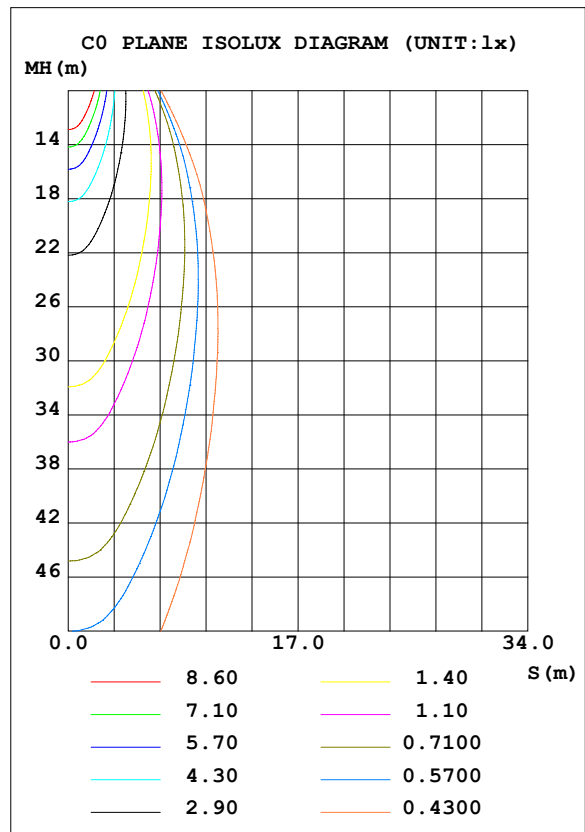
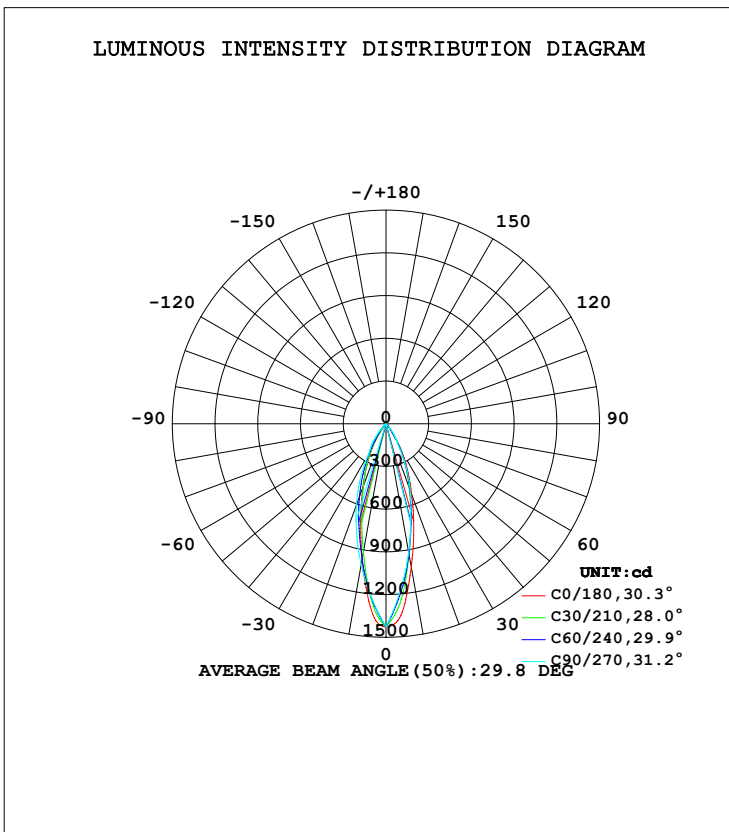


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: Libero SU-8W-30D-3000K-80	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	Libero SU-8W-30D-3000K-80	Imax (cd)	1427	S/MH (C0/180)	0.47
NOMINAL POWER (W)	8	LOR (%)	100.0	S/MH (C90/270)	0.54
RATED VOLTAGE (V)	228	TOTAL FLUX (lm)	539.58	η UP, DN (C0-180)	0.0, 53.4
NOMINAL FLUX (lm)	539.575	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 46.6
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:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	lum, lamp
5	1287	1219	1216	1240	1327	1210	1173	1190	0- 5	31.15	31.15	5.77,5.77
10	967.1	933.3	1005	979.3	1023	923.9	918.5	880.2	5- 10	76.61	107.8	20,20
15	685.6	692.9	794.6	748.2	754.6	674.7	664.2	626.6	10- 15	96.11	203.9	37.8,37.8
20	473.8	507.9	610.2	566.4	527.7	483.2	498.7	442.2	15- 20	97.81	301.7	55.9,55.9
25	314.3	344.6	425.8	393.8	357.7	326.5	333.2	293.5	20- 25	88.03	389.7	72.2,72.2
30	187.0	206.3	241.4	246.1	217.6	192.5	167.7	163.5	25- 30	68.09	457.8	84.8,84.8
35	66.11	91.41	164.5	124.1	93.87	81.31	113.1	66.45	30- 35	42.77	500.6	92.8,92.8
40	13.89	17.76	87.66	36.34	19.57	15.16	58.52	13.15	35- 40	21.76	522.3	96.8,96.8
45	5.314	9.816	10.78	13.60	8.084	8.650	3.945	7.398	40- 45	8.974	531.3	98.5,98.5
50	2.939	5.099	8.063	6.675	3.373	4.698	3.440	4.050	45- 50	2.597	533.9	98.9,98.9
55	2.821	2.679	5.348	2.881	2.813	3.005	2.934	2.837	50- 55	1.537	535.4	99.2,99.2
60	2.723	2.352	2.632	2.397	2.796	2.450	2.429	2.228	55- 60	1.317	536.7	99.5,99.5
65	1.844	1.908	2.083	1.931	1.973	1.747	1.847	1.535	60- 65	1.083	537.8	99.7,99.7
70	1.109	1.391	1.535	1.465	1.250	1.145	1.265	0.9908	65- 70	0.8035	538.6	99.8,99.8
75	0.7703	0.9567	0.9858	1.031	0.8684	0.7804	0.6837	0.6382	70- 75	0.5535	539.2	99.9,99.9
80	0.4327	0.5007	0	0.5501	0.5604	0.3959	0	0.2840	75- 80	0.3150	539.5	100,100
85	0.0519	0	0	0	0.1306	0	0	0	80- 85	0.0749	539.6	100,100
90	0	0	0	0	0	0	0	0	85- 90	0.0032	539.6	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			

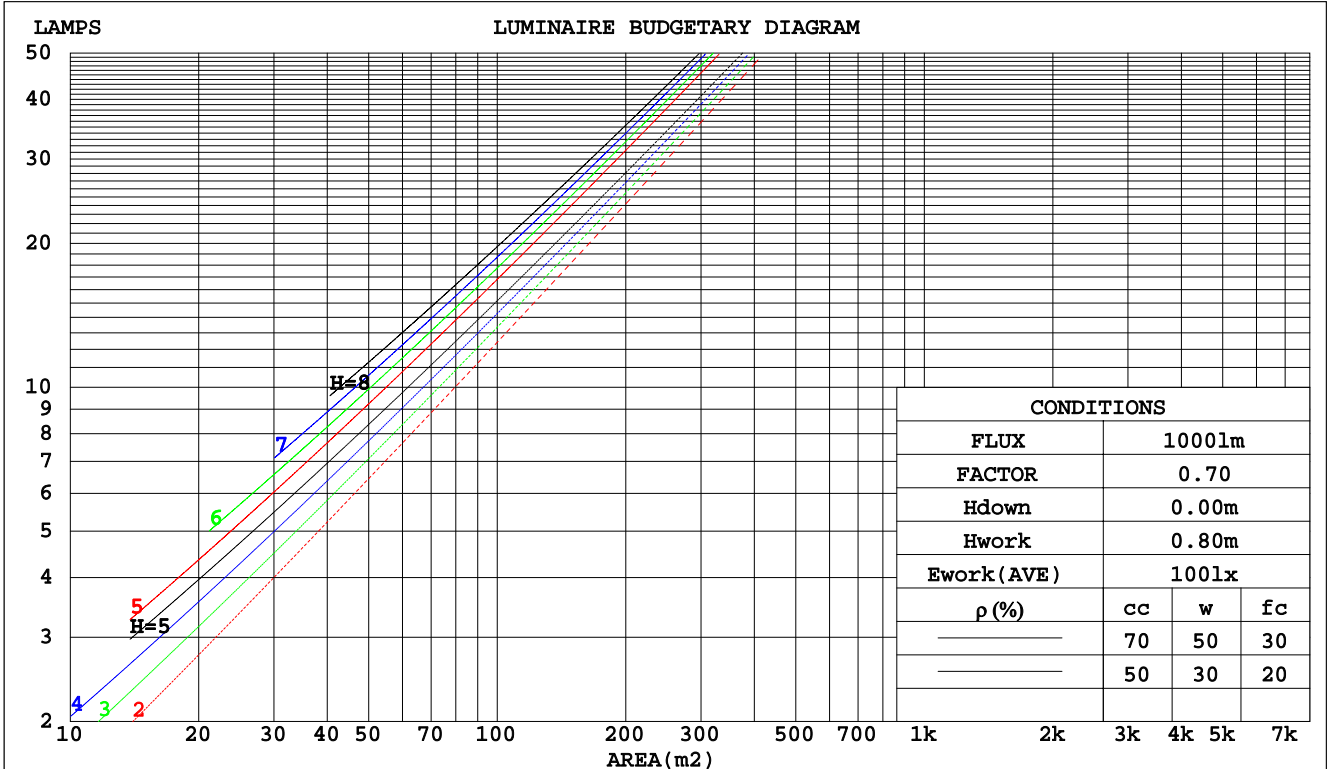
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DOBAC
Test Date:2017-11-07

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: Libero SU-8W-30D-3000K-80	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

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	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	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.98	.98	.97	.95
2.0	1.05	1.02	.99	1.03	1.00	.98	1.00	.98	.95	.97	.95	.93	.95	.93	.91	.90
3.0	.99	.95	.91	.98	.94	.91	.95	.92	.89	.93	.90	.88	.91	.89	.87	.85
4.0	.94	.89	.86	.93	.88	.85	.91	.87	.84	.89	.86	.83	.87	.84	.82	.81
5.0	.89	.84	.81	.88	.84	.80	.87	.83	.79	.85	.82	.79	.84	.81	.78	.77
6.0	.85	.80	.76	.84	.79	.76	.83	.79	.75	.81	.78	.75	.80	.77	.74	.73
7.0	.81	.76	.72	.80	.75	.72	.79	.75	.72	.78	.74	.71	.77	.74	.71	.70
8.0	.77	.72	.69	.77	.72	.69	.76	.71	.68	.75	.71	.68	.74	.70	.68	.67
9.0	.74	.69	.66	.74	.69	.65	.73	.68	.65	.72	.68	.65	.71	.67	.65	.64
10.0	.71	.66	.63	.71	.66	.63	.70	.65	.62	.69	.65	.62	.68	.65	.62	.61



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-8W-30D-3000K-80	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.159	.091	.029	.153	.087	.028	.140	.080	.026	.129	.074	.024	.118	.068	.022	
2.0	.151	.083	.025	.145	.080	.025	.135	.075	.023	.125	.070	.022	.116	.066	.021	
3.0	.142	.076	.023	.138	.074	.022	.129	.070	.021	.121	.066	.020	.113	.063	.019	
4.0	.135	.070	.021	.131	.068	.020	.123	.065	.020	.116	.062	.019	.110	.060	.018	
5.0	.128	.065	.019	.125	.064	.019	.118	.062	.018	.112	.059	.018	.106	.057	.017	
6.0	.122	.061	.018	.119	.060	.017	.113	.058	.017	.108	.056	.017	.103	.054	.016	
7.0	.116	.058	.016	.114	.057	.016	.109	.055	.016	.104	.053	.016	.100	.052	.015	
8.0	.111	.054	.015	.109	.054	.015	.105	.052	.015	.101	.051	.015	.097	.050	.014	
9.0	.107	.052	.014	.105	.051	.014	.101	.050	.014	.097	.049	.014	.094	.048	.014	
10.0	.103	.049	.014	.101	.049	.014	.097	.048	.013	.094	.047	.013	.091	.046	.013	

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	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	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.153	.133	.115	.131	.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	.087	.062	.102	.075	.054	.071	.052	.038	.041	.031	.023	.013	.010	.007	
6.0	.111	.077	.052	.096	.067	.046	.066	.047	.032	.038	.027	.019	.012	.009	.006	
7.0	.104	.069	.044	.090	.060	.039	.062	.042	.027	.036	.025	.016	.012	.008	.005	
8.0	.098	.063	.038	.085	.054	.033	.059	.038	.024	.034	.023	.014	.011	.007	.005	
9.0	.093	.057	.033	.080	.050	.029	.056	.035	.021	.032	.021	.012	.010	.007	.004	
10.0	.088	.053	.029	.076	.046	.025	.053	.032	.018	.031	.019	.011	.010	.006	.004	

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-8W-30D-3000K-80						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	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	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	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise									
x = 2H y = 2H	10.2	11.0	10.4	11.2	11.4	14.3	15.1	14.5	15.3	15.4	14.3	15.1	14.5	15.3	15.4
3H	10.1	10.9	10.4	11.1	11.3	14.2	14.9	14.4	15.1	15.3	14.2	14.9	14.4	15.1	15.3
4H	10.1	10.8	10.4	11.0	11.2	14.1	14.8	14.4	15.0	15.3	14.1	14.8	14.4	15.0	15.3
6H	10.0	10.7	10.3	11.0	11.2	14.0	14.7	14.3	14.9	15.2	14.0	14.7	14.3	14.9	15.2
8H	10.0	10.7	10.3	10.9	11.2	14.0	14.6	14.3	14.9	15.1	14.0	14.6	14.3	14.9	15.1
12H	10.0	10.6	10.3	10.8	11.1	13.9	14.6	14.2	14.8	15.1	13.9	14.6	14.2	14.8	15.1
4H 2H	10.0	10.8	10.3	11.0	11.2	14.1	14.8	14.3	15.0	15.2	14.1	14.8	14.3	15.0	15.2
3H	10.0	10.6	10.3	10.9	11.1	13.9	14.6	14.3	14.8	15.1	13.9	14.6	14.3	14.8	15.1
4H	10.0	10.5	10.3	10.8	11.1	13.9	14.4	14.2	14.7	15.0	13.9	14.4	14.2	14.7	15.0
6H	9.9	10.4	10.3	10.7	11.1	13.8	14.3	14.2	14.6	15.0	13.8	14.3	14.2	14.6	15.0
8H	9.9	10.3	10.3	10.7	11.0	13.7	14.2	14.1	14.6	14.9	13.7	14.2	14.1	14.6	14.9
12H	9.8	10.2	10.2	10.6	11.0	13.7	14.1	14.1	14.5	14.9	13.7	14.1	14.1	14.5	14.9
8H 4H	9.9	10.3	10.2	10.7	11.0	13.7	14.2	14.1	14.6	14.9	13.7	14.2	14.1	14.6	14.9
6H	9.8	10.2	10.2	10.6	11.0	13.7	14.0	14.1	14.4	14.8	13.7	14.0	14.1	14.4	14.8
8H	9.8	10.1	10.2	10.5	11.0	13.6	13.9	14.0	14.3	14.8	13.6	13.9	14.0	14.3	14.8
12H	9.7	10.0	10.2	10.5	10.9	13.5	13.8	14.0	14.3	14.7	13.5	13.8	14.0	14.3	14.7
12H 4H	9.8	10.2	10.2	10.6	11.0	13.7	14.1	14.1	14.5	14.9	13.7	14.1	14.1	14.5	14.9
6H	9.8	10.1	10.2	10.5	11.0	13.6	13.9	14.0	14.3	14.8	13.6	13.9	14.0	14.3	14.8
8H	9.7	10.0	10.2	10.5	10.9	13.5	13.8	14.0	14.3	14.7	13.5	13.8	14.0	14.3	14.7
Variations with the observer position at spacings:															
S = 1.0H	+ 2.6 / - 2.8					+ 3.9 / -10.1									
1.5H	+ 4.9 / - 2.9					+ 6.7 / -10.3									
2.0H	+ 0.7 / - 0.9					+ 3.0 / - 2.0									

CIE Pub.117 Corrected 539.6 lm Total Lamp Luminous Flux. (8log(F/F0) = -2.1)

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-8W-30D-3000K-80	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

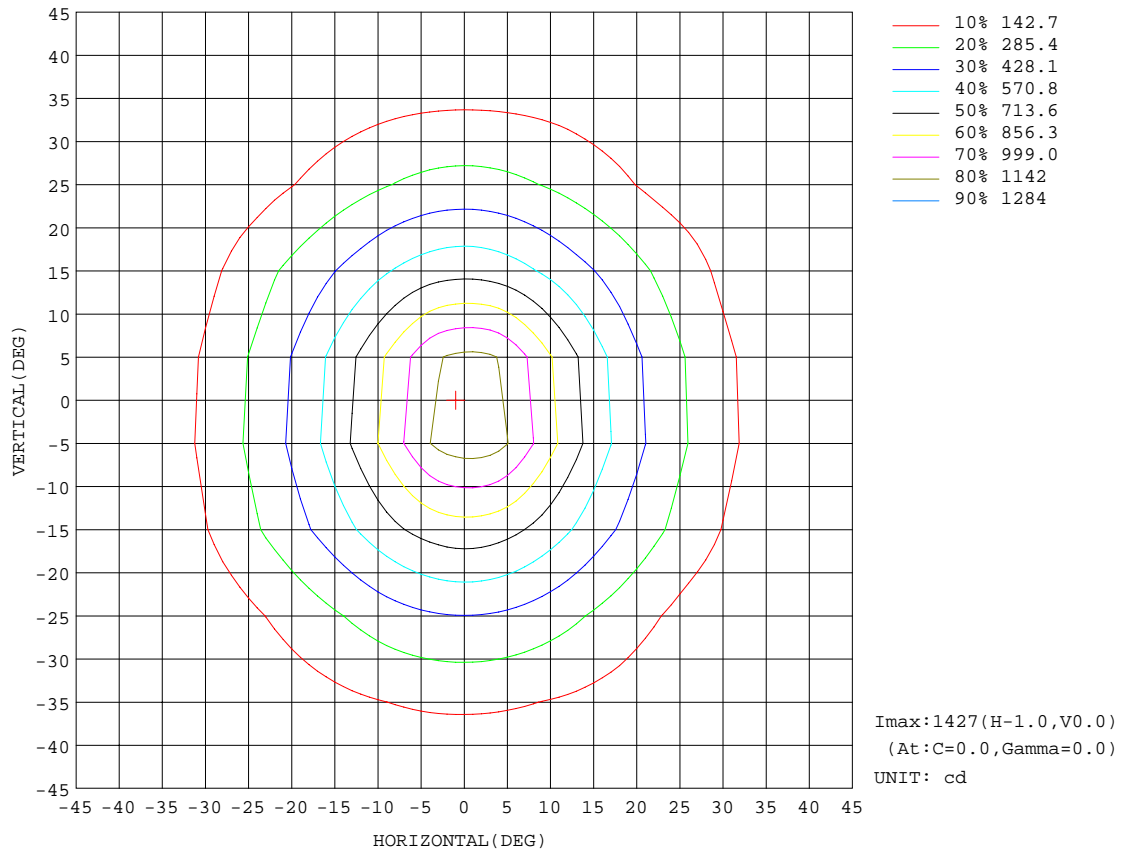
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	90	84	80	89	83	80	88	83	80	77
0.80	97	91	88	96	91	88	95	90	87	84
1.00	101	96	92	100	95	92	98	95	91	88
1.25	104	100	96	103	99	96	102	98	95	91
1.50	107	103	99	106	102	99	104	100	98	94
2.00	109	105	102	108	104	102	105	102	100	95
2.50	111	107	105	109	106	104	106	104	102	96
3.00	112	109	107	111	108	105	107	105	103	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	115	113	112	113	112	110	109	108	107	100
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHR NOM = 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-8W-30D-3000K-80	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:

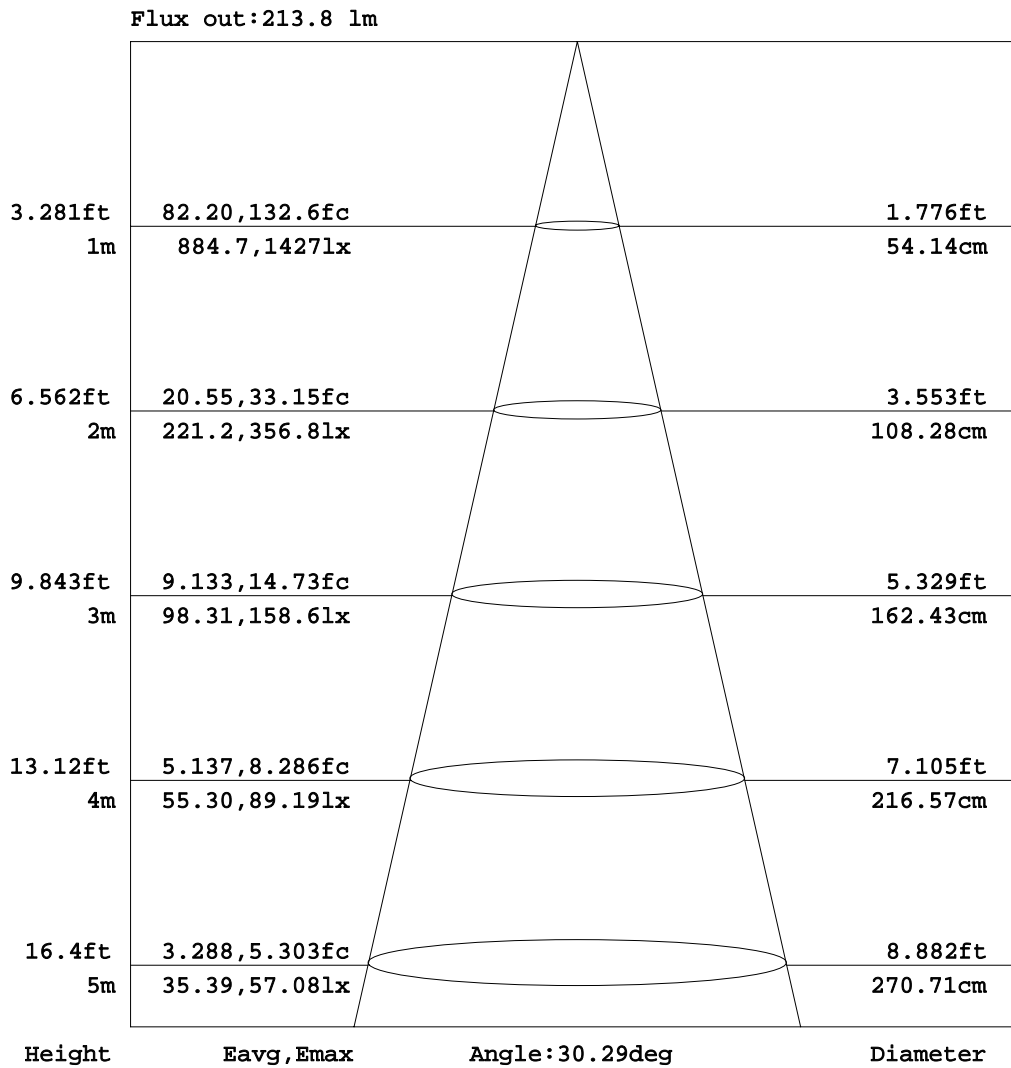


C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DOBAC
 Test Date: 2017-11-07

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:

AAI Figure

NAME: Libero SU-8W-30D-3000K-80	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: DOBAC	SUR.:	PROTECTION ANGLE:



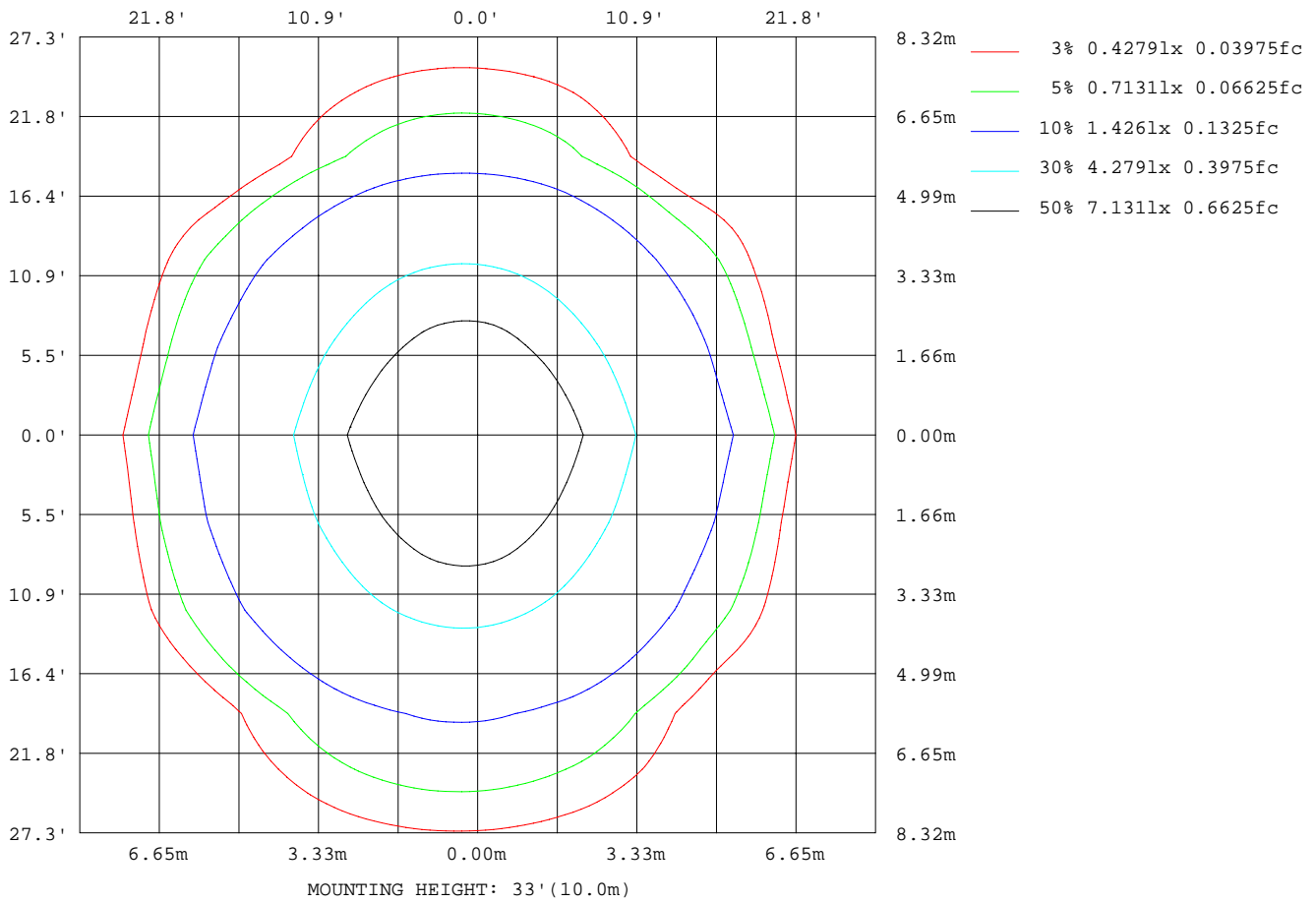
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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-8W-30D-3000K-80	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-8W-30D-3000K-80	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	539.575	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	820	821	817	808	835	774	838	1121	1451	1554	1565	1409	966	826	961	845	808	808	817
60	908	900	913	851	853	778	858	944	936	877	955	1026	902	807	836	872	904	912	932
65	727	722	757	788	772	782	853	856	836	822	849	862	844	773	786	837	807	793	778
70	540	551	585	653	618	726	772	771	753	748	770	781	768	724	675	688	636	629	609
75	496	503	531	552	579	648	660	641	626	635	649	660	666	665	640	586	571	564	559
80	415	409	456	462	549	393	234	107	27	0	28	111	240	417	627	594	558	566	538
85	99	114	43	0	0	0	0	0	0	0	0	0	0	0	0	0	369	335	250

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	1565	200	---	500
Category 2	65 to 90	862	200	---	500
Category 3	75 to 90	666	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-8W-30D-3000K-80	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	539.575	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	820	821	817	808	835	774	838	1121	1451	1554	1565	1409	966	826	961	845	808	808	817
60	908	900	913	851	853	778	858	944	936	877	955	1026	902	807	836	872	904	912	932
65	727	722	757	788	772	782	853	856	836	822	849	862	844	773	786	837	807	793	778
70	540	551	585	653	618	726	772	771	753	748	770	781	768	724	675	688	636	629	609
75	496	503	531	552	579	648	660	641	626	635	649	660	666	665	640	586	571	564	559
80	415	409	456	462	549	393	234	107	27	0	28	111	240	417	627	594	558	566	538
85	99	114	43	0	0	0	0	0	0	0	0	0	0	0	0	0	369	335	250

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	1565	1000	1500	200	500
65 to 90	862	1000	1500	200	500

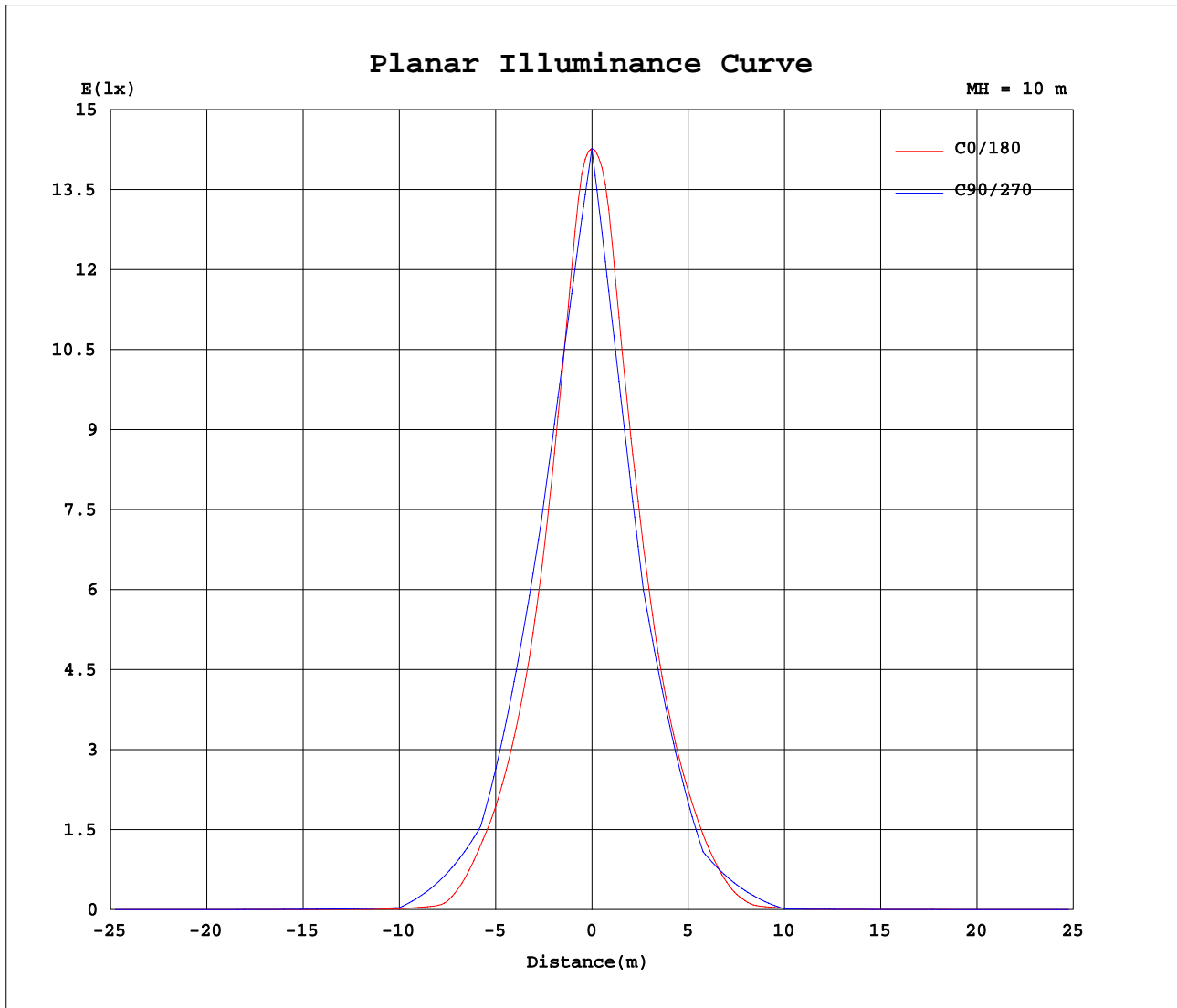
Table 3. Tabulation of average luminance(cd/sq.m.) and luminance limits

The luminaire satisfies the specified luminance criteria for
Negative Software with Type I & II Screen(Good to Moderate treatment).

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

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-8W-30D-3000K-80	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	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427
5	1287	1272	1259	1248	1239	1232	1227	1224	1221	1219	1219	1219	1217	1217	1216	1215	1215	1215	1216
10	967	949	934	924	918	915	916	919	925	933	943	955	968	978	987	994	999	1003	1005
15	686	669	658	652	650	653	658	668	679	693	708	723	737	751	765	775	782	789	795
20	474	461	453	449	451	456	465	477	491	508	522	533	546	559	572	585	595	604	610
25	314	303	297	296	299	308	320	335	339	345	353	363	375	386	396	405	414	421	426
30	187	176	171	172	178	189	195	195	201	206	213	221	228	233	236	237	238	239	241
35	66.1	59.7	58.5	61.5	68.6	80.7	90.1	93.3	91.1	91.4	96.5	100.0	118	132	143	150	157	162	165
40	13.9	13.2	13.2	14.0	14.1	16.6	25.2	30.8	26.5	17.8	30.6	49.2	63.2	74.0	80.0	83.1	84.8	86.3	87.7
45	5.31	5.01	4.87	5.53	6.48	6.77	6.23	6.85	8.67	9.82	10.8	17.8	24.3	26.3	24.4	20.2	15.4	11.9	10.8
50	2.94	2.92	2.91	2.99	3.09	3.13	3.11	3.32	4.38	5.10	4.87	4.03	3.24	3.67	5.27	6.50	7.28	7.79	8.06
55	2.82	2.84	2.82	2.83	2.81	2.74	2.78	2.92	2.87	2.68	2.66	2.82	2.88	3.07	3.86	4.57	4.99	5.23	5.35
60	2.72	2.67	2.70	2.68	2.74	2.58	2.55	2.75	2.56	2.35	2.34	2.45	2.57	2.65	2.83	2.89	2.81	2.70	2.63
65	1.84	1.80	1.83	1.92	1.92	1.94	2.00	2.02	1.96	1.91	1.98	2.09	2.16	2.18	2.17	2.15	2.12	2.10	2.08
70	1.11	1.10	1.13	1.18	1.20	1.25	1.34	1.30	1.27	1.39	1.49	1.54	1.59	1.60	1.58	1.57	1.54	1.54	1.53
75	0.77	0.77	0.78	0.79	0.82	0.84	0.86	0.88	0.90	0.96	1.01	1.02	1.03	1.01	1.00	0.99	0.97	0.98	0.99
80	0.43	0.43	0.43	0.43	0.47	0.46	0.48	0.53	0.57	0.50	0.41	0.32	0.24	0.17	0.11	0.06	0.03	0.01	0.00
85	0.05	0.05	0.06	0.07	0.02	0.05	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-8W-30D-3000K-80	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	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427
5	1216	1218	1219	1221	1224	1227	1232	1236	1240	1246	1252	1258	1266	1275	1285	1298	1312	1327	1308
10	1007	1007	1008	1008	1006	1002	995	987	979	973	969	967	967	971	979	989	1004	1023	998
15	797	799	798	796	790	782	771	760	748	737	728	721	717	716	719	726	737	755	730
20	613	612	610	605	599	592	585	577	566	551	537	525	515	509	506	508	515	528	508
25	428	429	428	424	420	413	405	399	394	391	391	374	361	351	345	344	348	358	341
30	245	249	253	256	256	255	251	249	246	244	245	244	235	221	212	208	210	218	203
35	166	165	162	156	147	134	122	123	124	124	124	123	118	106	94.9	89.0	88.6	93.9	83.8
40	89.1	89.9	90.1	88.5	84.1	76.6	65.3	51.3	36.3	38.0	45.5	44.2	37.3	28.8	23.4	20.8	19.6	19.6	18.7
45	12.5	16.8	22.5	28.2	31.6	31.8	27.7	20.9	13.6	12.3	11.1	11.5	9.77	9.79	9.40	8.28	7.87	8.08	7.17
50	8.17	7.98	7.59	6.92	5.78	4.07	5.67	6.38	6.67	6.39	5.23	3.71	4.20	3.93	3.49	3.35	3.29	3.37	3.32
55	5.43	5.39	5.23	4.85	4.13	3.32	3.10	2.84	2.88	3.31	3.06	2.91	2.75	2.78	2.79	2.78	2.80	2.81	2.86
60	2.70	2.87	3.02	3.08	2.89	2.71	2.51	2.42	2.40	2.51	2.75	2.62	2.54	2.71	2.66	2.74	2.76	2.80	2.75
65	2.11	2.15	2.17	2.18	2.18	2.14	2.07	1.96	1.93	1.99	2.12	2.12	2.05	2.05	2.04	2.01	1.99	1.97	1.95
70	1.55	1.58	1.59	1.60	1.60	1.58	1.54	1.49	1.46	1.38	1.38	1.41	1.40	1.30	1.32	1.29	1.28	1.25	1.25
75	0.99	1.01	1.01	1.03	1.03	1.03	1.03	1.03	1.03	0.99	0.94	0.91	0.91	0.89	0.88	0.88	0.88	0.87	0.86
80	0.01	0.03	0.07	0.12	0.18	0.25	0.33	0.43	0.55	0.65	0.65	0.62	0.58	0.58	0.60	0.59	0.58	0.56	0.54
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	0.12	0.19	0.21	0.18	0.16	0.13	0.11
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-8W-30D-3000K-80	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	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427
5	1291	1275	1261	1248	1237	1228	1219	1210	1203	1197	1190	1185	1181	1177	1175	1173	1173	1172	1173
10	977	960	947	936	930	926	924	924	926	928	931	930	928	925	922	920	919	916	915
15	711	697	686	679	674	673	673	675	677	680	681	681	680	676	672	668	664	660	657
20	494	484	478	476	476	478	481	483	485	489	493	496	499	501	502	501	499	494	487
25	329	323	322	324	328	333	329	327	327	328	330	334	336	336	337	335	333	330	325
30	194	191	193	198	200	198	196	193	190	188	187	185	182	178	174	170	168	167	169
35	79.1	79.0	82.3	89.4	95.4	96.1	89.8	81.3	74.6	67.3	79.9	92.4	101	108	112	113	113	111	108
40	19.2	19.1	17.3	22.9	30.2	32.2	25.9	15.2	19.7	31.4	42.3	50.6	55.7	58.3	59.1	59.1	58.5	57.9	57.2
45	6.85	6.92	7.48	7.50	6.66	5.66	7.18	8.65	9.46	11.7	16.4	17.8	16.2	12.5	8.25	5.12	3.95	5.04	8.05
50	3.31	3.35	3.43	3.66	3.18	3.39	3.95	4.70	4.68	3.75	3.14	3.17	3.23	3.40	3.43	3.45	3.44	3.40	3.34
55	2.90	2.96	2.99	2.96	2.95	2.99	3.10	3.01	2.85	2.74	2.69	2.75	2.79	2.91	2.94	2.94	2.93	2.89	2.83
60	2.76	2.66	2.73	2.57	2.53	2.69	2.59	2.45	2.33	2.28	2.28	2.33	2.39	2.43	2.44	2.43	2.43	2.38	2.34
65	1.92	1.92	1.87	1.89	1.89	1.90	1.83	1.75	1.72	1.79	1.82	1.83	1.87	1.86	1.87	1.85	1.85	1.82	1.78
70	1.23	1.23	1.21	1.22	1.27	1.19	1.09	1.14	1.22	1.29	1.29	1.29	1.30	1.29	1.28	1.27	1.27	1.25	1.23
75	0.84	0.83	0.81	0.80	0.78	0.77	0.75	0.78	0.80	0.81	0.79	0.76	0.74	0.72	0.70	0.68	0.68	0.68	0.68
80	0.53	0.47	0.48	0.43	0.41	0.41	0.41	0.40	0.31	0.25	0.18	0.13	0.08	0.05	0.02	0.01	0.00	0.01	0.02
85	0.11	0.11	0.08	0.05	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-8W-30D-3000K-80	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	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427	1427				
5	1174	1176	1178	1180	1184	1187	1190	1195	1200	1206	1215	1225	1237	1252	1268				
10	912	909	903	897	890	884	880	878	878	881	886	895	907	923	943				
15	654	651	646	641	636	631	627	623	621	620	622	627	635	647	664				
20	479	471	463	455	449	445	442	438	433	430	428	429	433	442	455				
25	320	315	309	303	299	295	293	292	293	287	283	281	283	289	299				
30	171	172	170	168	166	164	163	166	169	171	165	159	157	162	171				
35	103	95.0	82.2	67.1	50.5	55.8	66.5	76.3	77.6	70.8	60.6	53.3	51.7	53.3	57.9				
40	55.6	50.9	43.6	32.4	20.2	14.3	13.2	20.5	22.2	16.7	13.0	13.1	12.9	12.4	12.8				
45	11.8	14.5	14.9	11.5	8.47	8.27	7.40	5.93	4.34	5.62	6.00	5.57	4.62	4.79	4.97				
50	3.17	3.01	2.87	2.80	3.42	4.14	4.05	3.40	3.18	2.97	3.08	3.05	2.97	2.92	2.92				
55	2.70	2.58	2.45	2.45	2.49	2.59	2.84	2.88	2.73	2.67	2.82	2.90	2.83	2.90	2.88				
60	2.26	2.16	2.06	2.03	2.02	2.09	2.23	2.34	2.39	2.32	2.42	2.56	2.55	2.61	2.63				
65	1.74	1.68	1.63	1.58	1.51	1.50	1.54	1.62	1.68	1.68	1.66	1.72	1.74	1.73	1.75				
70	1.21	1.18	1.16	1.13	1.09	1.04	0.99	0.97	1.06	1.09	1.06	1.06	1.08	1.07	1.07				
75	0.69	0.69	0.70	0.70	0.70	0.68	0.64	0.63	0.64	0.67	0.72	0.73	0.74	0.74	0.74				
80	0.04	0.08	0.12	0.16	0.21	0.27	0.28	0.31	0.30	0.32	0.37	0.40	0.37	0.38	0.41				
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05	0.07	0.05	0.05				
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: