



**PRODUCT DESCRIPTION**

The Retrofit Kits for Linear Panels conversion for use only with fluorescent luminaires, delivers up to high lumens of exceptional 80+ CRI light with L70> 50000H while achieving up to 110 lumens per watt. The Retrofit Kits are available in ,4000k, 5000k DLC color temperature, using a UL/cUL internal power supply, designed for new construction applications or retrofitting existing the fluorescent tube in grille panel, widely used in office spaces, major retail stores, education, government, healthcare, and hospitality.

**ORDER INFORMATION:**

Typical Order Example: T84-ID-18W-40F

Catagory	Size	Driver	Wattge	CCT(XX)	Cover
T8=T8 Tube	2=2FT 4=4FT 5=5FT	ID=Internal Driver	10W=10W 16W=16W 18W=18W 22W=20W 26W=26W	30=3000K 40=4000K 50=5000K	F=Frosted C=Clear

**Linear Tube With Internal Driver**



Model	A	B	C	D
T82-ID-10W-XX	589	596.5	604	32X29
T84-ID-16W-XX	1198	1205.5	1213	32X29
T84-ID-18W-XX	1198	1205.5	1213	32X29
T84-ID-22W-XX	1198	1205.5	1213	32X29
T85-ID-26W-XX	1498	1505.5	1512	32X29

**PERFORMANCE SUMMARY**

MODEL	T82-ID-10W- XX	T84-ID-16W- XX	T84-ID-18W- XX	T84-ID-22W- XX	T85-ID-26W- XX
Efficacy	100LPW	110LPW	110LPW	107LPW	100LPW
Delivered Light Output	1000 Lumens	1750 Lumens	1900 Lumens	2300 Lumens	2500 Lumens
Input Power	10Watts	16Watts	18Watts	22Watts	26Watts
CRI	Ra>82 ,R9>20	Ra>83 ,R9>15	Ra>82 ,R9>15	Ra>82 ,R9>15	Ra>82 ,R9>15
Input Voltage	100-277 VAC	100-277 VAC	100-277 VAC	100-277 VAC	100-277 VAC
Input current	0.1A	0.13A	0.15A	0.18A	0.25A
THD	<20%(at 277V)	<20%(at 277V)	<20%(at 277V)	<20%(at 277V)	<20%(at 277V)
PF	>0.9(at 277V)	>0.9(at 277V)	>0.9(at 277V)	>0.9(at 277V)	>0.9(at 277V)
Standard Warranty	5 Years	5 Years	5 Years	5 Years	3 Years
Dimensions(LXWXH)	23.74x1.1 x1.26	47.7x1.14x1.26	47.7x1.14x1.26	47.7x1.14x1.26	59.5x1.14 x1.26
Weight	0.19kg	0.4kg	0.4kg	0.4kg	0.46kg
CCT	3000k 4000k 5000k				

**Electrical System**

MODEL	T82-ID-10W- XX	T84-ID-16W- XX	T84-ID-18W- XX	T84-ID-22W- XX	T85-ID-26W- XX
Diver Input	AC100-277 V 50/60Hz				
Driver efficiency	>87%.				
Input Power	Stays constant over life				
Standard Lifetime	Designed to minimum 50,000 hours				
Temperature Rating	Designed to operate in temperatures 40°C and below room side and plenum side.				
The integrated constant current driver ensures steady performance and long lifespan					





# T82-ID-10W-XX

The T82-ID-10W-XX for Linear Panels (2x2 Troffers), design for installation 3PCS or 4PCS LED TUBE inside fixture standard.

## PRODUCT SPECIFICATIONS

### LED CHIP

Use LED sources has been LM80 test report from accredited testing laboratory in accordance with IESNA LM-80-2008, Standard color management maintains superior color consistency over time and temperature. CCT classification according to the ANSI C78.377-2008 standard.

### Heat Sink

The source and radiator distribution in LED tube top, heat source distribution placed solve heat concentration, quantity of heat conduction of each other and radiation, effective to solve thermal management system design of the cooling. This enables the LEDs to consistently run cooler, providing significant boosts to lifetime, efficacy, and color consistency.

### Optical System

Proprietary optical system utilizes a unique combination of reflective components to achieve a uniform, comfortable appearance, high efficacy, low glare. LED TUBE with diffusion cover suggest to install the fixture with lens, LED TUBE with transparency cover suggest to install the fixture with reflector.

## Voluntary Qualification

cULus Listed	E355621
FCC	YES
Suitable for damp location	YES

## LUMINOUS INTENSITY (CD) DISTRIBUTION DATA

Y	c0	c45	c90
5	291.5	289.4	288.9
10	288.0	285.6	285.6
15	282.6	279.6	275.9
20	274.9	279.1	266.1
25	265.0	258.1	250.9
30	254.0	244.1	235.8
35	241.1	228.2	216.8
40	226.8	211.7	197.8
45	211.6	193.9	178.6
50	195.5	176.2	159.3
55	179.1	158.7	137.2
60	162.4	141.7	115.1
65	146.3	124.5	91.84
70	130.4	107.9	68.60
75	115.2	91.61	46.90
80	101.1	77.12	25.21
85	87.28	63.73	12.78
90	37.36	51.33	0.3448

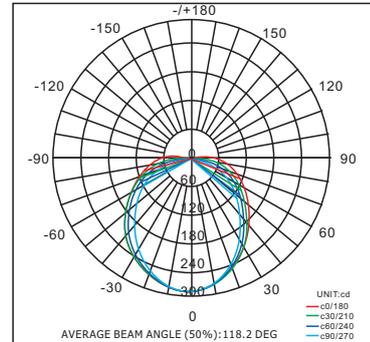
## COEFFICIENTS OF UTILIZATION

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc																0
RCR	RCR:Room Cavity Ratio						CU									
0	119	119	119	116	116	116	111	111	111	106	106	106	102	102	102	0
1	101	95	91	98	94	89	94	90	86	90	87	84	86	84	81	79
2	87	79	72	85	77	71	81	75	70	78	73	68	74	70	67	64
3	75	66	59	74	65	59	71	64	58	68	62	57	65	60	56	53
4	67	57	50	65	56	49	63	55	49	60	53	48	58	52	47	45
5	59	50	43	58	49	42	56	48	42	54	47	41	52	46	41	39
6	53	44	37	52	43	37	50	43	37	49	42	36	47	41	36	34
7	48	39	33	47	39	33	46	38	32	44	37	32	43	37	32	30
8	44	35	29	43	35	29	42	34	29	41	34	29	39	33	28	26
9	40	32	26	40	32	26	39	31	26	38	31	26	36	30	26	24
10	37	29	24	37	29	24	36	28	23	35	28	23	34	28	23	21

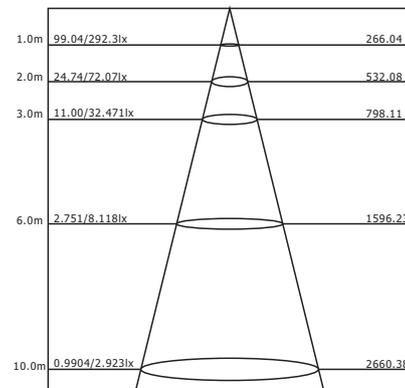
## PHOTOMETRY

Fixture photometry has been conducted accredited testing laboratory in accordance with IESNA LM-79-08 (single tube with milky cover).

### Luminous Intensity Distribution



### AVERAGE ILLUMINANCE CURVE



## ZONAL LUMEN DENSITY MEASUREMENT

Y	Φzone	Φtotal	%
0-5	6.948	6.948	0.75
5-10	20.57	27.52	2.96
10-15	33.47	60.99	6.57
15-20	45.12	106.1	11.43
20-25	55.22	161.3	17.38
25-30	69.49	224.7	24.21
30-35	63.37	294.2	31.69
35-40	73.31	367.5	39.59
40-45	75.03	442.5	47.67
45-50	74.69	517.2	55.72
50-55	72.44	589.6	63.52
55-60	68.45	658.1	70.90
60-65	63.05	721.1	77.69
65-70	56.54	777.7	83.78
70-75	49.33	827.0	89.10
75-80	41.61	868.6	93.58
80-85	33.45	902.1	97.18
85-90	26.41	928.2	100.00





# T84-ID-16W-XX

The T84-ID-16W-XX for Linear Panels (2x4 Troffers), design for installation 3PCS LED TUBE inside fixture standard.

## PRODUCT SPECIFICATIONS

### LED CHIP

Use LED sources has been LM80 test report from accredited testing laboratory in accordance with IESNA LM-80-2008, Standard color management maintains superior color consistency over time and temperature. CCT classification according to the ANSI C78.377-2008 standard.

### Heat Sink

The source and radiator distribution in LED tube top, heat source distribution placed solve heat concentration, quantity of heat conduction of each other and radiation, effective to solve thermal management system design of the cooling. This enables the LEDs to consistently run cooler, providing significant boosts to lifetime, efficacy, and color consistency.

### Optical System

Proprietary optical system utilizes a unique combination of reflective components to achieve a uniform, comfortable appearance, high efficacy, low glare. LED TUBE with diffusion cover suggest to install the fixture with lens. LED TUBE with transparency cover suggest to install the fixture with reflector.

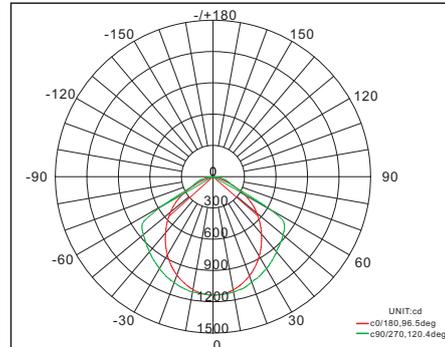
## Voluntary Qualification

cULus Listed	E355621
DLC Listed	YES
LM79 Report	YES
Suitable for damp location	YES

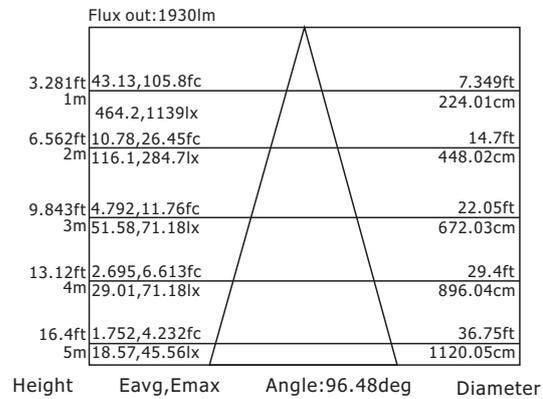
## PHOTOMETRY

Fixture photometry has been conducted accredited testing laboratory in accordance with IESNA LM-79-08. Recessed Troffer(2X4):Lithonia:2GT8 2 U316A12 MVDOL GEB 101S CSA install 3pcs tubes with milky cover).

### Luminous Intensity Distribution



### AVERAGE ILLUMINANCE CURVE



## LUMINOUS INTENSITY (CD) DISTRIBUTION DATA

Y	C0	C45	C90
10	1099	1101	1121
20	1005	1029	1082
30	868.2	916.6	1017
40	703.3	782.4	941.9
50	528.3	644.8	866.2
60	326.1	487.6	547.5
70	91.71	130.6	169.7
80	8.590	20.34	62.19
90	0	0	0

## ZONAL LUMEN DENSITY MEASUREMENT

Y	Φzone	Φtotal	%lum, lamp
0-10	107.1	107.1	3.71, 3.71
10-20	304.5	411.6	14.2, 14.2
20-30	456.4	868.1	30, 30
30-40	546.4	1414	48.9, 48.9
40-50	572.2	1987	68.7, 68.7
50-60	533.4	2520	87.2, 87.2
60-70	282.8	2803	97, 97
70-80	75.70	2879	99.6, 99.6
80-90	10.89	2889	100, 100

## COEFFICIENTS OF UTILIZATION

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc																0
RCR																0
0	119	119	119	116	116	116	111	111	111	105	106	106	102	102	102	100
1	106	102	99	104	100	97	100	97	94	96	94	91	92	90	89	87
2	94	87	82	92	86	81	88	84	79	85	81	78	82	79	76	74
3	83	75	69	81	74	69	78	72	67	76	71	66	73	69	65	63
4	74	65	59	72	65	59	70	63	58	68	62	57	65	60	56	54
5	66	57	51	65	57	51	63	56	50	61	55	50	59	54	49	47
6	59	51	45	58	50	44	57	49	44	55	49	44	53	48	43	41
7	54	45	39	53	45	39	52	44	39	50	44	39	49	43	38	37
8	49	41	35	48	41	35	47	40	35	46	39	35	45	39	34	33
9	45	37	32	44	37	32	43	36	31	42	36	31	41	35	31	29
10	42	34	29	41	34	29	40	33	28	39	33	28	38	32	28	27





# T84-ID-18W-XX

The T84-ID-18W-XX for Linear Panels (2x4 Troffers), design for installation 3PCS LED TUBE inside fixture standard.

## PRODUCT SPECIFICATIONS

### LED CHIP

Use LED sources has been LM80 test report from accredited testing laboratory in accordance with IESNA LM-80-2008, Standard color management maintains superior color consistency over time and temperature. CCT classification according to the ANSI C78.377-2008 standard.

### Heat Sink

The source and radiator distribution in LED tube top, heat source distribution placed solve heat concentration, quantity of heat conduction of each other and radiation, effective to solve thermal management system design of the cooling. This enables the LEDs to consistently run cooler, providing significant boosts to lifetime, efficacy, and color consistency.

### Optical System

Proprietary optical system utilizes a unique combination of reflective components to achieve a uniform, comfortable appearance, high efficacy, low glare. LED TUBE with diffusion cover suggest to install the fixture with lens, LED TUBE with transparency cover suggest to install the fixture with reflector.

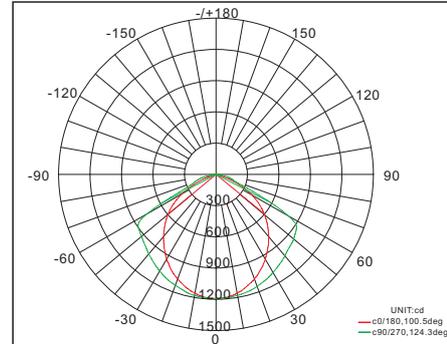
## Voluntary Qualification

cULus Listed	E355621
FCC	YES
Suitable for damp location	YES

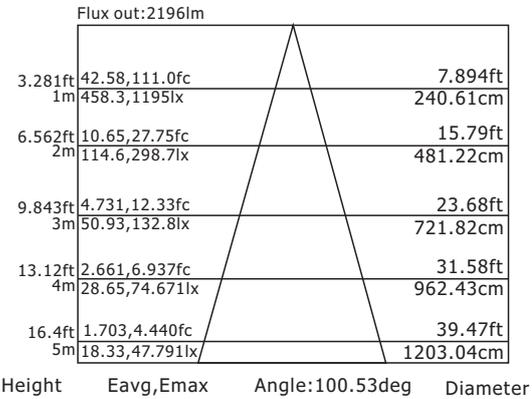
## PHOTOMETRY

Fixture photometry has been conducted accredited testing laboratory in accordance with IESNA LM-79-08. (Recessed Troffer(2X4):Lithonia:2GT8-2-32-A19-277-GB101S Lens install 3pcs tubes with milky cover.)

### Luminous Intensity Distribution



### AVERAGE ILLUMINANCE CURVE



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

## LUMINOUS INTENSITY (CD) DISTRIBUTION DATA

Y	C0	C45	C90
10	1158	1161	1181
20	1070	1091	1133
30	941.3	978.6	1072
40	777.1	850.7	996.9
50	597.3	709.6	928.3
60	374.9	562.7	764.5
70	108.2	191.3	217.6
80	9.827	25.54	77.88
90	0	0	0

## ZONAL LUMEN DENSITY MEASUREMENT

Y	Φzone	Φtotal	%lum, lamp
0-10	112.6	112.6	3.51, 3.51
10-20	321.3	433.9	13.5, 13.5
20-30	485.4	919.3	28.7, 28.7
30-40	588.0	1507	47, 47
40-50	626.0	2133	66.6, 66.6
50-60	601.2	2735	85.3, 85.3
60-70	363.2	3098	96.6, 96.6
70-80	93.55	3191	99.6, 99.6
80-90	13.19	3204	100, 100

## COEFFICIENTS OF UTILIZATION

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	
pw																
pfc																
RCR	RCR: Room Cavity Ratio			CU												
0	119	119	119	116	116	111	111	111	106	106	106	102	102	102	100	
1	106	102	98	103	100	97	99	96	94	95	93	91	92	90	86	
2	93	87	81	91	85	80	88	83	79	84	80	77	81	78	73	
3	82	74	68	80	73	67	77	71	66	75	70	65	72	68	62	
4	73	64	58	71	63	57	69	62	57	67	61	56	64	59	53	
5	65	56	50	64	56	49	62	54	49	60	53	48	58	52	46	
6	58	50	43	57	49	43	56	48	43	54	47	42	52	47	40	
7	53	44	38	52	44	38	51	43	38	49	42	38	48	42	35	
8	48	40	34	48	40	34	46	39	34	45	38	34	44	38	31	
9	44	36	31	44	36	31	42	35	30	41	35	30	40	34	28	
10	41	33	28	40	33	28	39	32	28	38	32	27	37	32	26	





# T84-ID-22W-XX

The T84-ID-22W-XX for Linear Panels (2x4 Troffers), design for installation 2PCS LED TUBE inside fixture standard,

## PRODUCT SPECIFICATIONS

### LED CHIP

Use LED sources has been LM80 test report from accredited testing laboratory in accordance with IESNA LM-80-2008, Standard color management maintains superior color consistency over time and temperature. CCT classification according to the ANSI C78.377-2008 standard.

### Heat Sink

The source and radiator distribution in LED tube top, heat source distribution placed solve heat concentration, quantity of heat conduction of each other and radiation, effective to solve thermal management system design of the cooling. This enables the LEDs to consistently run cooler, providing significant boosts to lifetime, efficacy, and color consistency.

### Optical System

Proprietary optical system utilizes a unique combination of reflective components to achieve a uniform, comfortable appearance, high efficacy, low glare. LED TUBE with diffusion cover suggest to install the fixture with lens, LED TUBE with transparency cover suggest to install the fixture with reflector.

## Voluntary Qualification

cULus Listed	E355621
FCC	YES
Suitable for damp location	YES

## LUMINOUS INTENSITY (CD) DISTRIBUTION DATA

Y	C0	C45	C90
10	1376	1377	1404
20	1275	1301	1353
30	1121	1175	1286
40	931.6	1024	1209
50	709.3	859.7	1140
60	444.2	666.6	789.9
70	125.1	186.3	242.6
80	12.12	28.61	86.15
90	0	0	0

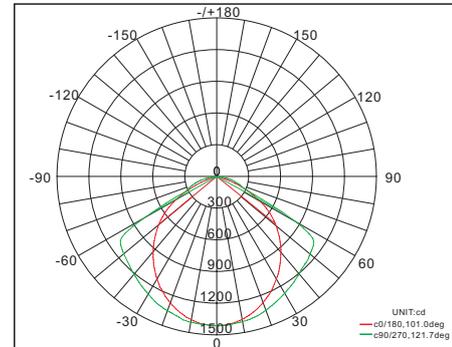
## COEFFICIENTS OF UTILIZATION

pcc	80%			70%			50%			30%			10%		0	
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%	10%		
pw	50%	20%		20%			20%			20%			20%			
pfc	20%															
RCR	RCR: Room Cavity Ratio			CU												
0	119	119	119	116	116	116	111	111	111	106	106	106	102	102	102	100
1	106	102	99	104	100	97	99	97	94	96	93	91	92	90	88	86
2	93	87	82	91	86	81	88	83	79	85	81	77	82	78	75	73
3	82	75	68	81	74	68	78	72	67	75	70	66	73	68	64	62
4	73	65	58	72	64	58	69	62	57	67	61	56	65	60	56	53
5	65	57	50	64	56	50	62	55	49	60	54	49	58	53	48	46
6	59	50	44	58	50	44	56	49	43	54	48	43	53	47	42	40
7	53	45	39	52	44	38	51	44	38	49	43	38	48	42	38	36
8	48	40	34	48	40	34	46	39	34	45	39	34	44	38	34	32
9	44	36	31	44	36	31	43	36	31	42	35	30	41	35	30	29
10	41	33	28	40	33	28	39	33	28	39	32	28	38	32	27	26

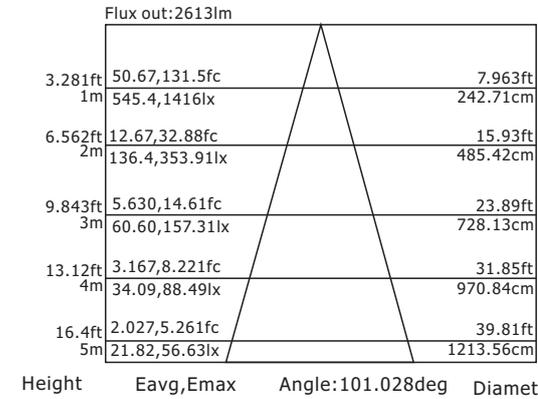
## PHOTOMETRY

Fixture photometry has been conducted accredited testing laboratory in accordance with IESNA LM-79-08. (Single tubes with milky cover.)

### Luminous Intensity Distribution



### AVERAGE AREA ILLUMINATION FIGURE



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

### ZONAL LUMEN RENSITY MEASUREMENT

Y	Φzone	Φtotal	%lum, lamp
0-10	133.4	133.4	3.54, 3.54
10-20	380.9	514.3	13.6, 13.6
20-30	575.8	1090	28.9, 28.9
30-40	699.5	1790	47.5, 47.5
40-50	748.5	2538	67.3, 67.3
50-60	715.8	3254	86.3, 86.3
60-70	392.5	3646	96.8, 96.8
70-80	105.7	3752	99.6, 99.6
80-90	15.13	3767	100, 100





# T85-ID-26W-XX

The T85-ID-26W-XX for use only with 5' fluorescent luminaires, Design one diver supply one LED tube .

## PRODUCT SPECIFICATIONS

### LED CHIP

Use LED sources has been LM80 test report from accredited testing laboratory in accordance with IESNA LM-80-2008, Standard color management maintains superior color consistency over time and temperature. CCT classification according to the ANSI C78.377-2008 standard.

### Heat Sink

The source and radiator distribution in LED tube top, heat source distribution placed solve heat concentration, quantity of heat conduction of each other and radiation, effective to solve thermal management system design of the cooling. This enables the LEDs to consistently run cooler, providing significant boosts to lifetime, efficacy, and color consistency.

### Optical System

Proprietary optical system utilizes a unique combination of reflective components to achieve a uniform, comfortable appearance, high efficacy, low glare. LED TUBE with diffusion cover suggest to install the fixture with lens, LED TUBE with transparence cover suggest to install the fixture with reflector .

## Voluntary Qualification

cULus Listed	E355621
FCC	YES
Suitable for damp location	YES

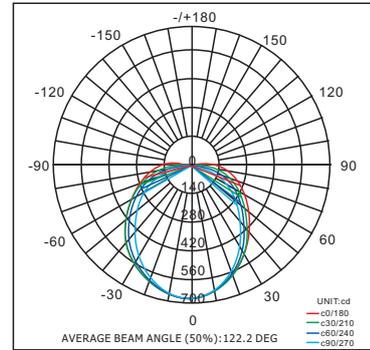
## LUMINOUS INTENSITY (CD) DISTRIBUTION DATA

Y	c0	c45	c90
5	678.6	677.6	677.0
10	670.8	668.5	666.1
15	658.4	653.3	648.3
20	641.4	632.6	623.9
25	620.0	606.6	593.9
30	595.2	576.2	558.5
35	567.3	541.8	518.3
40	536.5	504.4	474.2
45	503.5	464.6	426.8
50	468.9	423.3	376.5
55	433.2	381.2	323.8
60	396.9	339.1	269.2
65	360.8	297.9	213.4
70	325.2	258.3	157.3
75	290.9	221.0	102.4
80	257.9	186.5	52.49
85	226.7	155.5	13.81
90	197.5	128.0	0

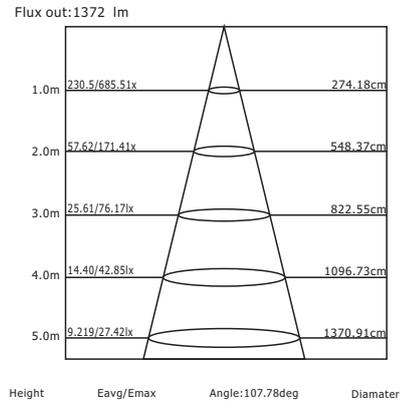
## PHOTOMETRY

Fixture photometry has been conducted accredited testing laboratory in accordance with IESNA LM-79-08. (Single tube with milky covers.)

### Luminous Intensity Distribution



### AVERAGE ILLUMINANCE CURVE



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

## ZONAL LUMEN DENSITY MEASUREMENT

Y	Φ zone	Φ total	%
0-5	16.24	16.24	0.65
5-10	48.18	64.42	2.57
10-15	78.46	142.9	5.69
15-20	106.1	249.0	9.92
20-25	130.2	379.1	15.10
25-30	150.0	529.2	21.09
30-35	165.2	694.3	27.66
35-40	175.3	869.7	34.65
40-45	180.4	1050	41.93
45-50	180.0	1231	49.02
50-55	175.8	1406	56.03
55-60	167.0	1573	62.68
60-65	154.6	1728	68.84
65-70	139.4	1867	74.39
70-75	122.4	1990	79.27
75-80	104.6	2094	83.43
80-85	87.26	2181	86.91
85-90	71.72	2253	89.77

## COEFFICIENTS OF UTILIZATION

pcc	80%			70%			50%			30%			10%			0
	pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio				CU											
0	117	117	117	113	113	113	106	106	106	100	100	100	94	94	94	91
1	99	94	90	96	91	87	90	86	83	84	82	79	79	77	75	72
2	85	78	72	83	76	70	78	72	67	73	68	64	69	65	61	59
3	75	66	59	72	64	58	68	61	56	64	58	53	60	56	51	49
4	66	57	50	64	55	49	60	53	47	57	50	45	54	48	44	41
5	59	49	42	57	48	42	54	46	40	51	44	39	48	42	38	36
6	53	43	37	51	43	36	48	41	35	46	39	34	44	38	33	31
7	48	39	32	46	38	32	44	37	31	42	35	30	40	34	29	27
8	43	35	29	42	34	28	40	33	28	38	32	27	36	31	26	24
9	40	31	26	39	31	26	37	30	25	35	29	24	34	28	24	22
10	37	29	23	36	28	23	34	27	23	33	26	22	31	26	22	20

