugs or emergency ballasts. For MS option, indicate UNV (for 120V or 277V), 347V or 480V. ⁽²⁾EBT ballast systems suitable for operation in ambient environments up to 104°F (40°C) in uplight configuration. ⁽³⁾EHT/HT5/HCT5 ballast systems are suitable for ambient environments not to exceed 149°F (65°C) in uplight configurations. ⁽⁴⁾Requires use of MC_ or MPC_ cord accessories, specify voltage for plugs. ⁽⁵⁾Cannot be combined with Modular Power Receptacle (MP). ⁽⁶⁾Recommended when using motion sensor options or accessories. ⁽⁷⁾Can be used in high abuse applications such as gymnasiums. ⁽⁸⁾For MWS with MP, choose MP in fixture logic and then choose MWS accessory such as MDS6.

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Solutions Representative for availability and ordering information.

SHIPPING DATA

Catalog No.	Wt.
HBL-854T5-UNV-UPL	22 lbs.