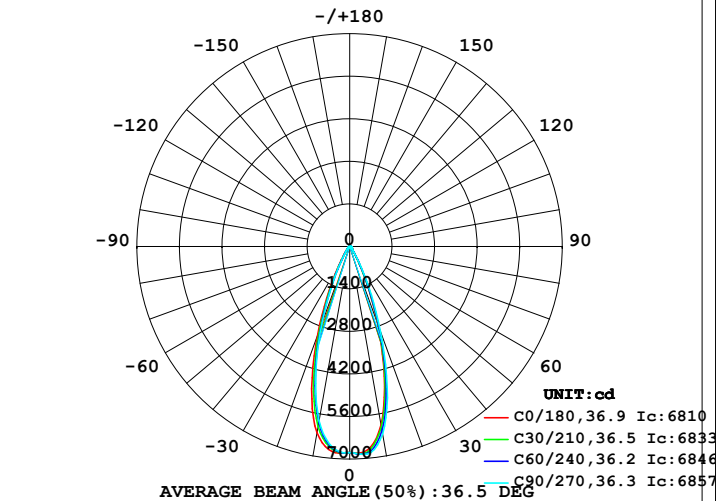


LUMINAIRE PHOTOMETRIC TEST REPORT

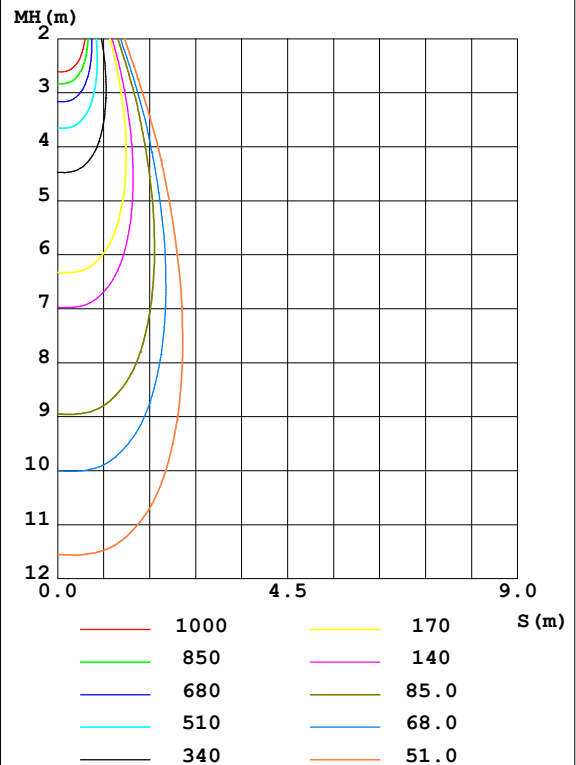
Test:U:225.5V I:0.1240A P:26.90W PF:0.9590 Freq:50.00Hz Lamp Flux:2942.2x1 lm		
NAME: TL44-28W-840-B-36-L	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:99	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 109.38 lm/W			
MODEL	4000K CRI80	I _{max} (cd)	6861	S/MH(C0/180)	0.60
NOMINAL POWER(W)	28	LOR(%)	100.0	S/MH(C90/270)	0.57
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	2942.2	η UP,DN(C0-180)	0.0,51.4
NOMINAL FLUX(lm)	2942.2	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,48.6
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	225.5	η down(%)	100.0	CIBSE SHR MAX	0.60

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	5961	6113	6258	6354	6224	5885	5821	5850	0- 10	622.2	622.2	21.1,21.1
20	2687	2870	2978	3187	3101	2735	2665	2618	10- 20	1239	1861	63.2,63.2
30	569.1	600.5	658.0	716.3	726.9	602.7	567.1	570.2	20- 30	685.3	2546	86.5,86.5
40	152.4	154.6	165.3	179.0	178.9	169.5	161.8	155.3	30- 40	198.1	2744	93.3,93.3
50	71.25	74.00	77.60	78.53	78.41	77.34	75.98	72.57	40- 50	84.82	2829	96.2,96.2
60	46.29	47.88	49.39	49.62	49.80	49.20	48.55	46.78	50- 60	53.69	2883	98,98
70	26.73	29.08	30.07	29.15	28.47	27.83	27.54	26.56	60- 70	37.41	2920	99.3,99.3
80	6.260	7.231	7.688	8.057	7.307	6.583	6.019	5.787	70- 80	18.56	2939	99.9,99.9
90	3.028	2.984	2.929	2.919	1.979	1.959	2.005	1.998	80- 90	3.436	2942	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:cd									UNIT:lm		

Conical surface Flux(90deg): 2793 lm

%lum = 94.9%

%lamp = 94.9%

Conical surface Flux(120deg): 2882.8 lm

%lum = 98.0%

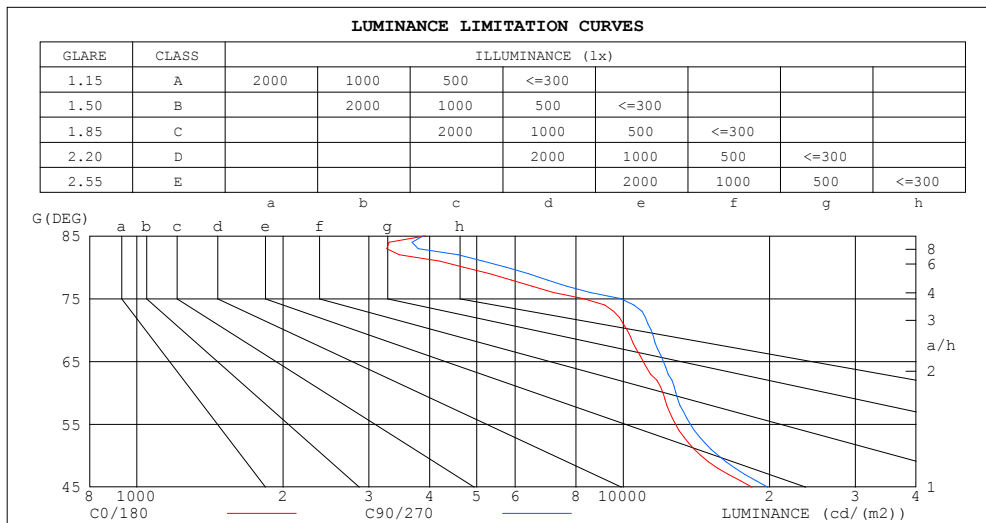
%lamp = 98.0%

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:2942.2x1 lm		
NAME: TL44-28W-840-B-36-L	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:99	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3922	3882
80	4699	5752
75	8282	9880
70	10187	11420
65	10992	12090
60	12068	12834
55	12812	13744
50	14448	15684
45	18389	19826

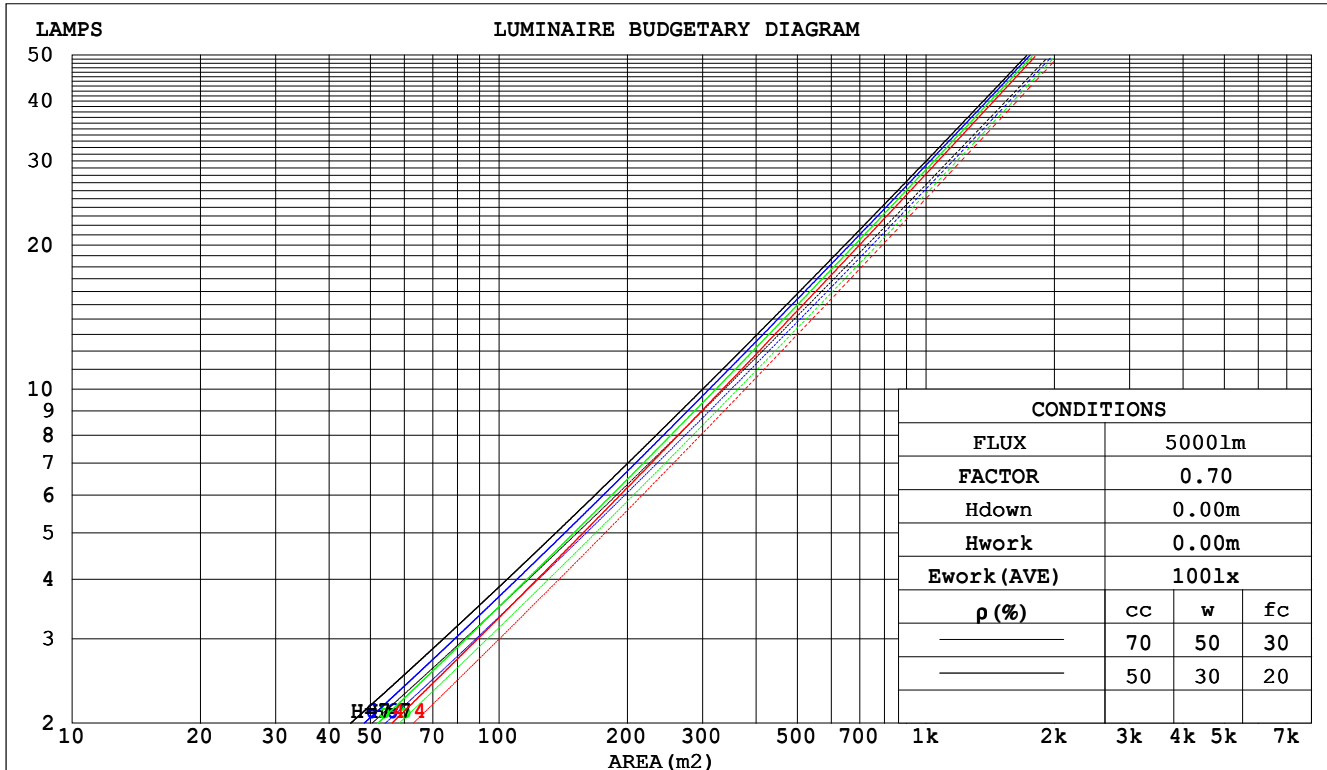
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WuXing
Test Date:2018-11-13

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:2942.2x1 lm		
NAME: TL44-28W-840-B-36-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	1.12	1.09	1.07	1.09	1.07	1.06	1.05	1.04	1.02	1.02	1.00	.99	.98	.97	.96	.95
2.0	1.05	1.01	.98	1.03	.99	.97	1.00	.97	.95	.97	.95	.93	.94	.93	.91	.90
3.0	.99	.95	.91	.98	.94	.91	.95	.92	.89	.93	.90	.88	.91	.88	.86	.85
4.0	.94	.89	.86	.93	.88	.85	.91	.87	.84	.89	.86	.83	.87	.84	.82	.81
5.0	.89	.84	.81	.89	.84	.80	.87	.83	.80	.85	.82	.79	.84	.81	.78	.77
6.0	.85	.80	.77	.85	.80	.76	.83	.79	.76	.82	.78	.75	.81	.77	.75	.74
7.0	.82	.77	.73	.81	.76	.73	.80	.76	.72	.79	.75	.72	.78	.74	.72	.70
8.0	.78	.73	.70	.78	.73	.70	.77	.72	.69	.76	.72	.69	.75	.71	.69	.68
9.0	.75	.70	.67	.75	.70	.67	.74	.69	.66	.73	.69	.66	.72	.69	.66	.65
10.0	.72	.67	.64	.72	.67	.64	.71	.67	.64	.70	.67	.64	.70	.66	.64	.62



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:2942.2x1 lm					
NAME: TL44-28W-840-B-36-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	.163	.092	.029	.156	.089	.028	.143	.082	.026	.132	.076	.024	.121	.070	.023	
2.0	.153	.084	.026	.147	.081	.025	.137	.076	.024	.127	.071	.022	.118	.067	.021	
3.0	.143	.076	.023	.139	.074	.022	.130	.070	.021	.122	.067	.020	.114	.063	.020	
4.0	.135	.070	.021	.131	.069	.020	.123	.065	.020	.116	.063	.019	.110	.060	.018	
5.0	.127	.065	.019	.124	.064	.019	.117	.061	.018	.111	.059	.017	.106	.057	.017	
6.0	.121	.061	.017	.118	.059	.017	.112	.057	.017	.107	.055	.016	.102	.054	.016	
7.0	.115	.057	.016	.112	.056	.016	.107	.054	.016	.103	.053	.015	.098	.051	.015	
8.0	.109	.053	.015	.107	.053	.015	.103	.051	.015	.099	.050	.014	.095	.049	.014	
9.0	.104	.051	.014	.102	.050	.014	.099	.049	.014	.095	.048	.014	.091	.046	.013	
10.0	.100	.048	.013	.098	.047	.013	.095	.046	.013	.091	.045	.013	.088	.044	.013	

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	.170	.157	.146	.146	.135	.126	.100	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.154	.133	.115	.132	.114	.099	.090	.079	.069	.052	.046	.041	.017	.015	.013	
3.0	.140	.113	.092	.120	.098	.080	.082	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.129	.098	.075	.110	.085	.065	.076	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.119	.086	.062	.102	.075	.054	.070	.052	.038	.041	.031	.023	.013	.010	.008	
6.0	.111	.077	.053	.095	.067	.046	.066	.047	.032	.038	.027	.019	.012	.009	.006	
7.0	.104	.069	.045	.089	.060	.039	.062	.042	.028	.036	.025	.016	.012	.008	.005	
8.0	.097	.062	.038	.084	.054	.034	.058	.038	.024	.034	.022	.014	.011	.007	.005	
9.0	.092	.057	.033	.079	.050	.029	.055	.035	.021	.032	.021	.012	.010	.007	.004	
10.0	.087	.052	.029	.075	.046	.026	.052	.032	.018	.030	.019	.011	.010	.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:2942.2x1 lm											
NAME: TL44-28W-840-B-36-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		11.9	12.8	12.2	12.9	13.1	12.4	13.2	12.6	13.4	13.5
	3H	12.8	13.6	13.1	13.8	14.0	13.3	14.1	13.6	14.2	14.4
	4H	13.2	13.9	13.4	14.1	14.3	13.7	14.4	14.0	14.6	14.8
	6H	13.2	13.9	13.5	14.1	14.4	13.8	14.5	14.1	14.7	14.9
	8H	13.2	13.9	13.5	14.1	14.4	13.8	14.4	14.1	14.7	14.9
	12H	13.2	13.8	13.5	14.1	14.4	13.8	14.4	14.1	14.6	14.9
4H	2H	12.3	13.0	12.6	13.2	13.4	12.7	13.4	13.0	13.6	13.8
	3H	13.4	14.0	13.7	14.3	14.5	13.8	14.4	14.1	14.7	15.0
	4H	13.8	14.4	14.2	14.7	15.0	14.3	14.8	14.6	15.1	15.4
	6H	14.0	14.5	14.3	14.8	15.1	14.4	14.9	14.8	15.3	15.6
	8H	13.9	14.4	14.3	14.8	15.1	14.4	14.9	14.8	15.2	15.6
	12H	13.9	14.3	14.3	14.7	15.1	14.4	14.8	14.8	15.2	15.6
8H	4H	13.9	14.4	14.3	14.8	15.1	14.4	14.8	14.7	15.2	15.5
	6H	14.1	14.5	14.5	14.9	15.3	14.6	14.9	15.0	15.3	15.7
	8H	14.1	14.5	14.6	14.9	15.3	14.6	14.9	15.0	15.3	15.8
	12H	14.1	14.4	14.6	14.8	15.3	14.6	14.9	15.0	15.3	15.8
12H	4H	13.9	14.3	14.3	14.7	15.1	14.3	14.7	14.7	15.1	15.5
	6H	14.1	14.4	14.5	14.8	15.3	14.5	14.9	15.0	15.3	15.7
	8H	14.1	14.4	14.6	14.8	15.3	14.5	14.8	15.0	15.3	15.7
Variations with the observer position at spacings:											
S = 1.0H	+ 0.6 / - 0.7					+ 0.6 / - 0.7					
1.5H	+ 1.1 / - 0.6					+ 1.2 / - 0.6					
2.0H	+ 0.8 / - 0.6					+ 0.8 / - 0.6					

CIE Pub.117, 2942 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 3.7$)

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:2942.2x1 lm		
NAME: TL44-28W-840-B-36-L	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:99	Shielding Angle:

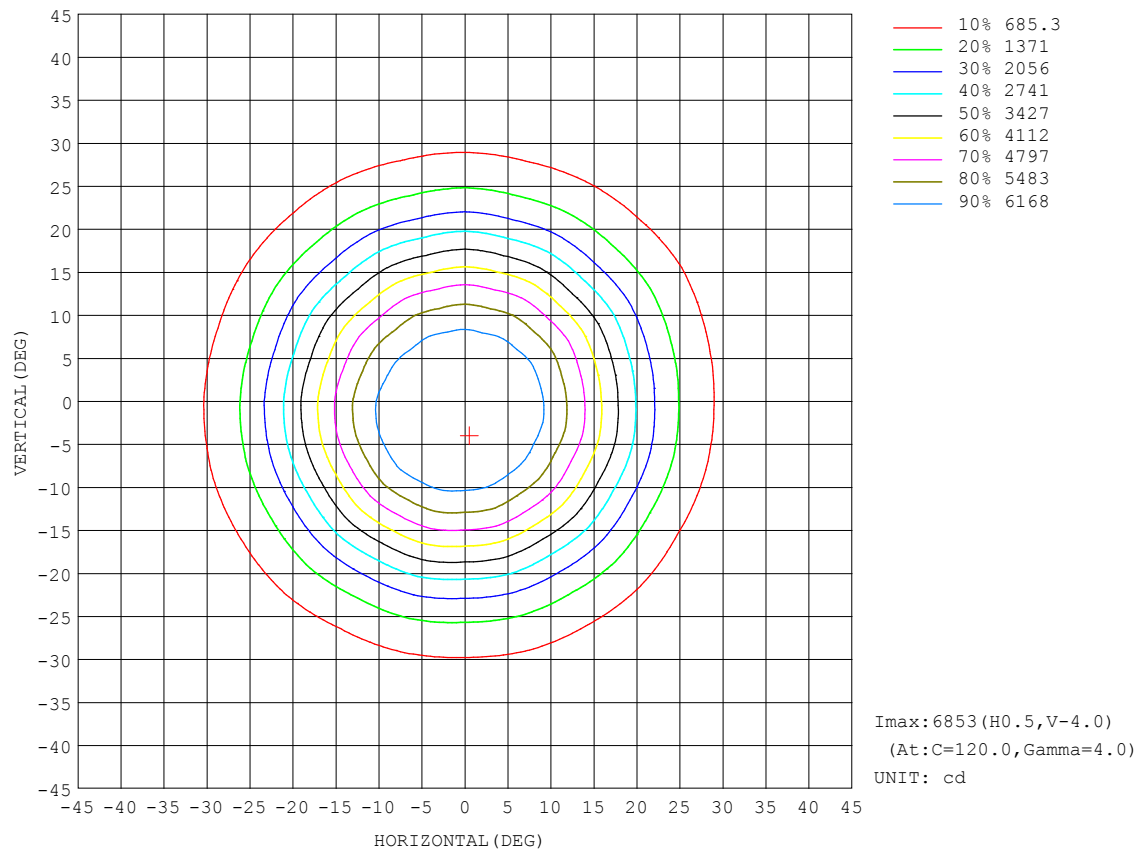
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	87	81	77	87	81	77	86	81	77	74
0.80	95	89	85	94	89	85	93	88	85	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	98	104	100	97	102	99	96	91
2.00	108	104	101	107	103	100	104	101	99	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:2942.2x1 lm		
NAME: TL44-28W-840-B-36-L	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:99	Shielding Angle:

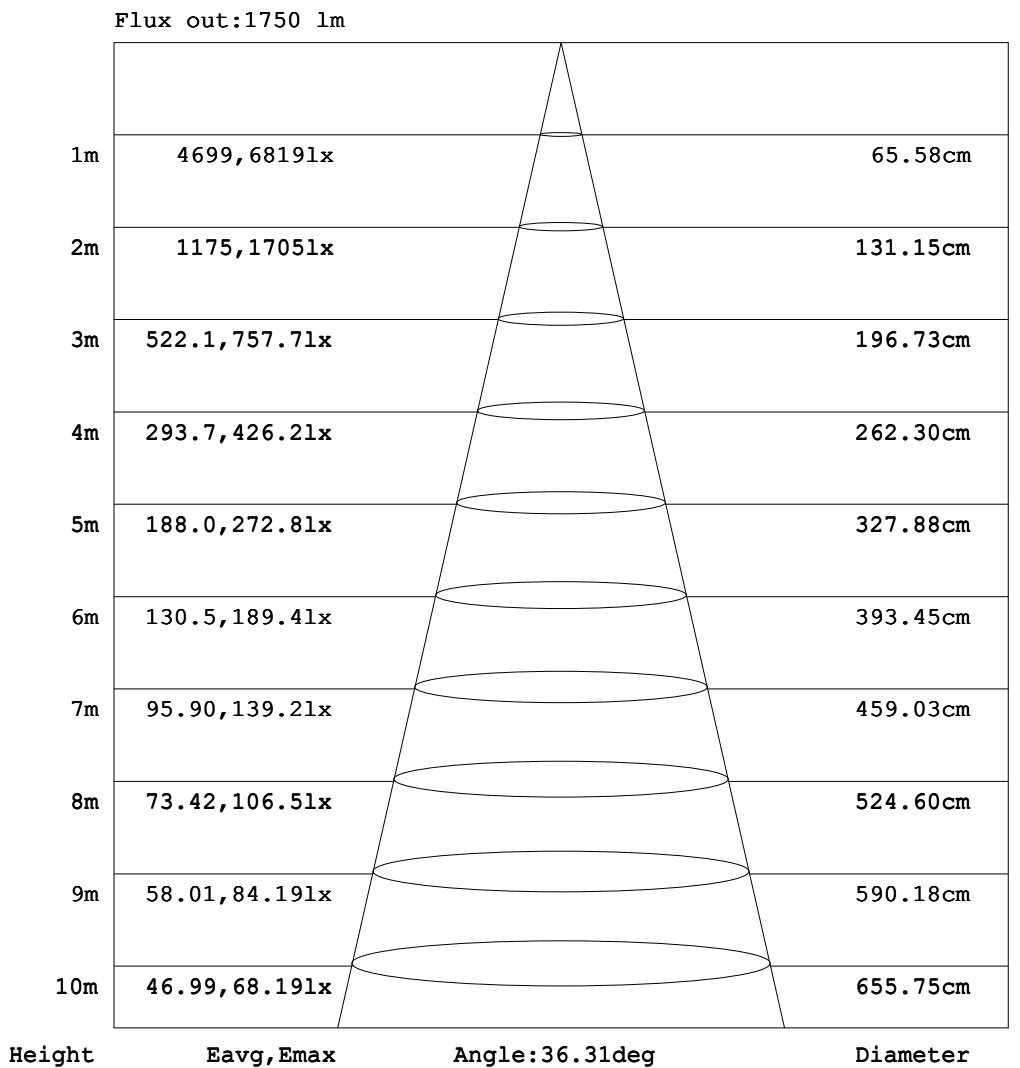


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: WuXing
Test Date: 2018-11-13

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:2942.2x1 lm		
NAME: TL44-28W-840-B-36-L	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:99	Shielding Angle:



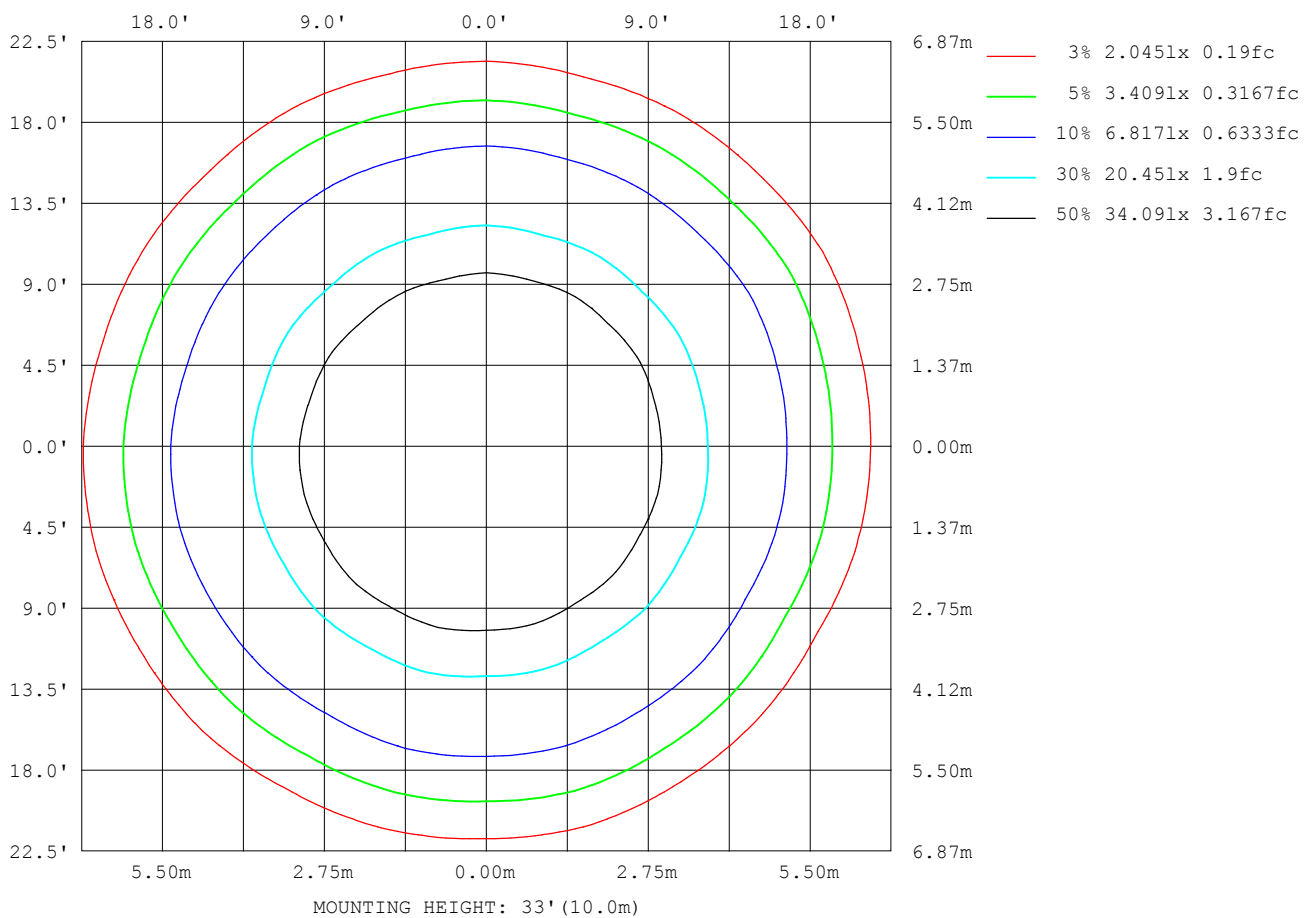
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:2942.2x1 lm		
NAME: TL44-28W-840-B-36-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:2942.2x1 lm		
NAME: TL44-28W-840-B-36-L	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:99	Shielding Angle:

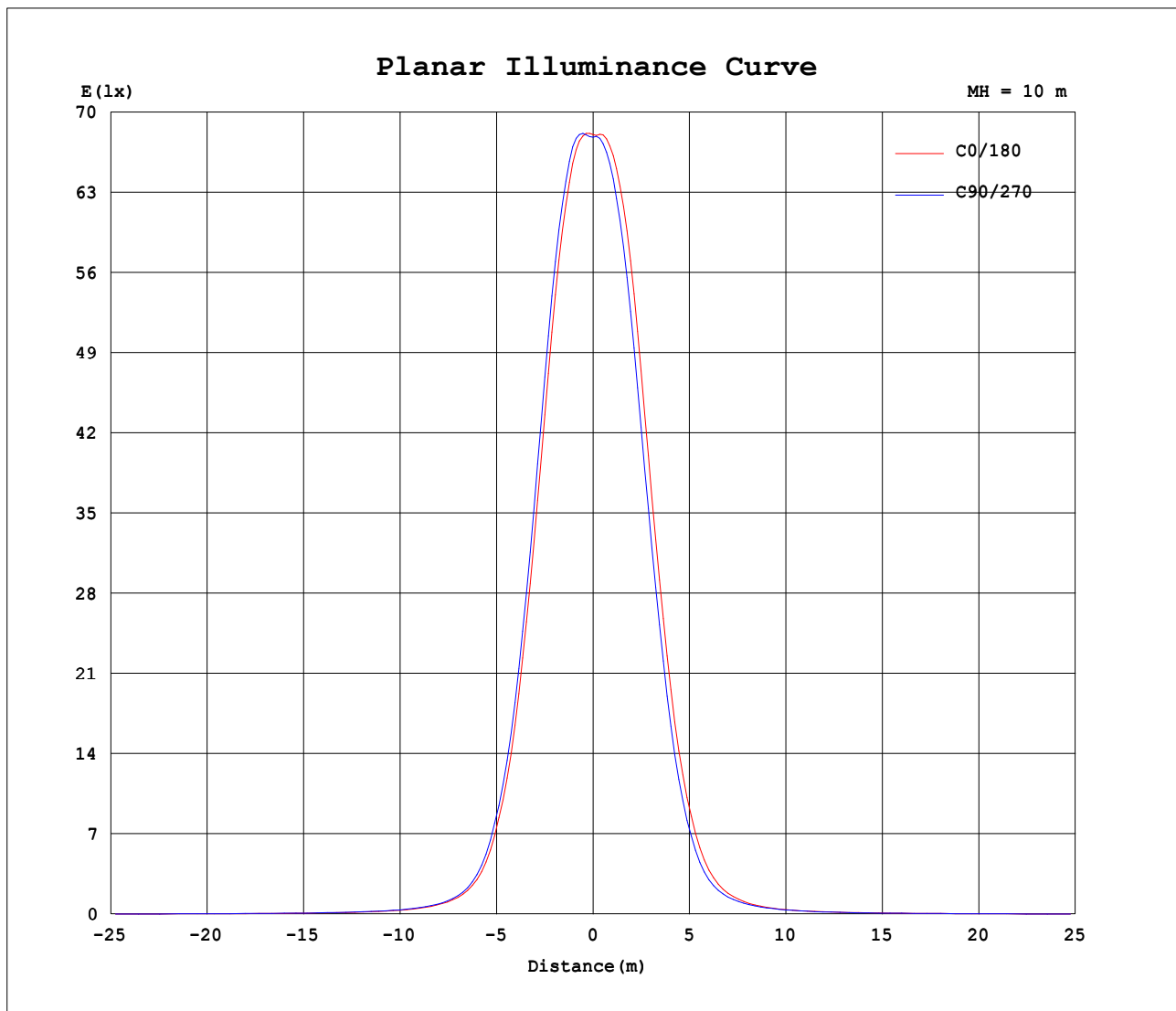
AvgL	cd/m2
L_0~180 (65) av	11320
L_0~180 (75) av	8879
L_0~180 (85) av	3422
L_90~270 (65) av	11721
L_90~270 (75) av	9300
L_90~270 (85) av	3370
L_45 (65) av	11541
L_45 (75) av	9280
L_45 (85) av	3383

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:

```