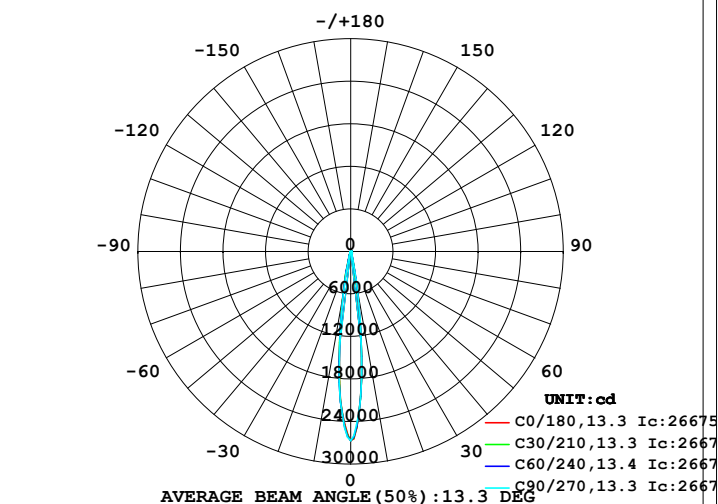


LUMINAIRE PHOTOMETRIC TEST REPORT

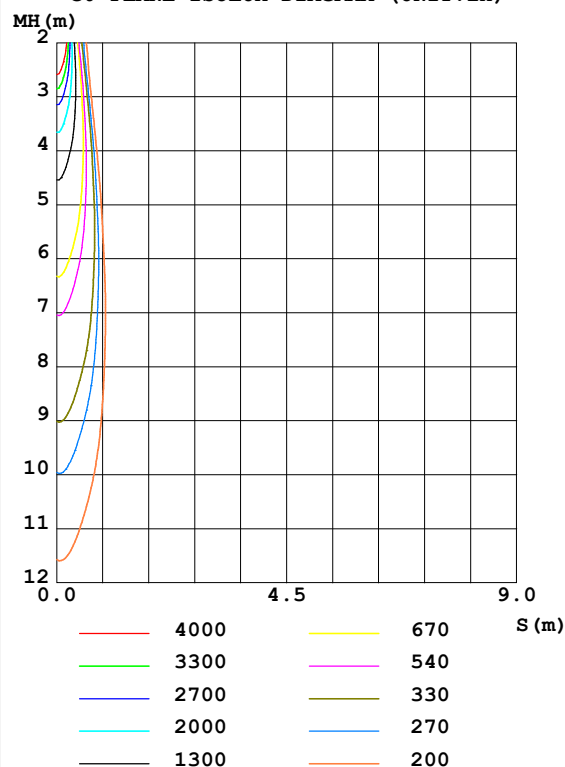
Test:U:225.5V I:0.1240A P:26.90W PF:0.9590 Freq:50.00Hz Lamp Flux:2164.69x1 lm		
NAME: TL44-28W-930-B-15-L	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:99	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 80.47 lm/W
MODEL	2700K CRI90	I _{max} (cd)	26675	S/MH(C0/180)	0.23	
NOMINAL POWER(W)	28	LOR(%)	100.0	S/MH(C90/270)	0.23	
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	2164.7	η UP,DN(C0-180)	0.0,49.5	
NOMINAL FLUX(lm)	2164.69	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.5	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE(V)	225.5	η down(%)	100.0	CIBSE SHR MAX	1.00	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:WuXing
 Test Date:2018-11-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	505.1	539.2	562.1	635.2	666.1	627.8	606.4	530.7	0- 10	1301	1301	60.1,60.1
20	48.73	51.99	54.71	62.69	64.89	61.57	56.95	51.18	10- 20	488.9	1790	82.7,82.7
30	17.48	18.00	18.06	19.31	20.05	19.25	17.92	17.02	20- 30	145.4	1935	89.4,89.4
40	9.571	9.812	9.535	10.11	10.37	9.731	8.780	8.707	30- 40	80.45	2016	93.1,93.1
50	6.269	6.313	6.020	6.125	6.363	5.892	5.690	5.836	40- 50	58.33	2074	95.8,95.8
60	4.519	4.515	4.056	4.026	4.178	4.082	4.068	4.212	50- 60	44.83	2119	97.9,97.9
70	2.029	2.032	2.025	2.048	2.139	2.103	2.103	2.074	60- 70	27.77	2147	99.2,99.2
80	0.5530	0.5424	0.5525	0.5822	0.6428	0.6110	0.6182	0.5580	70- 80	15.16	2162	99.9,99.9
90	0.2280	0.2266	0.2240	0.2229	0.1185	0.1194	0.1155	0.1155	80- 90	2.673	2165	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

Conical surface Flux(90deg): 2046.8 lm

%lum = 94.6%

%lamp = 94.6%

Conical surface Flux(120deg): 2119.1 lm

%lum = 97.9%

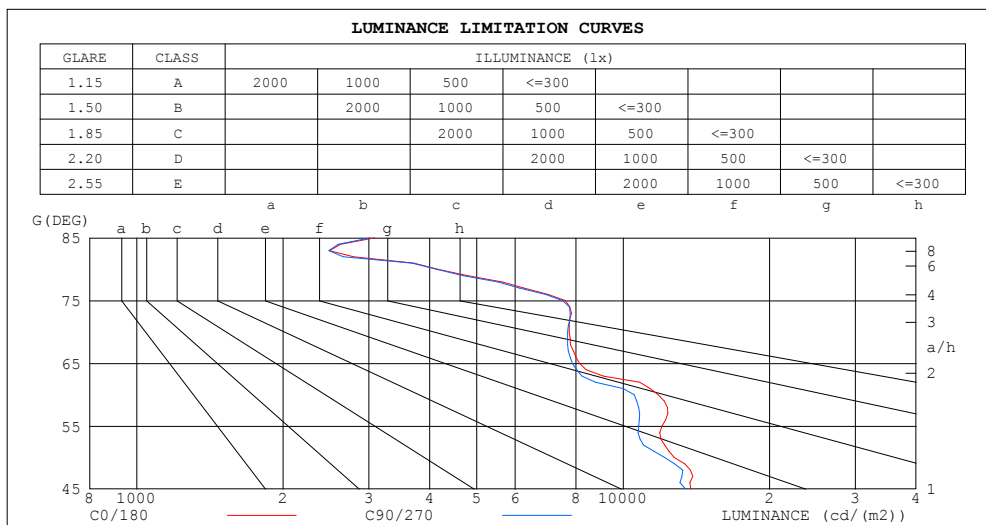
%lamp = 97.9%

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:WuXing
 Test Date:2018-11-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:225.5V I:0.1240A P:26.90W PF:0.9590 Freq:50.00Hz Lamp Flux:2164.69x1 lm		
NAME: TL44-28W-930-B-15-L	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:99	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3082	3018
80	4157	4132
75	7612	7509
70	7742	7688
65	8126	7866
60	11797	10536
55	12023	10759
50	12729	12164
45	13774	13445

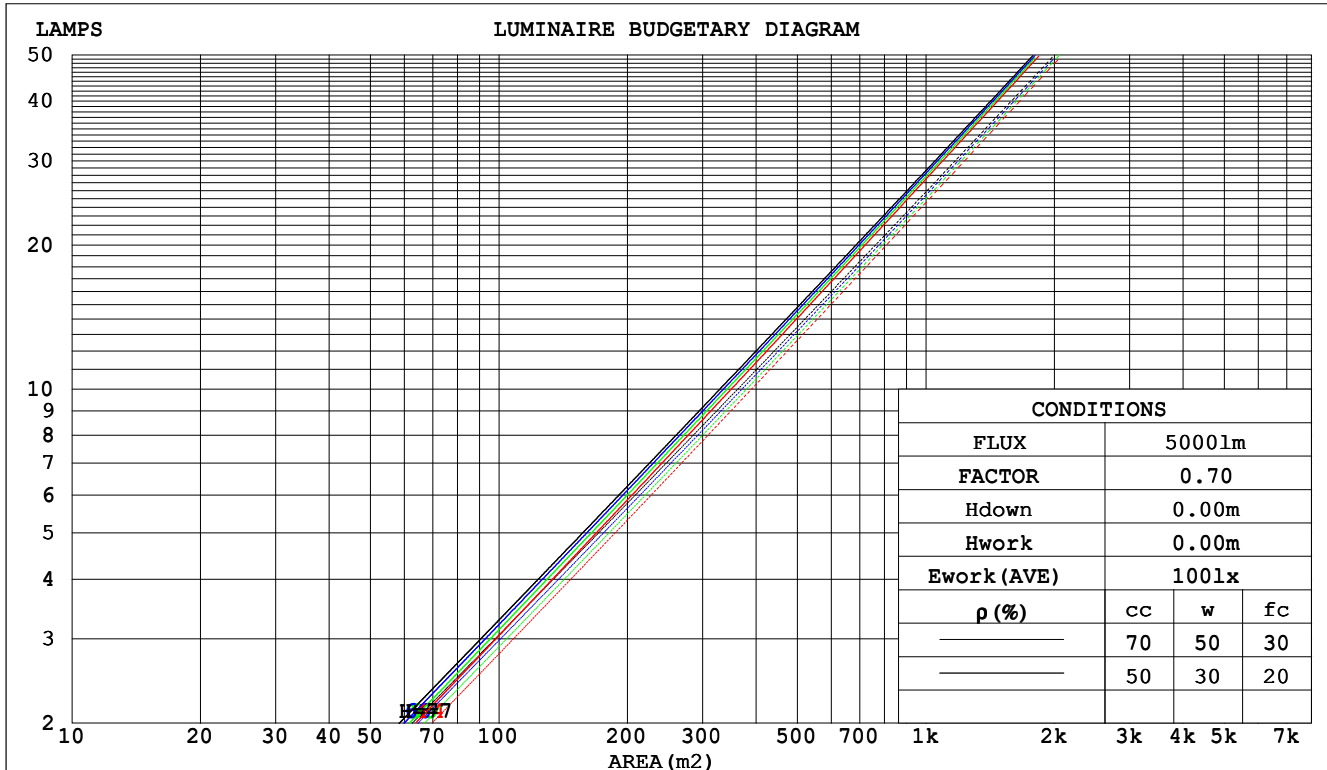
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WuXing
Test Date:2018-11-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:225.5V I:0.1240A P:26.90W PF:0.9590 Freq:50.00Hz Lamp Flux:2164.69x1 lm		
NAME: TL44-28W-930-B-15-L	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:99	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.13	1.11	1.09	1.11	1.09	1.08	1.07	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97
2.0	1.08	1.05	1.03	1.06	1.04	1.01	1.03	1.01	.99	1.00	.99	.97	.98	.96	.95	.94
3.0	1.04	1.00	.98	1.02	.99	.97	1.00	.97	.95	.98	.96	.94	.96	.94	.92	.91
4.0	1.00	.97	.94	.99	.96	.93	.97	.94	.92	.95	.93	.91	.94	.92	.90	.89
5.0	.97	.93	.91	.96	.93	.90	.95	.92	.89	.93	.91	.89	.92	.90	.88	.87
6.0	.95	.91	.88	.94	.90	.88	.93	.90	.87	.92	.89	.87	.90	.88	.86	.85
7.0	.92	.89	.86	.92	.88	.86	.91	.88	.85	.90	.87	.85	.89	.86	.85	.84
8.0	.90	.87	.84	.90	.86	.84	.89	.86	.84	.88	.85	.83	.87	.85	.83	.82
9.0	.89	.85	.83	.88	.85	.83	.88	.84	.82	.87	.84	.82	.86	.84	.82	.81
10.0	.87	.84	.81	.87	.83	.81	.86	.83	.81	.86	.83	.81	.85	.82	.81	.80



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:WuXing
 Test Date:2018-11-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:225.5V I:0.1240A P:26.90W PF:0.9590 Freq:50.00Hz Lamp Flux:2164.69x1 lm					
NAME: TL44-28W-930-B-15-L			TYPE:		WEIGHT:
SPEC.:			DIM.:		SERIAL No.:
MFR.:			SUR.:99		Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.134	.076	.024	.128	.073	.023	.115	.066	.021	.104	.060	.019	.093	.054	.017	
2.0	.123	.068	.021	.118	.065	.020	.108	.060	.019	.098	.055	.017	.090	.051	.016	
3.0	.114	.060	.018	.109	.058	.018	.101	.055	.017	.093	.051	.016	.085	.047	.015	
4.0	.105	.054	.016	.101	.053	.016	.094	.050	.015	.087	.047	.014	.081	.044	.013	
5.0	.097	.050	.014	.094	.048	.014	.088	.046	.013	.082	.043	.013	.077	.041	.012	
6.0	.091	.045	.013	.088	.044	.013	.083	.042	.012	.078	.041	.012	.073	.039	.011	
7.0	.085	.042	.012	.083	.041	.012	.078	.039	.011	.074	.038	.011	.070	.036	.011	
8.0	.080	.039	.011	.078	.038	.011	.074	.037	.011	.070	.036	.010	.067	.034	.010	
9.0	.075	.036	.010	.074	.036	.010	.070	.035	.010	.067	.034	.010	.064	.033	.009	
10.0	.071	.034	.009	.070	.034	.009	.067	.033	.009	.064	.032	.009	.061	.031	.009	

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.168	.158	.148	.144	.135	.128	.098	.093	.088	.057	.054	.051	.018	.017	.017	
2.0	.150	.133	.118	.128	.114	.102	.088	.079	.071	.051	.046	.042	.016	.015	.014	
3.0	.134	.113	.096	.115	.098	.084	.079	.068	.059	.046	.040	.035	.015	.013	.011	
4.0	.121	.098	.080	.104	.084	.069	.072	.059	.049	.041	.034	.029	.013	.011	.009	
5.0	.110	.085	.067	.095	.074	.058	.065	.052	.041	.038	.030	.024	.012	.010	.008	
6.0	.101	.075	.057	.086	.065	.050	.060	.046	.035	.035	.027	.021	.011	.009	.007	
7.0	.092	.067	.049	.079	.058	.042	.055	.041	.030	.032	.024	.018	.010	.008	.006	
8.0	.085	.060	.042	.073	.052	.037	.051	.036	.026	.030	.021	.016	.010	.007	.005	
9.0	.079	.054	.037	.068	.047	.032	.047	.033	.023	.028	.019	.014	.009	.006	.005	
10.0	.074	.049	.032	.064	.042	.028	.044	.030	.020	.026	.018	.012	.008	.006	.004	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WuXing
Test Date:2018-11-13

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:225.5V I:0.1240A P:26.90W PF:0.9590 Freq:50.00Hz Lamp Flux:2164.69x1 lm										
NAME: TL44-28W-930-B-15-L					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.:					SUR.:99			Shielding Angle:		
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	12.3	12.9	12.5	13.0	13.2	11.9	12.5	12.1	12.6	12.8
3H	13.1	13.6	13.3	13.8	14.0	12.8	13.3	13.0	13.5	13.7
4H	13.5	14.1	13.8	14.3	14.5	13.3	13.8	13.5	14.0	14.2
6H	13.7	14.2	13.9	14.4	14.6	13.4	13.9	13.7	14.2	14.4
8H	13.7	14.2	13.9	14.4	14.6	13.4	13.9	13.7	14.2	14.4
12H	13.6	14.1	13.9	14.4	14.6	13.4	13.9	13.7	14.1	14.4
4H 2H	12.7	13.2	12.9	13.4	13.6	12.3	12.9	12.6	13.1	13.3
3H	13.7	14.1	14.0	14.4	14.7	13.4	13.9	13.7	14.2	14.4
4H	14.2	14.6	14.5	14.9	15.2	14.0	14.4	14.3	14.7	15.0
6H	14.4	14.8	14.7	15.1	15.4	14.2	14.6	14.6	14.9	15.3
8H	14.4	14.7	14.8	15.1	15.4	14.2	14.6	14.6	14.9	15.3
12H	14.3	14.7	14.7	15.1	15.4	14.2	14.5	14.6	14.9	15.3
8H 4H	14.3	14.7	14.7	15.0	15.4	14.1	14.5	14.5	14.8	15.2
6H	14.5	14.8	14.9	15.2	15.6	14.4	14.7	14.8	15.1	15.5
8H	14.5	14.8	15.0	15.2	15.6	14.4	14.6	14.8	15.1	15.5
12H	14.5	14.7	15.0	15.2	15.7	14.3	14.6	14.8	15.0	15.5
12H 4H	14.3	14.6	14.7	15.0	15.4	14.1	14.4	14.5	14.8	15.2
6H	14.5	14.8	14.9	15.2	15.6	14.3	14.6	14.8	15.0	15.5
8H	14.5	14.7	15.0	15.2	15.6	14.3	14.6	14.8	15.0	15.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.4					+ 0.3 / - 0.4				
1.5H	+ 0.3 / - 0.3					+ 0.2 / - 0.5				
2.0H	+ 0.5 / - 1.2					+ 0.4 / - 1.0				

CIE Pub.117, 2165 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.7)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WuXing
Test Date:2018-11-13

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:225.5V I:0.1240A P:26.90W PF:0.9590 Freq:50.00Hz Lamp Flux:2164.69x1 lm		
NAME: TL44-28W-930-B-15-L	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:99	Shielding Angle:

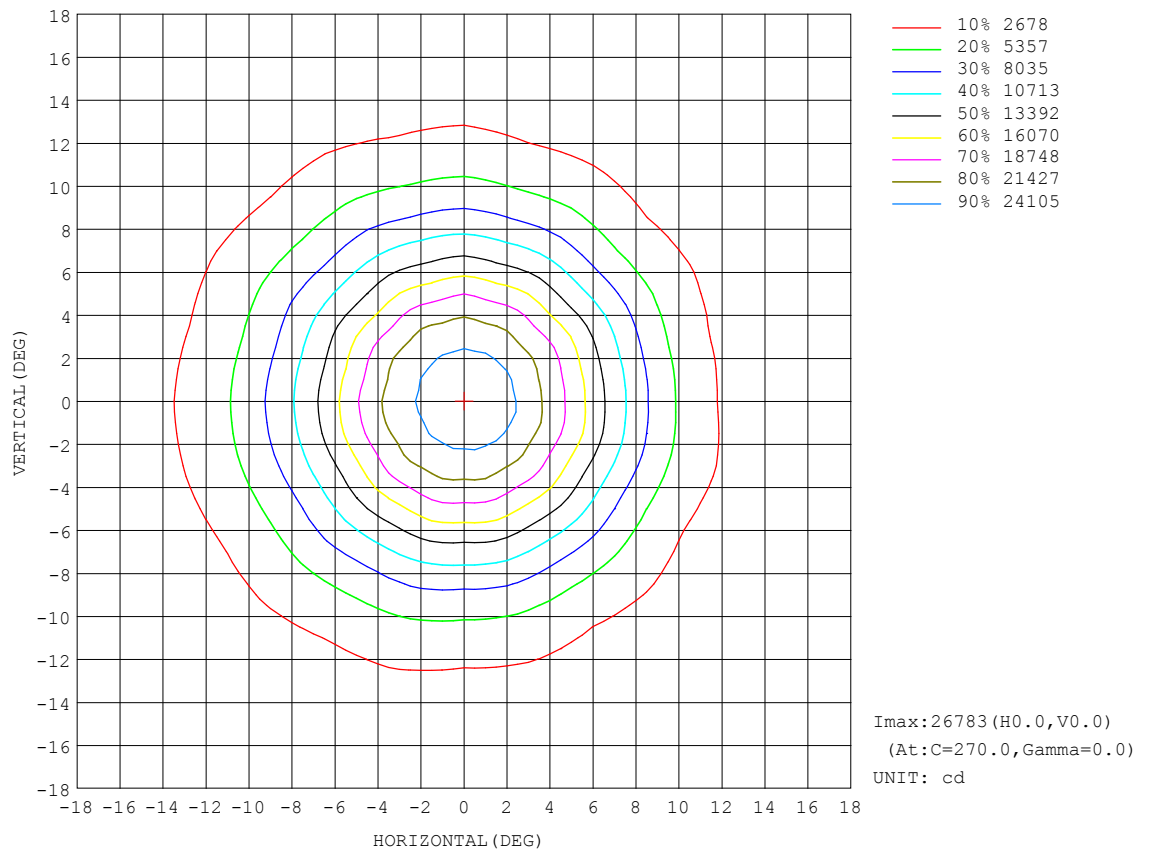
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	87	81	77	87	81	77	86	80	77	73
0.80	95	89	85	94	88	85	93	88	84	81
1.00	99	93	90	98	93	89	97	93	89	85
1.25	103	98	94	102	97	94	100	96	93	89
1.50	106	101	97	104	100	97	102	99	96	91
2.00	108	104	101	107	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	103	100	94
3.00	112	108	105	110	107	104	106	104	102	96
4.00	114	111	109	112	109	107	108	106	105	97
5.00	115	113	111	113	111	109	109	107	106	99
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WuXing
Test Date:2018-11-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:225.5V I:0.1240A P:26.90W PF:0.9590 Freq:50.00Hz Lamp Flux:2164.69x1 lm		
NAME: TL44-28W-930-B-15-L	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:99	Shielding Angle:

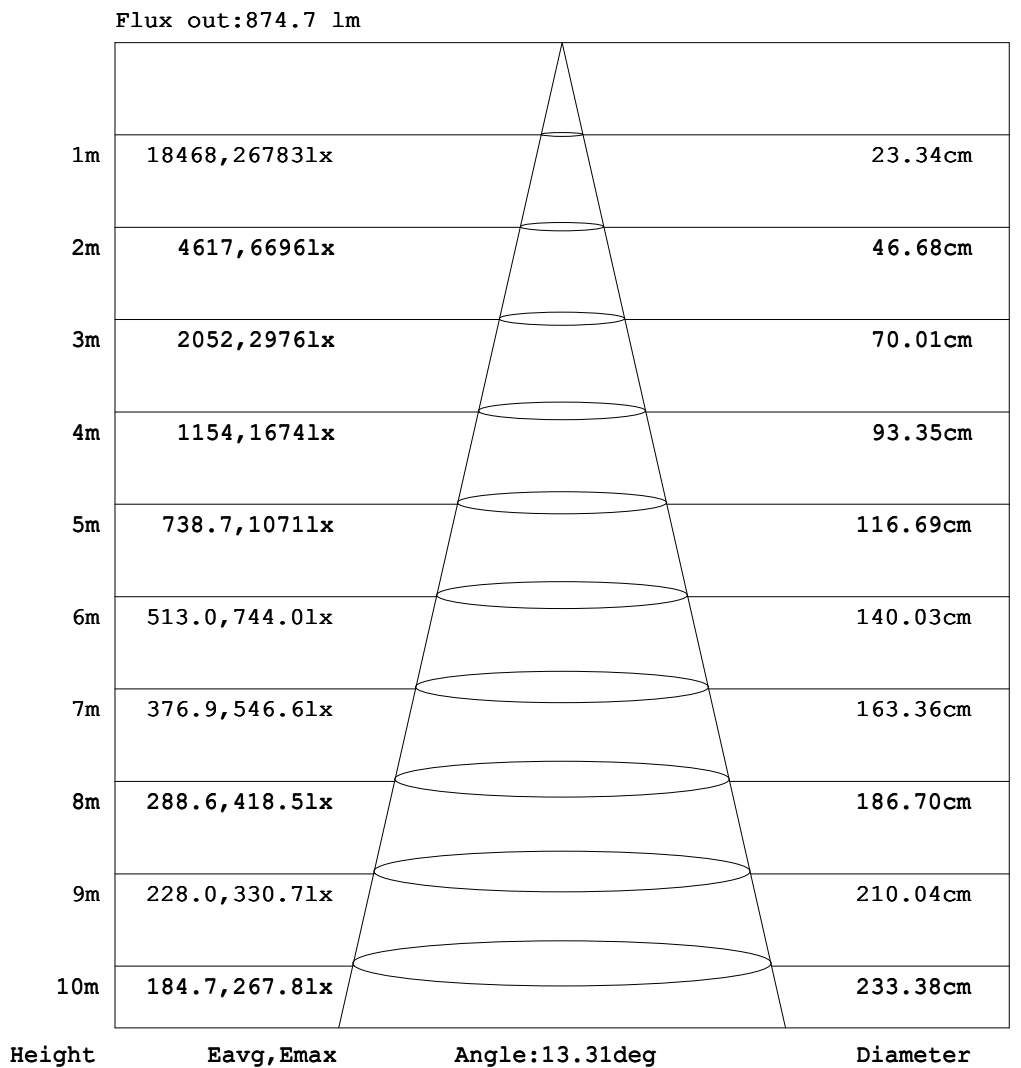


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WuXing
Test Date:2018-11-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

AAI Figure

Test:U:225.5V I:0.1240A P:26.90W PF:0.9590 Freq:50.00Hz Lamp Flux:2164.69x1 lm		
NAME: TL44-28W-930-B-15-L	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:99	Shielding Angle:



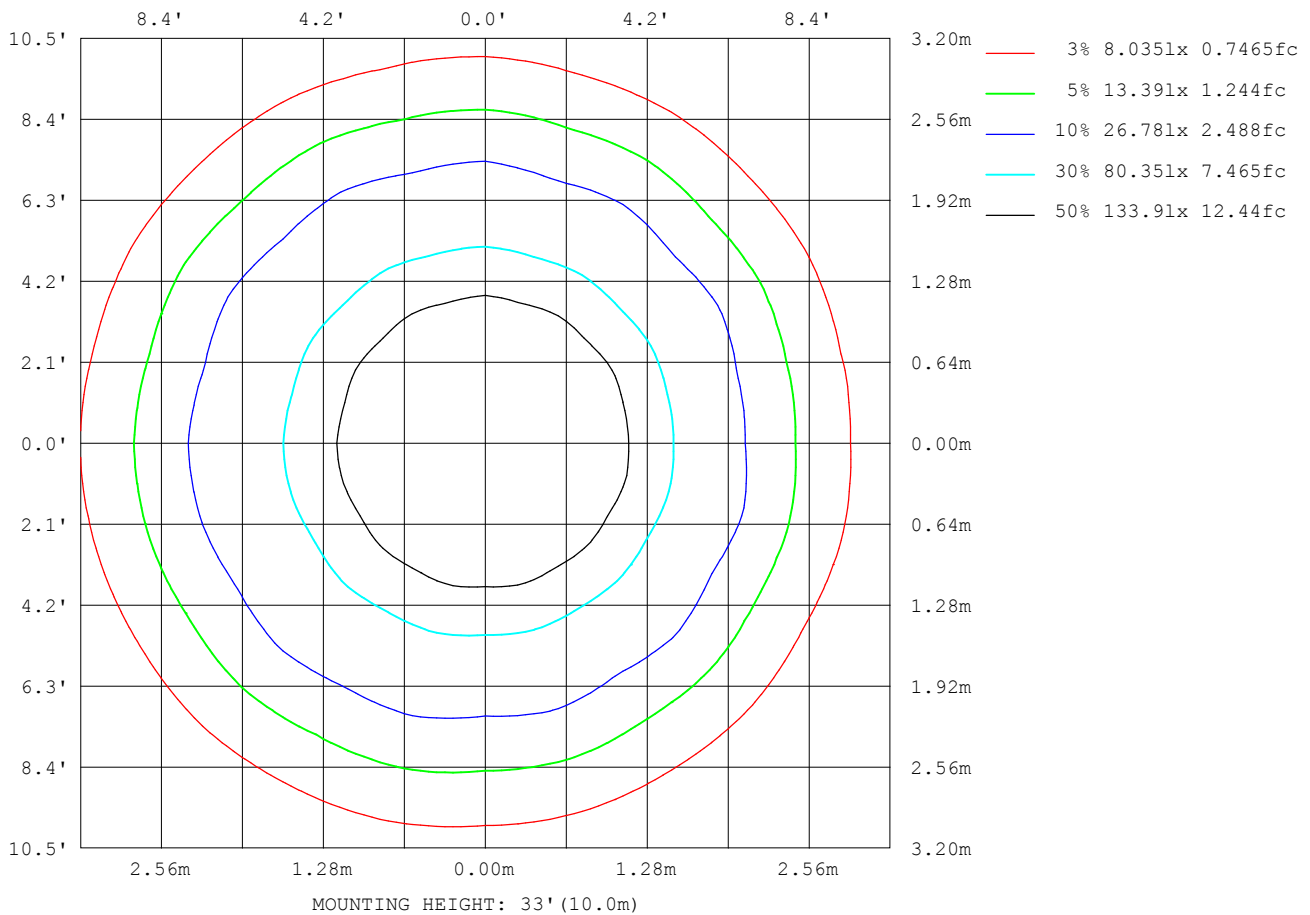
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:WuXing
 Test Date:2018-11-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:225.5V I:0.1240A P:26.90W PF:0.9590 Freq:50.00Hz Lamp Flux:2164.69x1 lm		
NAME: TL44-28W-930-B-15-L	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:99	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WuXing
Test Date:2018-11-13

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:225.5V I:0.1240A P:26.90W PF:0.9590 Freq:50.00Hz Lamp Flux:2164.69x1 lm		
NAME: TL44-28W-930-B-15-L	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:99	Shielding Angle:

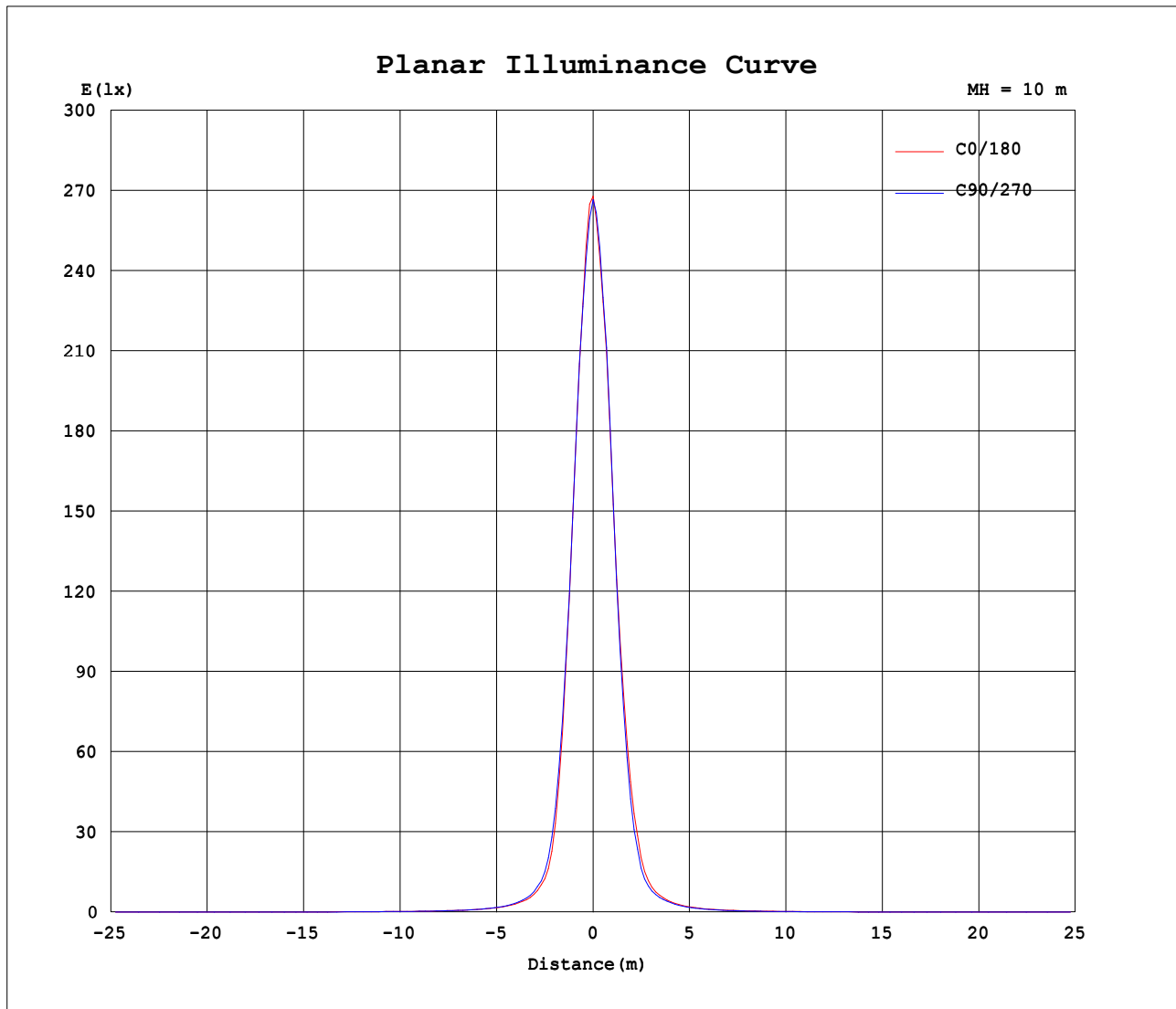
AvgL	cd/m2
L_0~180 (65) av	8257
L_0~180 (75) av	7962
L_0~180 (85) av	2757
L_90~270 (65) av	8090
L_90~270 (75) av	7909
L_90~270 (85) av	2701
L_45 (65) av	8087
L_45 (75) av	7698
L_45 (85) av	2723

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:WuXing
 Test Date:2018-11-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
 Humidity:65.0%
 Test Distance:7.240m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: WuXing
Test Date: 2018-11-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity: 65.0%
Test Distance: 7.240m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

```