Industra by TCP

LED TECHNICAL DATA

LED Low Bay

High efficiency LED Low Bays. Use anywhere you need exceptional light distribution for mounting heights up to 25 feet.

LIMITLESS OPTIONS for the following applications:

Warehouses

Commercial Facilities

Manufacturing Facilities

Aisles (Open and Stack)

Great Features/Benefits

- Energy efficient – Up to 61% energy savings compared to HID
- Smooth, uniform dimming
- Instant on
- Long life: 50,000 hours
- Replaces traditional metal halide and linear fluorescent low bay systems
- Excellent color rendering
- Heavy duty 20 gauge housing is code grade steel

TCP® | 325 Campus Dr. | Aurora, Ohio 44202 | P: 800-324-1496 | tcpi.com

we know light.™

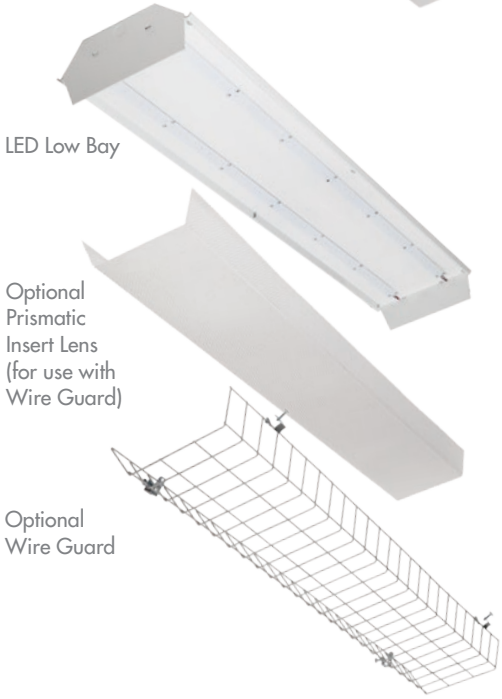
LED Low Bay

Features/Benefits

Up to 61% less energy than HID alternatives.	Instant energy savings; potential rebate eligibility.
Long 50,000 hour rated life.	Minimizes replacements & maintenance costs.
Very low heat generation.	Less energy wasted as heat.
Excellent color consistency & CRI.	Enhances color of focal point while maintaining uniformity throughout lighting installation.
UL approved for damp location.	Can be used outdoors when protected from elements. Withstands humidity indoors/outdoors.

Specifications

Input Line Voltage	120-277 & 347-480 VAC
Input Power	83W
Input Line Frequency	50/60HZ
Luminaire Life (Rated)	50,000 hours
Controls	0-10V dimming (standard)
Minimum Starting Temperature	-30°C
Maximum Operating Temperature	50°C
CRI	83+
Power Factor	>0.9
THD	<20%



Warranty

Five year limited warranty against defects in manufacturing.

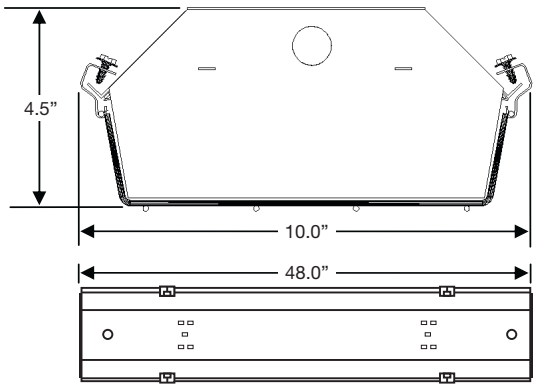
Replacement Comparison

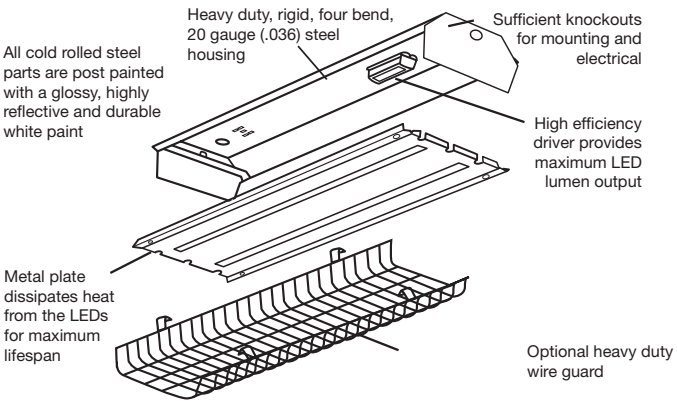
TYPE	WATTAGE	ENERGY SAVINGS (%)
TCP LED Low Bay	**83W**	—
175W Metal Halide	215W	61%
4 Lamp T8 HBF	147W	44%
3 Lamp T5 HO	182W	54%

c UL US LISTED DLC QPL LISTED 5 YEAR WARRANTY

Not all versions of this product are qualified on the DLC QPL. To view our DLC qualified products, please consult the DLC Qualified Products List at www.designlights.org/qpl.

Dimensions and Mounting Data





Industra by TCP

LED Low Bay
LED TECHNICAL DATA

Applications

The TCP LED Low Bay's superior lumen package is ideal for replacing traditional metal halide and linear fluorescent low bay systems. Benefits include high efficiency, excellent color rendering, long life, instant on, and improved uniformity. Suggested mounting heights from 10' - 25' with primary applications including warehousing, commercial facilities, manufacturing facilities, open and stack aisle applications.

Construction

The full body assembly features TCP high efficiency drivers and high output LEDs. The LED Low Bay's heavy duty 20 gauge housing and 8 gauge wire guard is code gauge steel and all components, excluding the wire guard, have a baked white enamel finish that is electrostatically applied and post painted with a glossy, highly reflective and durable white paint.

Electrical

TCP high efficiency drivers are Class 2 rated, cULus listed, and provide consistent power to ensure even lighting from the long life LEDs. Each driver is matched to a light engine to deliver 50,000 hours life. Our drivers are tightly secured by mounting bolts. 0-10V dimming comes standard.

Optics

The optional impact resistant acrylic diffuser comes in two styles. The prismatic insert lens is for use with the wire guard, while the prismatic wraparound lens is used on its own without the wire guard.

Item Number	
Notes	Type

Installation

Suspension by chain, cable, or hook with appropriate accessories.

Warranty

Five year limited warranty against defects in manufacturing.

Listings

cULus Listed – damp location rated
RoHS Compliant
DLC v4.2 Standard

Lumen Maintenance

Lumen Maintenance Factor (LMF)[1]			
25,000 Hour Projected LMF[2]	**50,000 Hour Calculated LMF[3]**	**100,000 Hour Calculated LMF[3]**	**Reported L_{70} (hours)[2]**
94.00%	88.67%	78.89%	>36,000

[1] Lumen Maintenance calculated per TM-21-11 based on LM-80-08 data and in-situ luminaire testing.
[2] IESNA TM-21-11 projected value based on 6X IESNA LM-80-08 total test duration of 6,000 hours.
[3] IESNA TM-21-11 calculated value exceeds 6X IESNA LM-80-08 total test duration of 6,000 hours.

Catalog Ordering Matrix

Example: TCPLB4UNIZDL150K

TCP	LB4		ZD	L1		
BRAND	**FAMILY**	**VOLTAGE**	**CONTROLS/DIMMING**	**LUMEN PACKAGE (Power)[1][2]**	**COLOR TEMPERATURE**	**OPTIONS**
TCP	**LB4** - 4' LED Low Bay	**UNI** – 120V-277V **UHV** – 347V-480V	**ZD** – 0-10V Dimming	**L1** – 9,300 lumens (83W)	**41K** – 4100K **50K** – 5000K	(see below)

[1] Approximate lumen output. Actual performance may vary based on CCT, options selected and end user application.
[2] Actual wattage may differ by +/- 10%.

OPTIONS (Add to catalog number in order shown)

1 POWER CORDS
- **6C** - 6' PCord 300V 16/3 SJTOOW NO PLUG
- **6C4** - 6' PCord 300V 18/4 SJTOW NO PLUG
- **6W** - 6' WHIP PCord 600V 16/3 NO PLUG
- **10C** - 10' PCord 277V SJTOOW NO PLUG
- **10C6** - 10' PCord 600V 15A 16/3 STOW NO PLUG
- **20C** - 20' PCord 277V 20A 16/3 SJTOOW NO PLUG
- **20C4** - 20' PCord 300V 18/4 SJTOW NO PLUG

2 OCCUPANCY SENSORS
- **TS1** - TCP Occupancy Sensor w/bracket and interchangeable lenses, 40' or less, 120V, 277V, or 347V.
- **TS1C** - TCP Cold Storage Occupancy Sensor w/bracket and interchangeable lenses, 40' or less, 120V, 277V, or 347V.
- **TS4** - TCP Occupancy Sensor w/bracket and interchangeable lenses, 40' or less, 480V.
- **TS4C** - TCP Cold Storage Occupancy Sensor w/bracket and interchangeable lenses, 40' or less, 480V.
- **LS1D** - Leviton Occupancy Sensor w/ Daylight Harvesting – PIR, 40' or less, 120V-277V.
- **LS3D** - Leviton Occupancy Sensor w/ Daylight Harvesting – PIR, 40' or less, 347V.

3 WIRE GUARD / LENS
- **WG** - Wire Guard
- **WGPIL** - Wire Guard with Prismatic Insert Lens
- **PWL** - Prismatic Wrap Lens, not to be used with Wire Guard

4 SPECIAL MOUNTING
- **HCB** - Hub Connector Box - 3/4" Threaded Hub Mount

5 SPECIAL PACKAGING
- **SP** - Single Packed

6 EMERGENCY BACK-UP
- **EB** - Emergency Back-Up, maximum height 24' per UL924, 120V-277V.

AVAILABLE HANGING KITS (ordered separately)

EZHANGER - 15' adjustable aircraft cable hanging kit

AVAILABLE ACCESSORIES (ordered separately)

PCWG - Wire Guard kit complete with Wire Guard and hardware
PCINSERTLENS - Prismatic Insert Lens, to be used with Wire Guard
PCWRAPLENS - Prismatic Wrap Lens, not to be used with Wire Guard

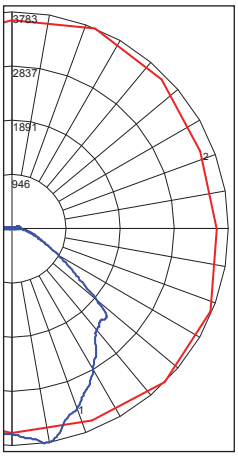
For the most up-to-date specs and warranty information, please visit www.tcpi.com

Photometric Reports

TCP LED Low Bay with Prismatic Wraparound Lens

LED Low Bay Luminaire with lumen rating of 9,300 lumens and operating at 120-277 VAC and 83 watts.

TCPLB4UNIZDL141KPWL



Maximum Candela = 3782.74
Located At Horizontal Angle = 67.5, Vertical Angle = 9

1 - Vertical Plane Through
Horizontal Angles (67.5 - 247.5) (Through Max. Cd.)

2 - Horizontal Cone Through
Vertical Angle (9) (Through Max. Cd.)

Photometric Report

Efficiency (total)	N.A.
Spacing Criterion (0-180)	1.00
Spacing Criterion (90-270)	1.36

Zonal Lumen Summary

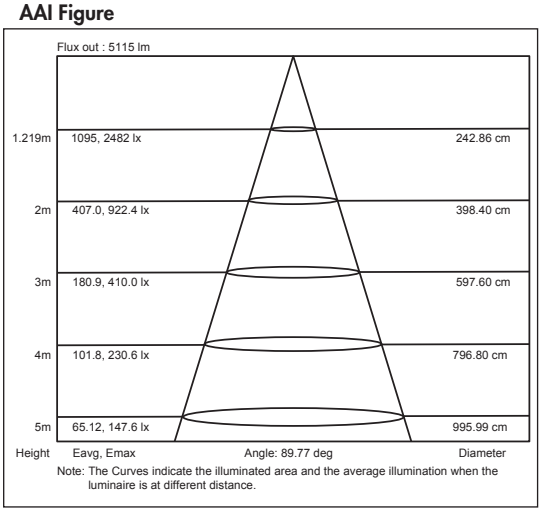
Zone	Lumens	% Lamp	% Fixture
0-20	1302.47	N.A.	14.70
0-30	2679.84	N.A.	30.30
0-40	4279.23	N.A.	48.40
0-60	7040.4	N.A.	79.60
0-80	8211.27	N.A.	92.90
0-90	8355.41	N.A.	94.50
10-90	8012.49	N.A.	90.60
20-40	2976.76	N.A.	33.70
20-50	4599.53	N.A.	52.00
40-70	3476.39	N.A.	39.30
60-80	1170.88	N.A.	13.20
70-80	455.66	N.A.	5.20
80-90	144.13	N.A.	1.60
90-110	302.09	N.A.	3.40
90-120	391.63	N.A.	4.40
90-130	438.91	N.A.	5.00
90-150	476.07	N.A.	5.40
90-180	486.26	N.A.	5.50
110-180	184.17	N.A.	2.10
0-180	8841.67	N.A.	100.00

Total Luminaire Efficiency = N.A.%

Average Luminance
(Candelas / Square Meter)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	7639	8034	9436
55	4907	5020	7873
65	5603	5016	4464
75	5191	6182	3265
85	3393	3775	3280

AAI Figure



Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

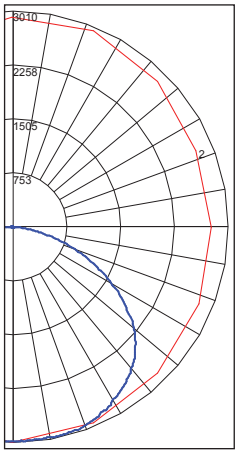
Coefficient of Utilization Table
Effective Floor Cavity Reflectance = 20%

RC / RW	80 70	80 50	80 30	80 10	70 70	70 50	70 30	70 10	50 50	50 30	50 10	30 50	30 30	30 10	10 50	10 30	10 10	0 0
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	94
1	108	104	100	96	105	101	97	94	96	93	90	91	89	87	87	85	83	81
2	99	92	85	80	96	89	83	79	85	80	76	81	77	73	77	74	71	69
3	91	81	74	68	88	79	72	67	76	70	65	72	67	63	69	65	61	59
4	84	73	64	58	81	71	63	57	68	61	56	65	59	55	62	57	53	51
5	77	65	57	51	75	64	56	50	61	54	49	59	53	48	56	51	47	45
6	72	59	51	45	69	58	50	44	56	49	43	53	47	43	51	46	42	40
7	67	54	45	40	65	53	45	39	51	44	39	49	43	38	47	42	37	35
8	62	49	41	36	60	48	41	35	47	40	35	45	39	34	43	38	34	32
9	58	45	37	32	56	44	37	32	43	36	31	42	35	31	40	35	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	28	37	32	28	26

TCP LED Low Bay

LED Low Bay Luminaire with lumen rating of 9,300 lumens and operating at 120-277 VAC and 83 watts.

TCPLB4UNIZDL141K



Maximum Candela = 3010.45
Located At Horizontal Angle = 270, Vertical Angle = 22

1 - Vertical Plane Through
Horizontal Angles (270 - 90) (Through Max. Cd.)

2 - Horizontal Cone Through
Vertical Angle (22) (Through Max. Cd.)

Photometric Report

Efficiency (total)	N.A.
Spacing Criterion (0-180)	1.30
Spacing Criterion (90-270)	1.40

Zonal Lumen Summary

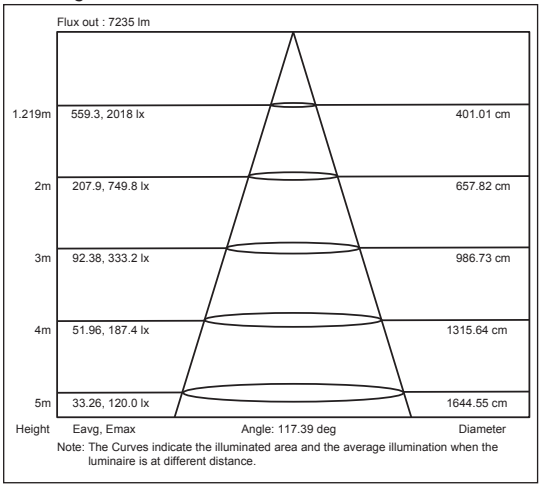
Zone	Lumens	% Lamp	% Fixture
0-20	1114.31	N.A.	11.90
0-30	2410.99	N.A.	25.90
0-40	4033.1	N.A.	43.20
0-60	7382.62	N.A.	79.20
0-80	9228.06	N.A.	99.00
0-90	9294.19	N.A.	99.70
10-90	9009.65	N.A.	96.60
20-40	2918.79	N.A.	31.30
20-50	4658.48	N.A.	50.00
40-70	4581.26	N.A.	49.10
60-80	1845.44	N.A.	19.80
70-80	613.70	N.A.	6.60
80-90	66.14	N.A.	0.70
90-110	12.62	N.A.	0.10
90-120	17.14	N.A.	0.20
90-130	21.05	N.A.	0.20
90-150	27.64	N.A.	0.30
90-180	31.57	N.A.	0.30
110-180	18.95	N.A.	0.20
0-180	9325.76	N.A.	100.00

Total Luminaire Efficiency = N.A.%

Average Luminance
(Candelas / Square Meter)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	8038	8508	9209
55	7944	8577	9049
65	7566	8202	8277
75	3189	6991	6470
85	46	355	2686

AAI Figure



Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

Coefficient of Utilization Table
Effective Floor Cavity Reflectance = 20%

RC / RW	80 70	80 50	80 30	80 10	70 70	70 50	70 30	70 10	50 50	50 30	50 10	30 50	30 30	30 10	10 50	10 30	10 10	0 0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	78	96	89	83	77	85	80	75	82	77	74	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56	52	50
5	75	62	53	47	73	61	53	46	59	52	46	57	50	45	55	49	45	43
6	70	6	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	25	37	30	25	36	30	25	35	29	25	23