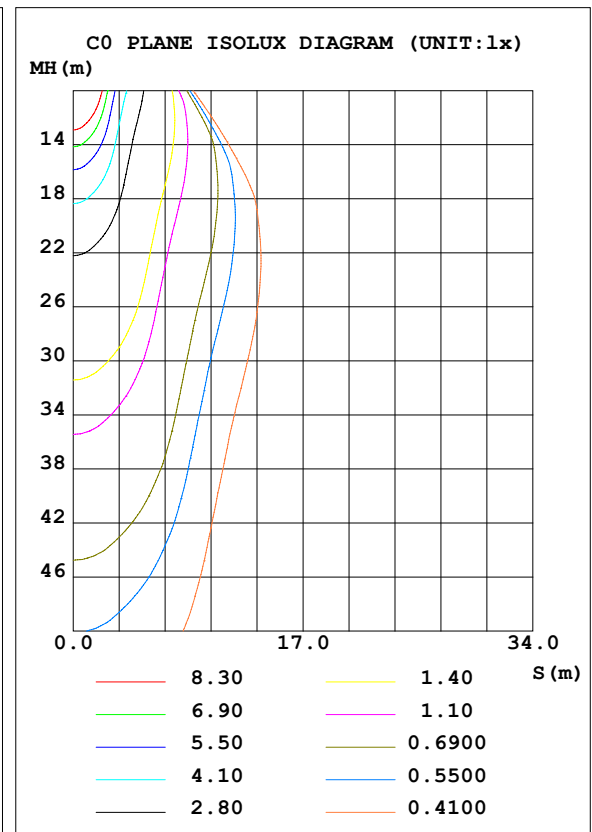
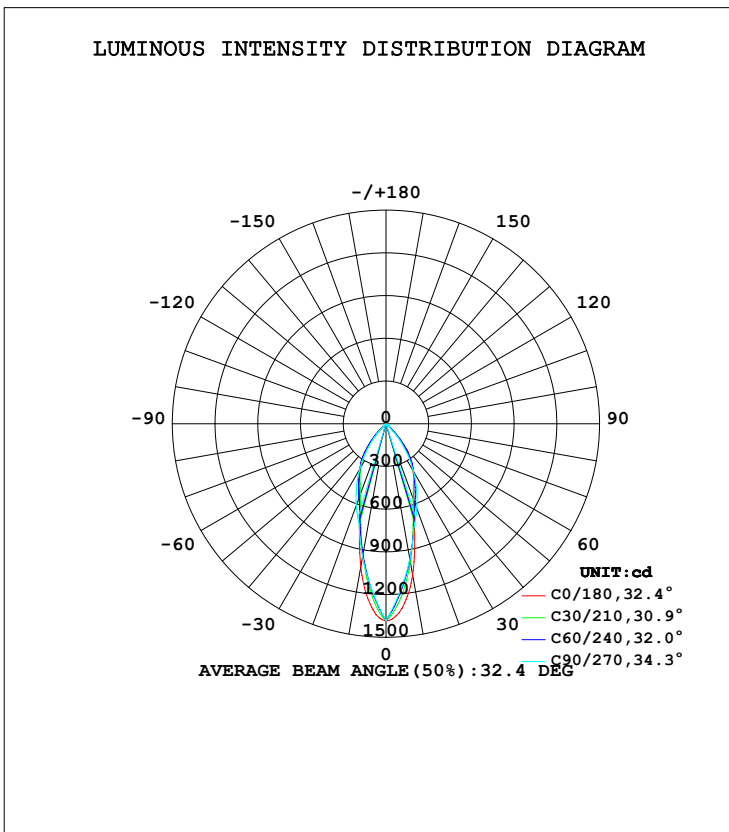


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: Libero SU-10W-3000K-30D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	Libero SU-10W-3000K-30D	Imax (cd)	1383	S/MH (C0/180)	0.51
NOMINAL POWER (W)	10	LOR (%)	100.0	S/MH (C90/270)	0.51
RATED VOLTAGE (V)	228	TOTAL FLUX (lm)	769.24	η UP, DN (C0-180)	0.0, 49.3
NOMINAL FLUX (lm)	769.237	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 50.7
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	227.9	η down (%)	100.0	CIBSE SHR MAX	0.55



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DOBAC  
Test Date: 2017-11-07

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
Humidity: 65.0%  
Test Distance: 6.960m [K=1.0000]  
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\%lum, lamp$
5	1273	1178	1165	1194	1301	1199	1174	1185	0- 5	30.35	30.35	3.95,3.95
10	1022	930.7	948.0	964.3	1078	971.5	965.4	944.0	5- 10	76.91	107.3	13.9,13.9
15	723.1	699.9	730.7	740.2	774.1	748.2	756.9	716.6	10- 15	99.47	206.7	26.9,26.9
20	545.8	537.1	610.8	567.0	570.6	573.4	632.8	554.0	15- 20	105.2	312.0	40.6,40.6
25	444.5	438.9	491.0	460.7	459.4	465.9	508.8	452.8	20- 25	107.3	419.3	54.5,54.5
30	362.6	358.8	371.1	376.6	381.1	379.9	384.7	370.2	25- 30	105.3	524.6	68.2,68.2
35	285.1	279.8	256.5	301.4	303.5	304.0	268.4	295.9	30- 35	96.84	621.4	80.8,80.8
40	154.4	168.7	141.9	214.6	205.0	218.7	152.1	186.9	35- 40	76.56	698.0	90.7,90.7
45	24.60	70.26	27.27	106.8	49.68	104.2	35.80	83.61	40- 45	40.72	738.7	96,96
50	10.99	19.70	20.49	37.09	13.66	35.84	26.66	26.28	45- 50	12.97	751.7	97.7,97.7
55	9.267	8.651	13.70	9.487	10.16	10.53	17.52	9.676	50- 55	5.761	757.4	98.5,98.5
60	7.362	6.750	6.922	8.034	8.277	8.668	8.381	7.508	55- 60	4.323	761.8	99,99
65	5.055	4.789	5.014	6.231	6.844	6.432	6.005	5.320	60- 65	3.395	765.2	99.5,99.5
70	2.021	2.963	3.107	4.236	3.188	3.957	3.629	3.231	65- 70	2.329	767.5	99.8,99.8
75	1.025	1.488	1.199	2.216	1.364	2.028	1.253	1.621	70- 75	1.213	768.7	99.9,99.9
80	0.4173	0.3983	0	0.5512	0.6190	0.5439	0	0.4580	75- 80	0.4520	769.1	100,100
85	0.0675	0	0	0	0.1792	0	0	0	80- 85	0.0838	769.2	100,100
90	0	0	0	0	0	0	0	0	85- 90	0.0049	769.2	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd								UNIT:lm			

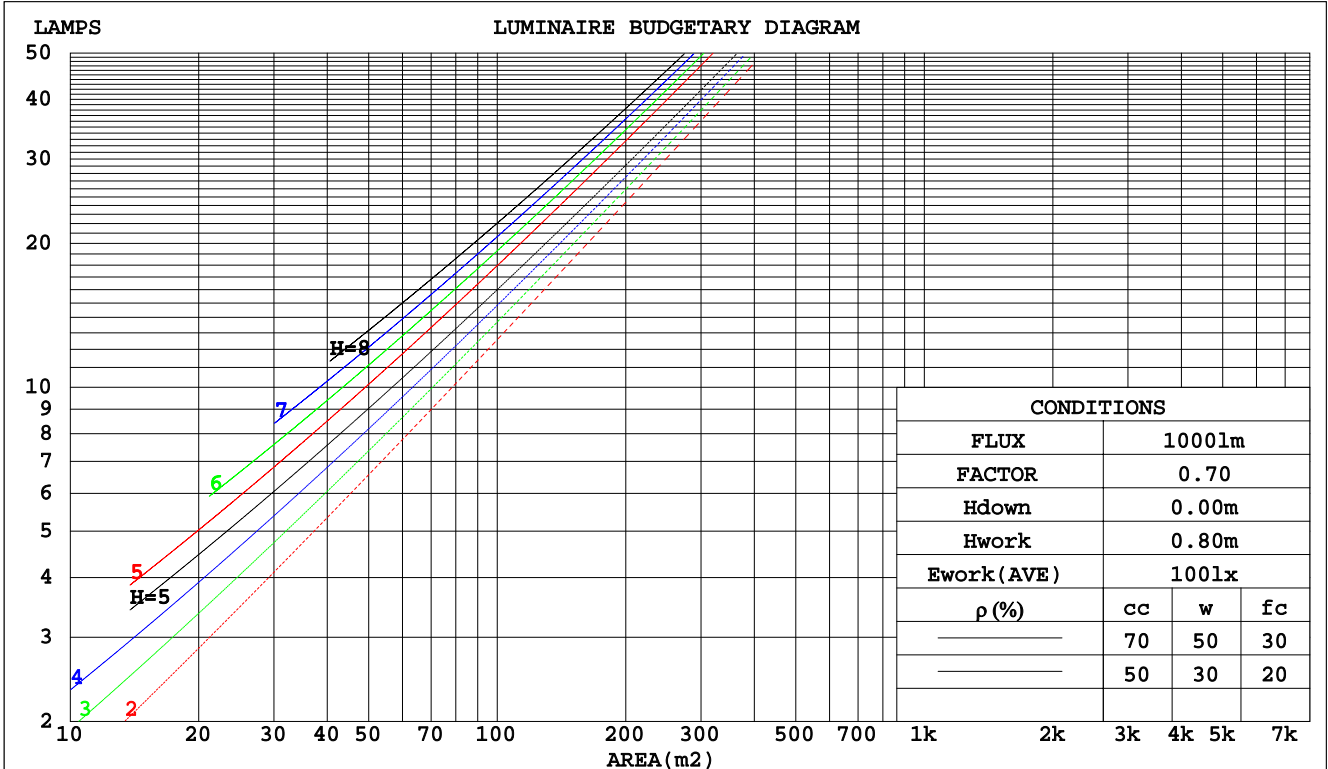
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DOBAC  
Test Date:2017-11-07

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
Humidity:65.0%  
Test Distance:6.960m [K=1.0000]  
Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

NAME: Libero SU-10W-3000K-30D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION 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	.00
1.0	1.11	1.08	1.06	1.09	1.06	1.04	1.05	1.03	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.03	.99	.96	1.01	.98	.95	.98	.95	.92	.95	.93	.90	.92	.90	.89	.87
3.0	.96	.91	.87	.95	.90	.86	.92	.88	.85	.90	.86	.84	.87	.85	.82	.81
4.0	.90	.84	.80	.89	.83	.80	.86	.82	.79	.84	.81	.78	.83	.79	.77	.75
5.0	.84	.78	.74	.83	.78	.74	.81	.77	.73	.80	.76	.72	.78	.75	.72	.70
6.0	.79	.73	.69	.78	.73	.69	.77	.72	.68	.75	.71	.68	.74	.70	.67	.66
7.0	.74	.68	.64	.74	.68	.64	.72	.67	.64	.71	.67	.63	.70	.66	.63	.62
8.0	.70	.64	.60	.70	.64	.60	.69	.63	.60	.68	.63	.60	.67	.62	.59	.58
9.0	.66	.61	.57	.66	.60	.57	.65	.60	.56	.64	.59	.56	.63	.59	.56	.55
10.0	.63	.57	.53	.63	.57	.53	.62	.57	.53	.61	.56	.53	.60	.56	.53	.52



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DOBAC  
 Test Date: 2017-11-07

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
 Humidity: 65.0%  
 Test Distance: 6.960m [K=1.0000]  
 Remarks:

WEC AND CCEC

NAME: Libero SU-10W-3000K-30D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

ρ <sub>cc</sub>	80%			70%			50%			30%			10%			0
ρ <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ <sub>fc</sub>	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.178	.101	.032	.172	.098	.031	.159	.091	.029	.147	.085	.027	.137	.079	.026	
2.0	.171	.094	.029	.166	.091	.028	.155	.086	.027	.145	.081	.025	.136	.077	.024	
3.0	.163	.087	.026	.158	.085	.026	.149	.081	.025	.141	.077	.024	.133	.074	.023	
4.0	.155	.081	.024	.151	.079	.023	.143	.076	.023	.136	.073	.022	.129	.070	.021	
5.0	.148	.075	.022	.144	.074	.022	.138	.072	.021	.131	.069	.021	.125	.067	.020	
6.0	.141	.071	.020	.138	.070	.020	.132	.068	.020	.126	.066	.019	.121	.064	.019	
7.0	.135	.067	.019	.132	.066	.019	.127	.064	.018	.122	.062	.018	.117	.061	.018	
8.0	.129	.063	.018	.126	.062	.018	.122	.061	.017	.117	.059	.017	.113	.058	.017	
9.0	.123	.060	.017	.121	.059	.017	.117	.058	.016	.113	.057	.016	.109	.055	.016	
10.0	.118	.057	.016	.116	.056	.016	.112	.055	.015	.109	.054	.015	.105	.053	.015	

ρ <sub>cc</sub>	80%			70%			50%			30%			10%			0
ρ <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ <sub>fc</sub>	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	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.156	.132	.113	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.144	.114	.089	.123	.098	.078	.085	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.134	.099	.072	.115	.085	.063	.079	.060	.044	.046	.035	.026	.015	.011	.009	
5.0	.125	.087	.059	.107	.076	.052	.074	.053	.037	.043	.031	.022	.014	.010	.007	
6.0	.118	.078	.050	.101	.068	.043	.070	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.111	.070	.042	.096	.061	.037	.066	.043	.026	.038	.025	.015	.012	.008	.005	
8.0	.105	.064	.036	.091	.056	.031	.063	.039	.022	.037	.023	.013	.012	.008	.004	
9.0	.100	.059	.031	.086	.051	.027	.060	.036	.019	.035	.021	.012	.011	.007	.004	
10.0	.096	.055	.027	.083	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003	

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DOBAC  
 Test Date:2017-11-07

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
 Humidity:65.0%  
 Test Distance:6.960m [K=1.0000]  
 Remarks:

Uncorrected UGR Table

NAME: Libero SU-10W-3000K-30D					TYPE:					WEIGHT:				
DIM.:					SPEC.:					SERIAL No.:				
MFR.: DOBAC					SUR.:					PROTECTION 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	17.2	18.2	17.4	18.3	18.5	18.0	19.0	18.2	19.1	19.3				
3H	17.1	18.0	17.3	18.2	18.4	17.9	18.8	18.1	19.0	19.2				
4H	17.0	17.8	17.3	18.1	18.3	17.8	18.6	18.1	18.9	19.1				
6H	16.9	17.7	17.2	17.9	18.2	17.7	18.5	18.0	18.7	19.0				
8H	16.9	17.6	17.2	17.9	18.1	17.7	18.4	18.0	18.7	18.9				
12H	16.8	17.5	17.1	17.8	18.1	17.6	18.3	18.0	18.6	18.9				
4H 2H	17.0	17.8	17.3	18.0	18.3	17.8	18.6	18.1	18.8	19.1				
3H	16.9	17.6	17.2	17.8	18.1	17.7	18.4	18.0	18.7	18.9				
4H	16.8	17.4	17.1	17.7	18.0	17.6	18.2	17.9	18.5	18.8				
6H	16.7	17.3	17.1	17.6	17.9	17.5	18.1	17.9	18.4	18.7				
8H	16.6	17.2	17.0	17.5	17.9	17.4	18.0	17.8	18.3	18.7				
12H	16.6	17.1	17.0	17.4	17.8	17.4	17.9	17.8	18.3	18.6				
8H 4H	16.6	17.2	17.0	17.5	17.9	17.5	18.0	17.8	18.3	18.7				
6H	16.5	17.0	17.0	17.4	17.8	17.4	17.8	17.8	18.2	18.6				
8H	16.5	16.9	16.9	17.3	17.7	17.3	17.7	17.7	18.1	18.5				
12H	16.4	16.8	16.9	17.2	17.7	17.2	17.6	17.7	18.0	18.5				
12H 4H	16.6	17.1	17.0	17.4	17.8	17.4	17.9	17.8	18.3	18.6				
6H	16.5	16.9	16.9	17.3	17.7	17.3	17.7	17.7	18.1	18.5				
8H	16.4	16.8	16.9	17.2	17.7	17.2	17.6	17.7	18.0	18.5				
Variations with the observer position at spacings:														
S = 1.0H	+ 3.7 / -10.5					+ 2.6 / - 9.6								
1.5H	+ 6.4 / - 9.7					+ 4.8 / - 9.5								
2.0H	+ 3.5 / - 1.5					+ 3.3 / - 2.1								

CIE Pub.117 Corrected 769.2 lm Total Lamp Luminous Flux. (8log(F/F0) = -0.9)

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DOBAC  
Test Date: 2017-11-07

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
Humidity: 65.0%  
Test Distance: 6.960m [K=1.0000]  
Remarks:

UTILIZATION FACTORS TABLE

NAME: Libero SU-10W-3000K-30D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

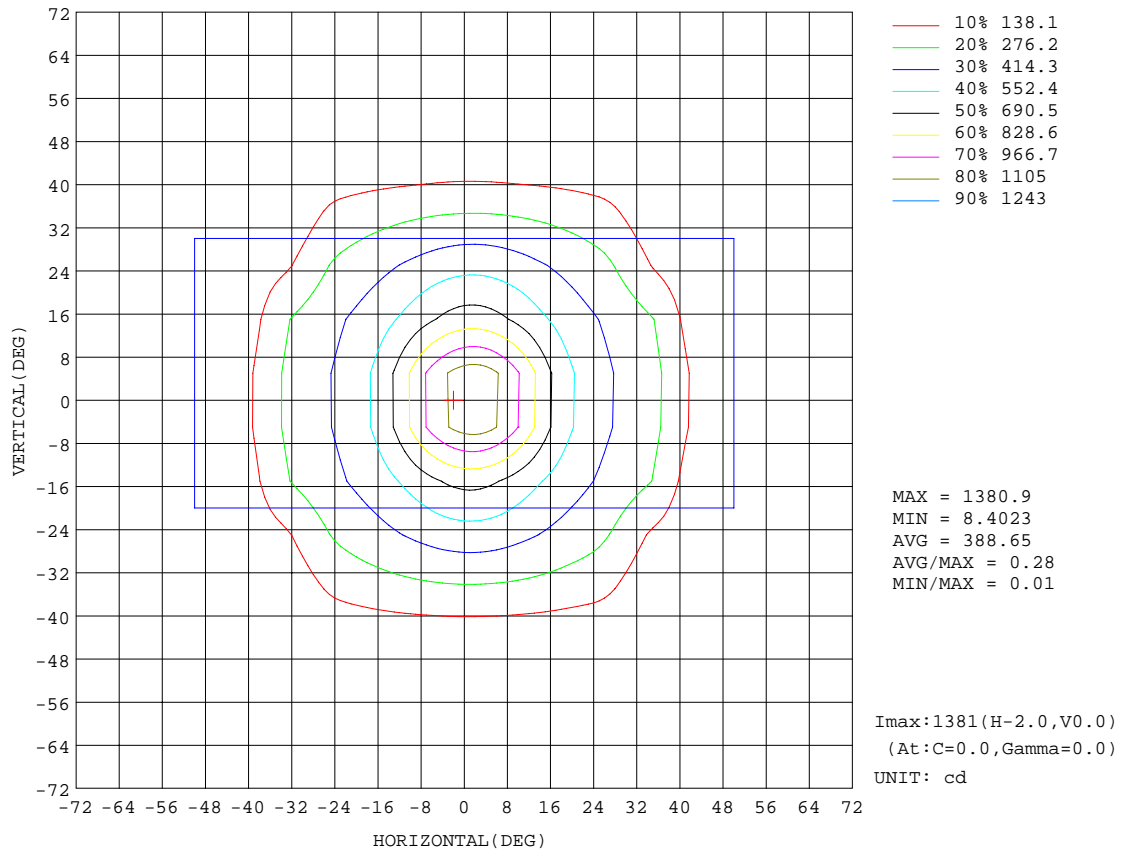
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	86	79	75	85	79	75	84	79	75	71
0.80	93	87	83	93	87	83	92	86	83	79
1.00	98	92	89	97	92	88	96	92	88	84
1.25	102	97	93	101	97	93	99	95	92	88
1.50	105	100	97	104	100	96	102	98	95	91
2.00	108	104	101	107	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	102	100	94
3.00	111	108	105	110	107	104	106	104	102	95
4.00	114	111	108	112	109	107	108	106	104	97
5.00	115	112	111	113	111	109	109	107	106	98
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DOBAC  
 Test Date: 2017-11-07

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
 Humidity: 65.0%  
 Test Distance: 6.960m [K=1.0000]  
 Remarks:

ISOCANDELA DIAGRAM

NAME: Libero SU-10W-3000K-30D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

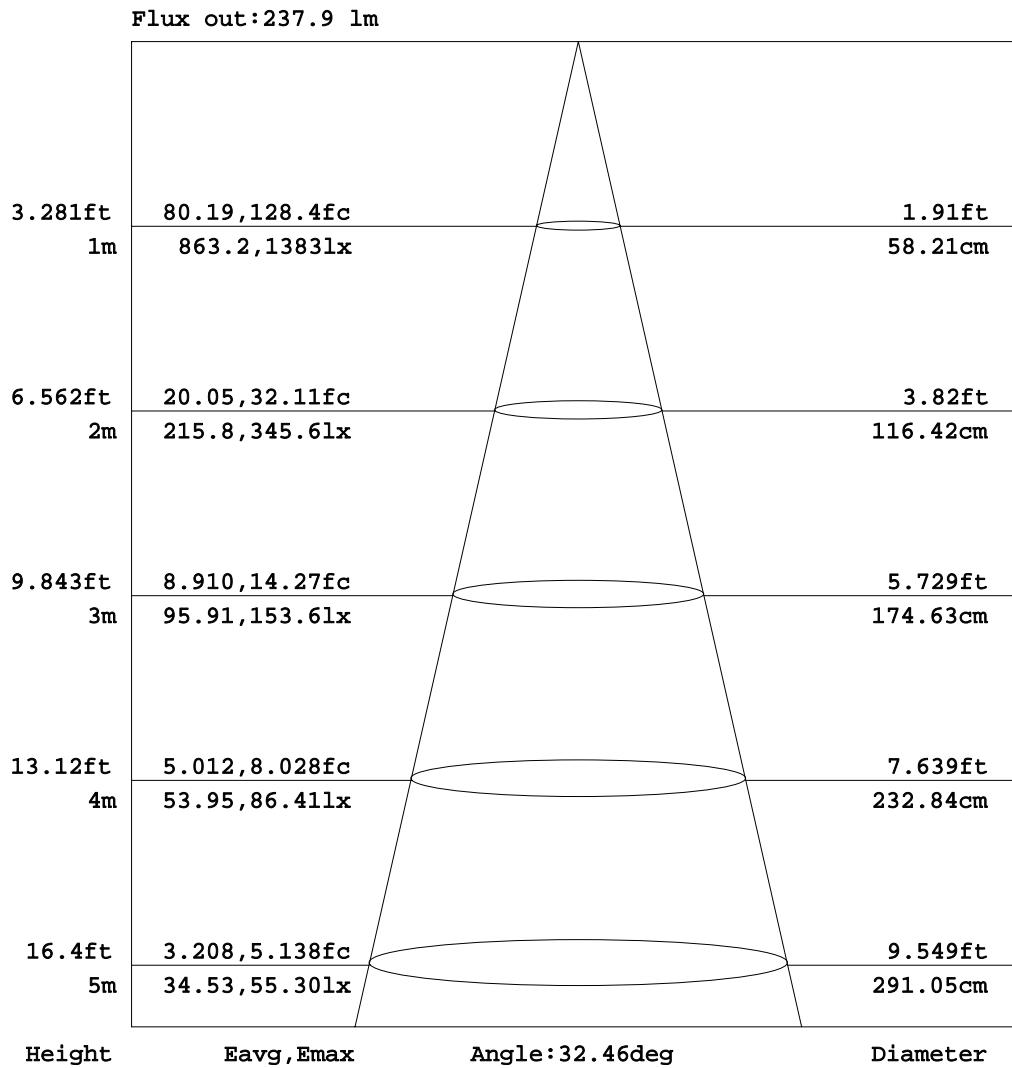


C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DOBAC  
 Test Date: 2017-11-07

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
 Humidity: 65.0%  
 Test Distance: 6.960m [K=1.0000]  
 Remarks:

AAI Figure

NAME: Libero SU-10W-3000K-30D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:



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

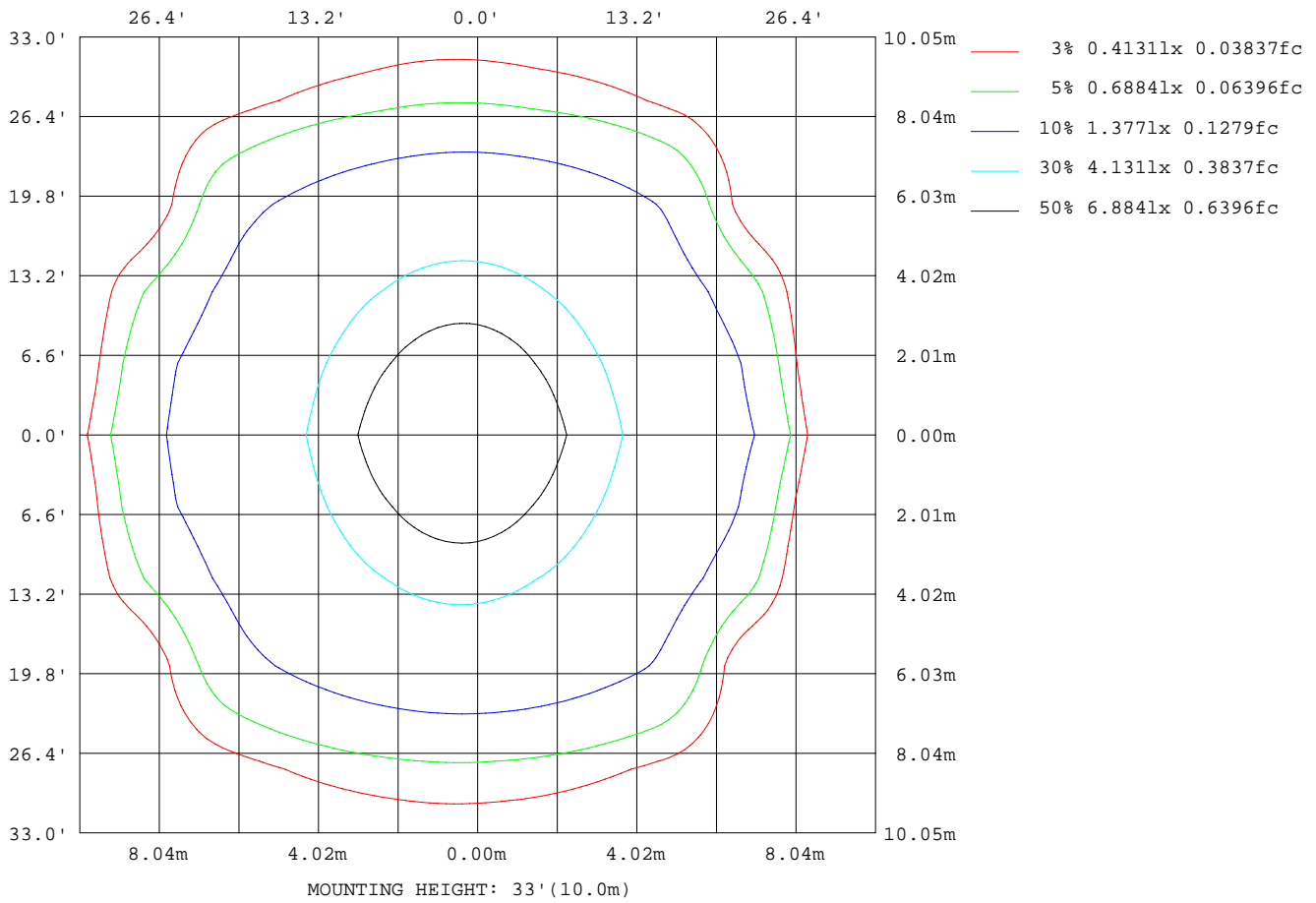
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DOBAC  
Test Date: 2017-11-07

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
Humidity: 65.0%  
Test Distance: 6.960m [K=1.0000]  
Remarks:



**ISOLUX DIAGRAM**

NAME: Libero SU-10W-3000K-30D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DOBAC  
 Test Date: 2017-11-07

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
 Humidity: 65.0%  
 Test Distance: 6.960m [K=1.0000]  
 Remarks:

**Average Luminance Table(CIBSE)**

NAME: Libero SU-10W-3000K-30D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Parameter description for average Luminance	Symbol	Value	Unit
Luminance in Azimuth Plane	Bc	refer Table 2	cd/sq.m.
Intensity at angle Gamma in given azimuth plane	I	from data	cd/klm
Number of lamps	N	1	
Output of each lamp(initial lumens as specified)	F	769.237	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.006	sq.m.
Angle to the downward vertical from light centre	Gamma	from data	deg

Table 1. Calculation parameters for determination of CIBSE LG3:1996 Average Luminance

G deg	C plane(deg)																		
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
55	2693	2623	2561	2501	2518	2521	2414	2899	3622	3982	3914	3603	2688	2680	3240	2739	2853	2937	2951
60	2454	2362	2297	2374	2190	2355	2376	2416	2385	2307	2491	2696	2541	2664	2638	2651	2749	2759	2759
65	1993	1941	1936	2084	1694	2052	2209	2047	1973	1977	2064	2168	2447	2562	2342	2474	2456	2587	2699
70	985	1004	1007	1251	960	1602	1735	1575	1503	1514	1597	1705	1984	2146	1780	1731	1713	1623	1554
75	660	629	646	638	736	1043	995	822	756	772	847	959	1184	1415	1278	871	907	894	878
80	401	362	386	408	414	329	220	112	32	0	36	136	274	440	631	659	629	622	594
85	129	140	170	0	0	0	0	0	0	0	0	0	0	0	0	0	321	360	343

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

CIBSE Category	Gamma (deg)	Average Luminance		Patch Luminance	
		maximum calculated	specified maximum	maximum measured	specified maximum
Category 1	55 to 90	3982	200	---	500
Category 2	65 to 90	2699	200	---	500
Category 3	75 to 90	1415	200	---	500

Table 3. Tabulation of Average and Patch Luminance(cd/sq.m.) for defined CIBSE categories

No match

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DOBAC  
Test Date:2017-11-07

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
Humidity:65.0%  
Test Distance:6.960m [K=1.0000]  
Remarks:

**Average Luminance Table(CIBSE)**

NAME: Libero SU-10W-3000K-30D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Parameter description for average Luminance	Symbol	Value	Unit
Luminance in Azimuth Plane	Bc	refer Table 2	cd/sq.m.
Intensity at angle Gamma in given azimuth plane	I	from data	cd/klm
Number of lamps	N	1	
Output of each lamp(initial lumens as specified)	F	769.237	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.006	sq.m.
Angle to the downward vertical from light centre	Gamma	from data	deg

Table 1. Calculation parameters for determination of CIBSE LG3:2001 Average Luminance

G deg	C plane(deg)																		
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
55	2693	2623	2561	2501	2518	2521	2414	2899	3622	3982	3914	3603	2688	2680	3240	2739	2853	2937	2951
60	2454	2362	2297	2374	2190	2355	2376	2416	2385	2307	2491	2696	2541	2664	2638	2651	2749	2759	2759
65	1993	1941	1936	2084	1694	2052	2209	2047	1973	1977	2064	2168	2447	2562	2342	2474	2456	2587	2699
70	985	1004	1007	1251	960	1602	1735	1575	1503	1514	1597	1705	1984	2146	1780	1731	1713	1623	1554
75	660	629	646	638	736	1043	995	822	756	772	847	959	1184	1415	1278	871	907	894	878
80	401	362	386	408	414	329	220	112	32	0	36	136	274	440	631	659	629	622	594
85	129	140	170	0	0	0	0	0	0	0	0	0	0	0	0	0	321	360	343

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

range (deg)	Maximum measured	Average Luminance(cd/sq.m)			
		Maximum limit for screen type & software category used			
		Type I,II screen Some neg.s'ware	Type I,II screen Only pos.s'ware	Type III screen Some neg.s'ware	Type III screen Only pos.s'ware
55 to 90	3982	1000	1500	200	500
65 to 90	2699	1000	1500	200	500

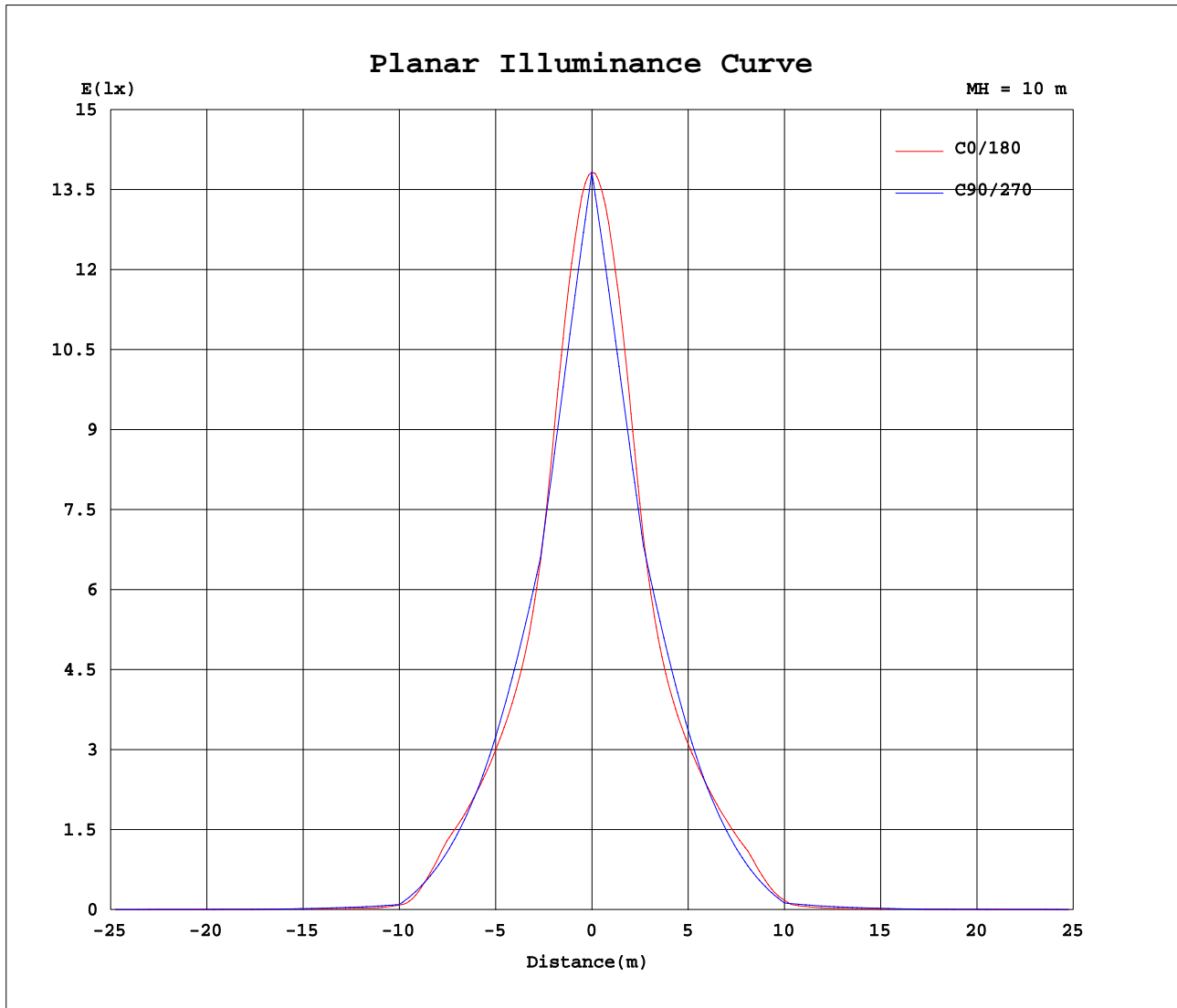
Table 3. Tabulation of average luminance(cd/sq.m.) and luminance limits

No match

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DOBAC  
Test Date:2017-11-07

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
Humidity:65.0%  
Test Distance:6.960m [K=1.0000]  
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DOBAC  
 Test Date: 2017-11-07

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
 Humidity: 65.0%  
 Test Distance: 6.960m [K=1.0000]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Libero SU-10W-3000K-30D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C( DEG) γ (DEG)	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383
5	1273	1256	1241	1228	1216	1205	1196	1189	1183	1178	1175	1172	1169	1167	1165	1164	1164	1164	1165
10	1022	999	980	965	953	944	938	934	932	931	930	930	932	934	937	940	942	945	948
15	723	707	696	689	685	685	687	691	695	700	704	706	709	712	716	719	722	726	731
20	546	535	528	524	522	523	526	530	534	537	540	548	556	567	578	589	598	605	611
25	445	436	430	427	427	428	432	437	437	439	443	448	454	461	468	476	482	487	491
30	363	355	351	351	353	358	356	354	356	359	361	365	368	371	372	372	372	371	371
35	285	275	272	276	284	275	257	253	262	280	291	294	285	276	269	263	258	256	257
40	154	135	127	132	147	151	140	127	138	169	194	194	182	170	160	151	145	142	142
45	24.6	22.3	21.7	22.7	27.0	37.0	42.2	24.1	35.6	70.3	93.4	98.5	84.0	67.6	53.6	41.9	33.2	27.8	27.3
50	11.0	10.7	10.6	10.5	10.6	11.6	9.87	10.5	14.4	19.7	27.9	18.2	9.30	10.7	13.5	16.1	18.0	19.2	20.5
55	9.27	9.07	9.03	8.90	8.81	8.83	8.61	8.23	8.67	8.65	8.68	8.49	8.31	8.32	9.98	11.4	12.5	13.1	13.7
60	7.36	7.15	7.08	7.09	6.89	7.02	7.12	6.67	6.57	6.75	7.06	7.15	7.13	6.94	7.25	7.31	7.16	7.06	6.92
65	5.05	4.83	4.92	5.01	4.91	4.70	5.28	4.69	4.30	4.79	5.20	5.61	5.60	5.38	5.19	5.07	5.00	5.05	5.01
70	2.02	1.97	2.06	2.15	2.07	2.39	2.57	2.34	1.97	2.96	3.29	3.58	3.56	3.41	3.23	3.14	3.08	3.11	3.11
75	1.02	0.95	0.98	0.95	1.00	0.98	0.99	1.07	1.14	1.49	1.62	1.65	1.55	1.40	1.28	1.20	1.17	1.18	1.20
80	0.42	0.38	0.38	0.39	0.40	0.42	0.42	0.45	0.43	0.40	0.34	0.29	0.23	0.17	0.12	0.07	0.03	0.01	0.00
85	0.07	0.05	0.07	0.11	0.09	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DOBAC  
Test Date:2017-11-07

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
Humidity:65.0%  
Test Distance:6.960m [K=1.0000]  
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Libero SU-10W-3000K-30D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Table--2

UNIT: cd

C(DEG) γ (DEG)	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185
0	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383
5	1166	1168	1169	1172	1175	1178	1183	1188	1194	1202	1210	1219	1230	1241	1254	1269	1284	1301	1285
10	950	951	952	953	955	958	959	961	964	970	976	983	992	1003	1016	1033	1053	1078	1054
15	733	736	738	740	741	742	742	741	740	738	736	733	732	733	737	744	756	774	757
20	612	611	607	601	593	585	577	570	567	564	560	555	552	550	550	554	560	571	561
25	492	492	490	485	480	474	469	464	461	459	460	455	450	447	446	447	452	459	452
30	373	376	379	381	382	382	380	378	377	376	377	379	378	373	370	370	374	381	375
35	258	262	267	275	285	295	305	304	301	297	288	287	299	305	298	295	297	304	297
40	144	148	156	166	178	190	204	216	215	189	173	173	191	212	199	189	191	205	189
45	29.8	35.4	45.5	58.5	73.8	90.5	107	118	107	78.4	45.3	66.0	75.1	65.4	47.0	42.4	44.7	49.7	44.3
50	20.6	19.7	18.9	17.4	15.0	12.1	20.5	37.6	37.1	21.9	17.6	13.3	14.7	15.9	14.7	13.0	13.1	13.7	13.2
55	13.8	13.5	13.2	12.4	11.0	9.25	9.01	9.22	9.49	11.2	9.94	9.42	9.83	9.82	9.84	10.1	10.0	10.2	10.0
60	7.09	7.47	7.90	8.09	8.16	7.62	7.92	7.99	8.03	7.91	7.97	7.95	8.17	8.25	8.06	8.28	8.16	8.28	8.18
65	5.08	5.23	5.37	5.50	5.98	6.21	6.70	6.50	6.23	5.94	5.72	6.27	6.46	6.23	6.70	6.56	6.79	6.84	6.79
70	3.16	3.28	3.38	3.50	3.82	4.07	4.32	4.40	4.24	3.65	3.28	3.55	3.76	3.51	3.37	3.33	3.29	3.19	3.17
75	1.23	1.31	1.41	1.49	1.64	1.84	2.02	2.20	2.22	1.99	1.48	1.35	1.50	1.41	1.40	1.39	1.38	1.36	1.35
80	0.01	0.04	0.08	0.14	0.21	0.29	0.37	0.46	0.55	0.66	0.69	0.69	0.67	0.66	0.66	0.65	0.64	0.62	0.60
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.17	0.18	0.19	0.16	0.18	0.16
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DOBAC  
Test Date:2017-11-07

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
Humidity:65.0%  
Test Distance:6.960m [K=1.0000]  
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Libero SU-10W-3000K-30D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Table--3

UNIT: cd

C( DEG) γ (DEG)	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280
0	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383
5	1270	1256	1244	1232	1223	1214	1206	1199	1194	1189	1185	1182	1180	1178	1176	1174	1174	1173	1173
10	1034	1018	1006	996	988	981	976	971	969	968	968	968	967	967	967	967	965	964	961
15	745	739	735	735	737	741	745	748	751	753	755	756	758	759	759	759	757	754	750
20	555	552	552	555	559	564	569	573	579	587	596	606	616	624	630	633	633	629	622
25	448	447	449	452	458	464	464	466	470	476	483	490	497	503	507	509	509	506	502
30	372	372	375	381	382	379	379	380	382	386	389	391	391	390	388	385	385	385	387
35	295	299	306	300	289	290	301	304	307	309	301	291	282	276	272	269	268	269	270
40	186	196	211	190	172	169	187	219	218	207	194	182	170	161	156	154	152	152	154
45	41.3	43.9	61.5	72.7	65.2	43.9	73.9	104	121	110	93.8	76.7	60.9	47.8	41.5	38.3	35.8	35.2	37.3
50	13.2	14.6	15.9	14.8	14.7	17.8	22.7	35.8	37.9	22.9	15.3	17.6	19.3	20.4	23.8	26.7	26.7	24.4	20.8
55	10.1	10.0	10.2	10.2	10.1	11.0	11.9	10.5	10.2	10.0	11.9	13.4	14.2	14.7	16.1	17.7	17.5	16.3	14.4
60	8.37	8.44	8.46	8.74	8.85	8.86	8.62	8.67	8.79	8.91	9.44	9.99	9.78	9.37	8.96	8.70	8.38	8.43	8.49
65	6.67	6.93	6.45	6.69	6.92	6.27	5.99	6.43	7.02	7.52	7.44	7.24	6.79	6.43	6.20	6.13	6.01	5.96	5.92
70	3.13	3.18	3.26	3.46	3.68	3.38	3.41	3.96	4.55	4.80	4.69	4.52	4.20	3.93	3.77	3.70	3.63	3.60	3.61
75	1.36	1.37	1.39	1.48	1.35	1.52	1.87	2.03	2.23	2.20	1.99	1.78	1.57	1.41	1.33	1.26	1.25	1.25	1.31
80	0.62	0.62	0.63	0.65	0.67	0.66	0.63	0.54	0.46	0.37	0.28	0.21	0.14	0.08	0.04	0.01	0.00	0.01	0.04
85	0.17	0.18	0.17	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DOBAC  
Test Date:2017-11-07

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
Humidity:65.0%  
Test Distance:6.960m [K=1.0000]  
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: Libero SU-10W-3000K-30D	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

Table--4

UNIT: cd

C( DEG) γ (DEG)	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355				
0	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383	1383				
5	1173	1174	1176	1177	1179	1182	1185	1189	1194	1201	1209	1219	1230	1243	1257				
10	958	954	951	948	945	944	944	944	945	947	952	959	969	983	1000				
15	746	742	738	733	729	723	717	709	703	697	693	691	694	699	709				
20	613	602	591	580	568	560	554	548	542	536	531	528	528	531	537				
25	496	489	480	471	464	458	453	450	449	442	437	434	432	433	437				
30	388	388	386	383	379	374	370	368	367	367	367	361	356	355	357				
35	274	281	289	298	306	301	296	278	268	270	284	290	281	276	277				
40	159	169	180	191	203	209	187	157	143	150	161	160	144	136	139				
45	46.1	59.5	74.7	90.8	106	103	83.6	50.6	28.8	49.5	46.8	31.7	25.7	24.3	23.5				
50	19.3	17.9	15.9	12.6	20.1	32.2	26.3	17.2	14.5	11.1	13.3	12.2	10.9	10.9	10.8				
55	13.9	13.2	12.1	9.94	9.71	9.71	9.68	10.2	9.37	9.56	9.68	9.39	9.34	9.32	9.20				
60	8.77	9.23	9.23	8.71	8.55	7.97	7.51	7.51	7.87	8.27	7.80	7.56	7.76	7.48	7.44				
65	6.02	6.45	6.84	7.21	7.06	5.81	5.32	4.93	5.63	6.09	5.36	5.52	5.44	5.22	5.03				
70	3.70	4.01	4.26	4.52	4.32	3.66	3.23	2.58	2.67	2.93	2.59	2.24	2.36	2.17	2.08				
75	1.37	1.50	1.67	1.87	1.91	1.81	1.62	1.39	1.20	1.12	1.15	1.09	1.06	1.06	1.03				
80	0.08	0.13	0.19	0.26	0.33	0.39	0.46	0.50	0.52	0.52	0.48	0.49	0.46	0.45	0.44				
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.08	0.11	0.08	0.07				
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DOBAC  
Test Date:2017-11-07

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V1.0.260  
Humidity:65.0%  
Test Distance:6.960m [K=1.0000]  
Remarks: