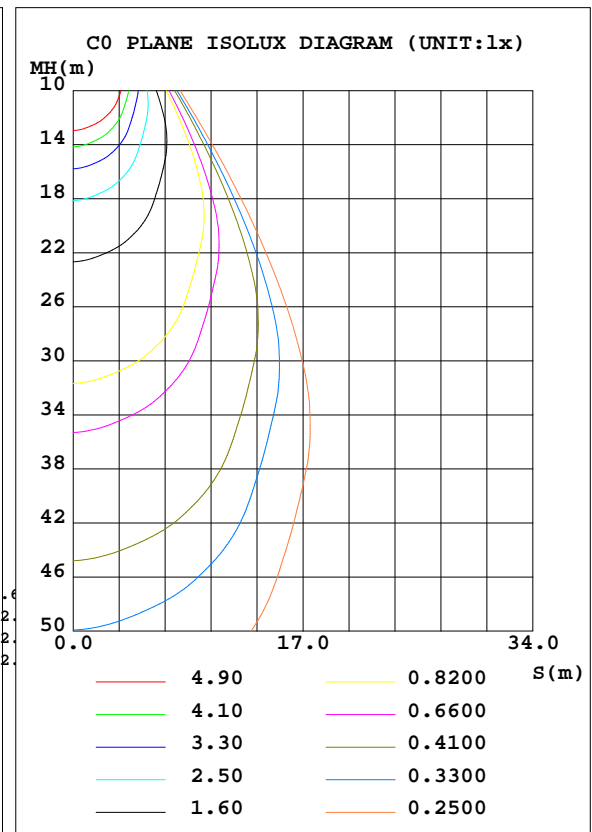
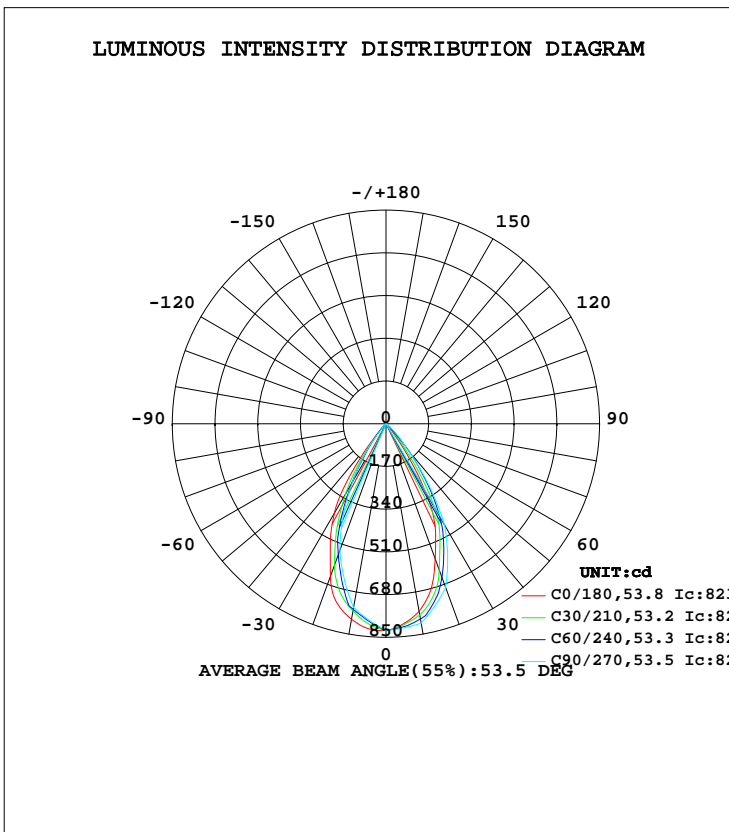


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.39V I:0.0373A P:7.8315W PF:0.9521 Freq:50.01Hz Lamp Flux:651.544x1 lm		
NAME: ED110-2 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 83.19 lm/W			
MODEL:13111202P430E39 3000K		I <sub>max</sub> (cd)	823.6	S/MH(C0/180)	0.90
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	0.77
RATED VOLTAGE(V)	220-240	TOTAL FLUX(lm)	651.54	η UP, DN(C0-180)	0.0,56.0
NOMINAL FLUX(lm)	651.544	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,44.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)		η down(%)	100.0	CIBSE SHR MAX	0.90



H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2019-10-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.402  
Humidity:65.0%  
Test Distance:6.880m [K=1.0000]  
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

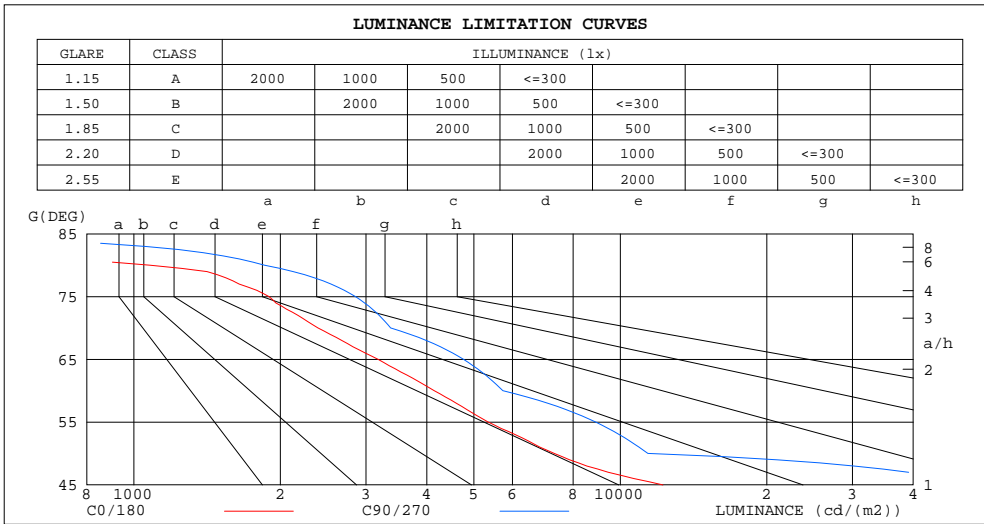
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum,lamp
10	758.2	779.5	806.0	793.0	790.1	752.9	743.3	734.9	0- 10	75.43	75.43	11.6,11.6
20	572.2	641.8	694.0	658.0	647.0	570.1	537.3	552.1	10- 20	195.3	270.7	41.5,41.5
30	320.0	405.0	466.2	440.4	411.2	316.4	265.0	272.8	20- 30	222.0	492.7	75.6,75.6
40	37.85	79.17	123.5	132.1	73.36	36.79	27.26	30.44	30- 40	125.6	618.3	94.9,94.9
50	8.130	10.36	12.67	12.18	9.610	7.707	7.203	7.218	40- 50	23.18	641.4	98.4,98.4
60	3.585	4.431	4.959	4.900	4.248	3.586	3.524	3.515	50- 60	5.825	647.3	99.3,99.3
70	1.414	1.875	1.995	2.024	1.732	1.751	1.718	1.765	60- 70	2.803	650.1	99.8,99.8
80	0.3240	0.5087	0.5576	0.5485	0.5055	0.8161	0.7264	0.8941	70- 80	1.220	651.3	100,100
90	0.0825	0	0	0	0.0746	0	0	0	80- 90	0.2518	651.5	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		

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2019-10-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.402  
Humidity:65.0%  
Test Distance:6.880m [K=1.0000]  
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.39V I:0.0373A P:7.8315W PF:0.9521 Freq:50.01Hz Lamp Flux:651.544x1 lm		
NAME: ED110-2 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:



LUMINANCE cd/(m2)		
G( DEG)	C0/180	C90/270
85	547	0
80	1079	1856
75	1896	2854
70	2390	3371
65	3175	4760
60	4144	5733
55	5350	8900
50	7311	11390
45	12238	56029

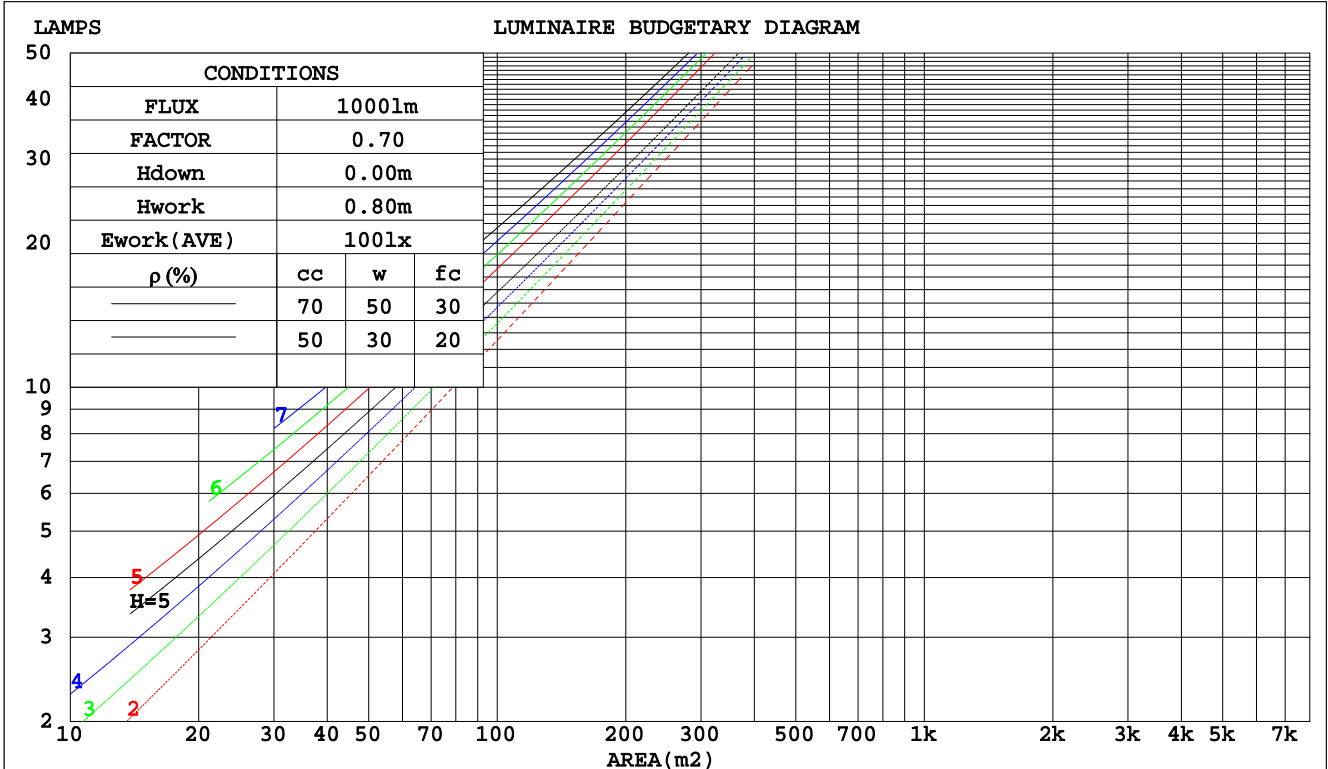
H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2019-10-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.402  
Humidity:65.0%  
Test Distance:6.880m [K=1.0000]  
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.39V I:0.0373A P:7.8315W PF:0.9521 Freq:50.01Hz Lamp Flux:651.544x1 lm		
NAME: ED110-2 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding 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																
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	1.11	1.09	1.06	1.09	1.07	1.05	1.05	1.03	1.01	1.01	.00	.98	.98	.97	.96	.94
2.0	1.04	.00	.96	1.02	.98	.95	.99	.96	.93	.96	.93	.91	.93	.91	.89	.88
3.0	.97	.92	.88	.95	.91	.87	.93	.89	.86	.90	.87	.85	.88	.86	.83	.82
4.0	.91	.85	.81	.90	.85	.81	.87	.83	.80	.86	.82	.79	.84	.81	.78	.77
5.0	.85	.80	.75	.84	.79	.75	.83	.78	.74	.81	.77	.74	.79	.76	.73	.72
6.0	.80	.74	.70	.79	.74	.70	.78	.73	.70	.77	.72	.69	.75	.72	.69	.67
7.0	.76	.70	.66	.75	.70	.66	.74	.69	.65	.73	.68	.65	.71	.68	.65	.63
8.0	.72	.66	.62	.71	.65	.62	.70	.65	.61	.69	.64	.61	.68	.64	.61	.60
9.0	.68	.62	.58	.67	.62	.58	.66	.61	.58	.65	.61	.58	.65	.60	.57	.56
10.0	.64	.59	.55	.64	.58	.55	.63	.58	.55	.62	.58	.54	.61	.57	.54	.53



H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2019-10-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.402  
Humidity:65.0%  
Test Distance:6.880m [K=1.0000]  
Remarks:

WEC AND CCEC

Test:U:220.39V I:0.0373A P:7.8315W PF:0.9521 Freq:50.01Hz Lamp Flux:651.544x1 lm		
NAME: ED110-2 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.174	.099	.031	.167	.095	.030	.155	.089	.028	.143	.083	.026	.133	.077	.025	
2.0	.166	.091	.028	.161	.088	.027	.150	.083	.026	.140	.079	.025	.131	.074	.023	
3.0	.158	.084	.025	.153	.082	.025	.144	.078	.024	.136	.075	.023	.128	.071	.022	
4.0	.151	.078	.023	.146	.077	.023	.139	.074	.022	.131	.071	.021	.125	.068	.021	
5.0	.144	.073	.021	.140	.072	.021	.133	.069	.020	.127	.067	.020	.121	.065	.019	
6.0	.137	.069	.020	.134	.068	.019	.128	.066	.019	.122	.064	.019	.117	.062	.018	
7.0	.131	.065	.018	.128	.064	.018	.123	.062	.018	.118	.061	.018	.114	.059	.017	
8.0	.126	.061	.017	.123	.061	.017	.118	.059	.017	.114	.058	.017	.110	.056	.016	
9.0	.120	.058	.016	.118	.058	.016	.114	.056	.016	.110	.055	.016	.106	.054	.016	
10.0	.116	.055	.015	.114	.055	.015	.110	.054	.015	.106	.053	.015	.103	.052	.015	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.155	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.143	.114	.090	.123	.098	.078	.084	.068	.055	.049	.040	.032	.016	.013	.011	
4.0	.133	.099	.073	.114	.085	.063	.078	.059	.045	.045	.035	.026	.015	.011	.009	
5.0	.124	.087	.060	.106	.075	.052	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.116	.078	.050	.100	.067	.044	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.110	.070	.042	.094	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.104	.064	.036	.090	.055	.032	.062	.039	.022	.036	.023	.013	.012	.008	.004	
9.0	.099	.059	.032	.085	.051	.027	.059	.036	.020	.034	.021	.012	.011	.007	.004	
10.0	.095	.054	.028	.082	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003	

H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2019-10-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.402  
Humidity:65.0%  
Test Distance:6.880m [K=1.0000]  
Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.39V I:0.0373A P:7.8315W PF:0.9521 Freq:50.01Hz Lamp Flux:651.544x1 lm										
NAME: ED110-2 WW BK					TYPE:			WEIGHT:		
SPEC.:10W					DIM.:			SERIAL No.:		
MFR.: OBALS					SUR.:47mm			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	21.3	22.3	21.6	22.4	22.6	24.1	25.0	24.3	25.2	25.4
3H	21.2	22.0	21.4	22.2	22.4	24.0	24.8	24.2	25.0	25.2
4H	21.1	21.9	21.4	22.1	22.4	23.9	24.7	24.2	24.9	25.1
6H	21.0	21.8	21.3	22.0	22.3	23.8	24.6	24.1	24.8	25.0
8H	21.0	21.7	21.3	22.0	22.2	23.8	24.5	24.1	24.7	25.0
12H	20.9	21.6	21.3	21.9	22.2	23.7	24.4	24.0	24.7	24.9
4H 2H	21.1	21.9	21.4	22.1	22.3	23.9	24.7	24.1	24.9	25.1
3H	21.0	21.7	21.3	21.9	22.2	23.7	24.4	24.0	24.7	25.0
4H	20.9	21.5	21.2	21.8	22.1	23.6	24.3	24.0	24.6	24.9
6H	20.8	21.4	21.2	21.7	22.0	23.6	24.1	23.9	24.4	24.8
8H	20.8	21.3	21.1	21.6	22.0	23.5	24.0	23.9	24.4	24.7
12H	20.7	21.2	21.1	21.5	21.9	23.5	23.9	23.9	24.3	24.7
8H 4H	20.8	21.3	21.1	21.6	22.0	23.5	24.0	23.9	24.4	24.7
6H	20.7	21.1	21.1	21.5	21.9	23.4	23.8	23.8	24.2	24.6
8H	20.6	21.0	21.1	21.4	21.8	23.4	23.7	23.8	24.1	24.6
12H	20.6	20.9	21.0	21.3	21.8	23.3	23.6	23.8	24.1	24.5
12H 4H	20.7	21.2	21.1	21.5	21.9	23.4	23.9	23.9	24.3	24.7
6H	20.6	21.0	21.1	21.4	21.8	23.4	23.7	23.8	24.1	24.6
8H	20.6	20.9	21.0	21.3	21.8	23.3	23.6	23.8	24.1	24.5
Variations with the observer position at spacings:										
S = 1.0H	+ 2.8 / - 7.6					+ 3.7 / -10.8				
1.5H	+ 5.0 / - 6.5					+ 5.9 / -10.4				
2.0H	+ 3.5 / - 2.5					+ 7.9 / - 5.8				

CIE Pub.117, 651.5 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.5)

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2019-10-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.402  
Humidity:65.0%  
Test Distance:6.880m [K=1.0000]  
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.39V I:0.0373A P:7.8315W PF:0.9521 Freq:50.01Hz Lamp Flux:651.544x1 lm		
NAME: ED110-2 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:

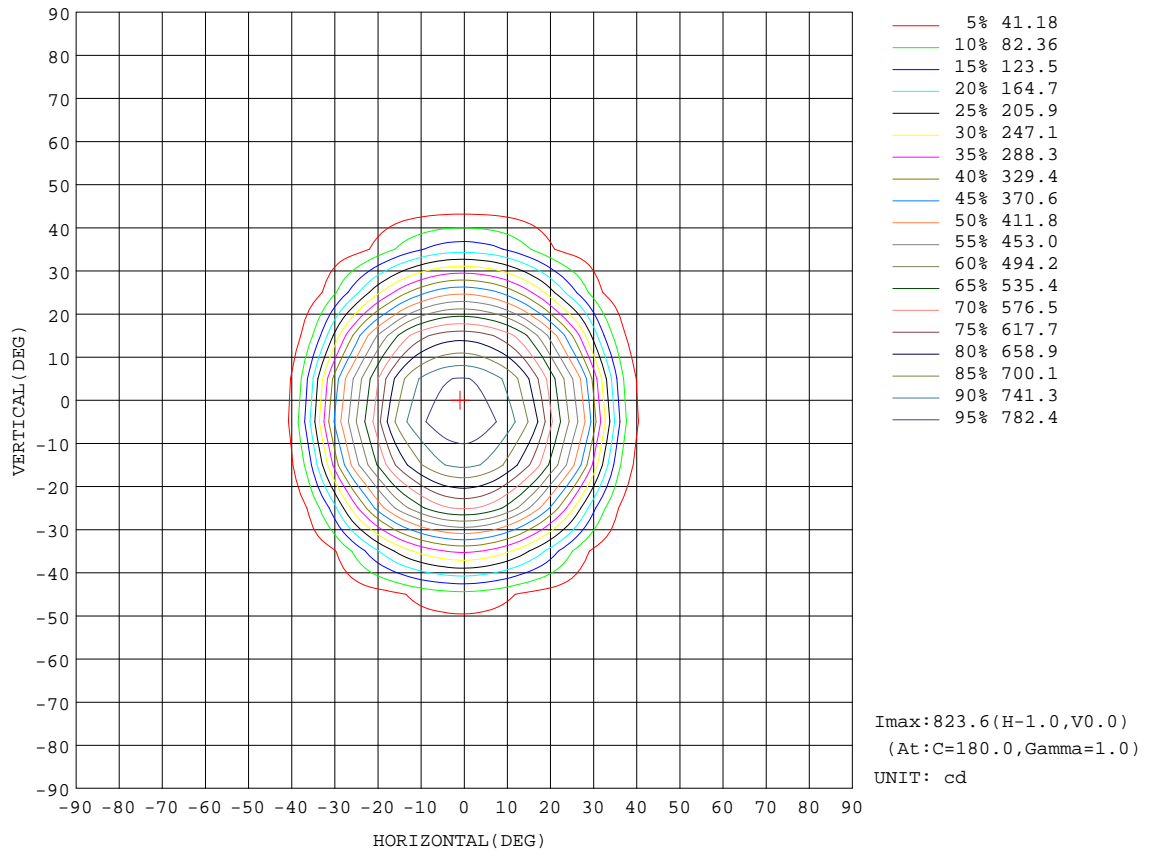
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	88	82	79	88	82	78	87	82	78	75
0.80	96	90	86	95	90	86	94	89	86	82
1.00	100	95	91	99	94	91	98	94	90	86
1.25	104	99	95	103	98	95	101	97	94	90
1.50	106	102	99	105	101	98	103	100	97	93
2.00	109	105	102	108	104	101	105	102	100	94
2.50	111	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	97
4.00	114	111	109	112	110	108	108	107	105	98
5.00	115	113	111	113	111	110	109	108	107	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2019-10-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.402  
Humidity:65.0%  
Test Distance:6.880m [K=1.0000]  
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.39V I:0.0373A P:7.8315W PF:0.9521 Freq:50.01Hz Lamp Flux:651.544x1 lm		
NAME: ED110-2 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:



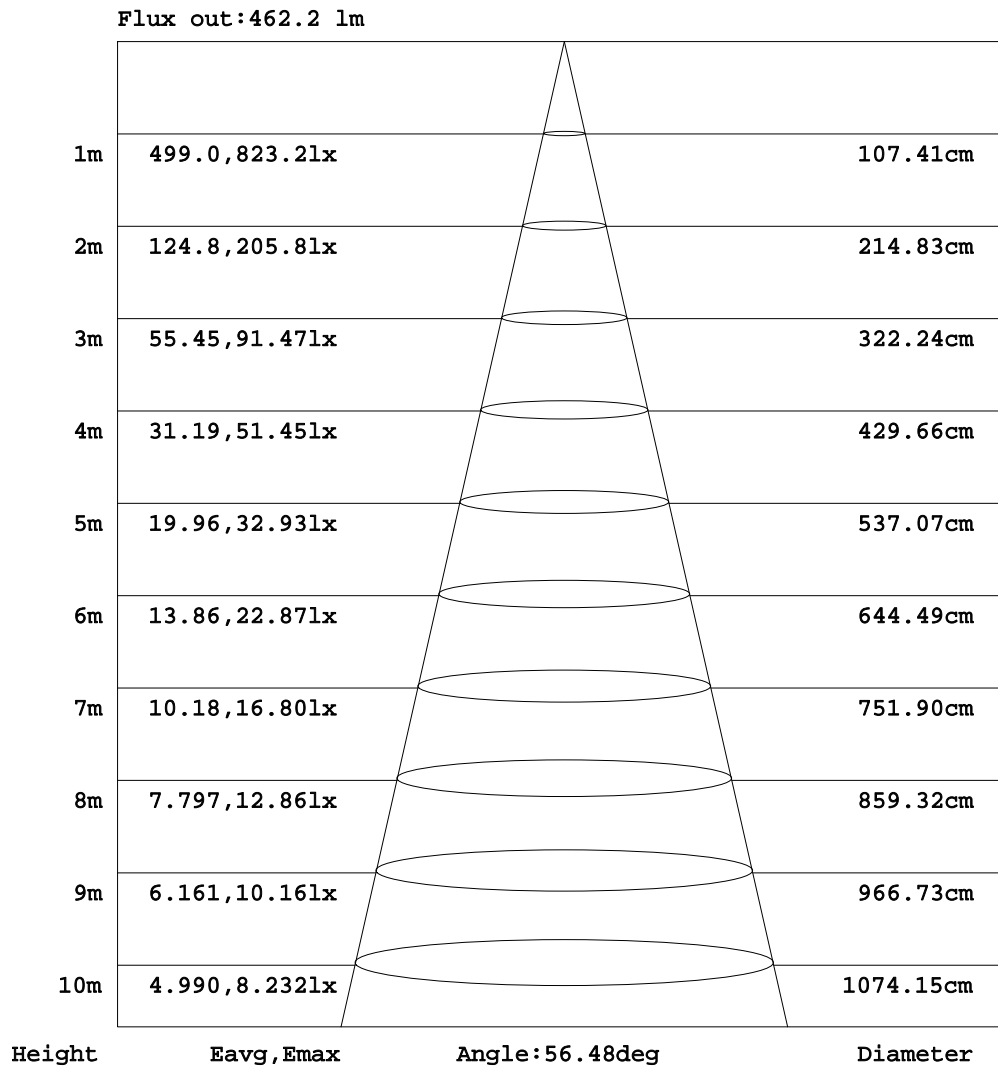
H( $\beta$ ) Range:-90 - 90DEG  
 H( $\beta$ ) Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:25DEG  
 Operators:  
 Test Date:2019-10-05

V(B) Range:-80 - 80DEG  
 V(B) Interval: 5.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.402  
 Humidity:65.0%  
 Test Distance:6.880m [K=1.0000]  
 Remarks:



AAI Figure

Test:U:220.39V I:0.0373A P:7.8315W PF:0.9521 Freq:50.01Hz Lamp Flux:651.544x1 lm		
NAME: ED110-2 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:



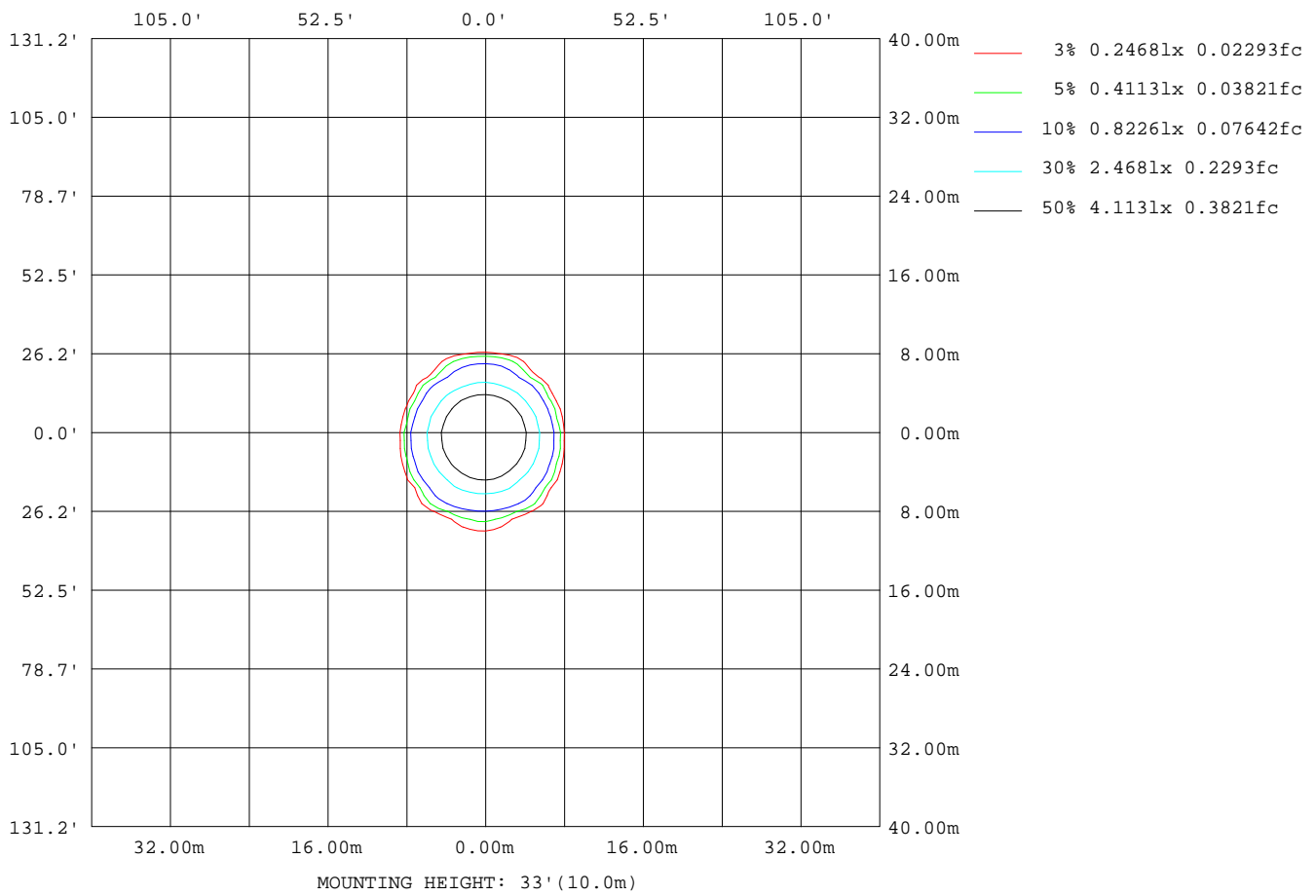
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2019-10-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.402  
Humidity:65.0%  
Test Distance:6.880m [K=1.0000]  
Remarks:

ISOLUX DIAGRAM

Test:U:220.39V I:0.0373A P:7.8315W PF:0.9521 Freq:50.01Hz Lamp Flux:651.544x1 lm		
NAME: ED110-2 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:



H( $\beta$ ) Range:-90 - 90DEG  
 H( $\beta$ ) Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:25DEG  
 Operators:  
 Test Date:2019-10-05

V(B) Range:-80 - 80DEG  
 V(B) Interval: 5.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.402  
 Humidity:65.0%  
 Test Distance:6.880m [K=1.0000]  
 Remarks:

**LED Avg.L Report**

Test:U:220.39V I:0.0373A P:7.8315W PF:0.9521 Freq:50.01Hz Lamp Flux:651.544x1 lm		
NAME: ED110-2 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:

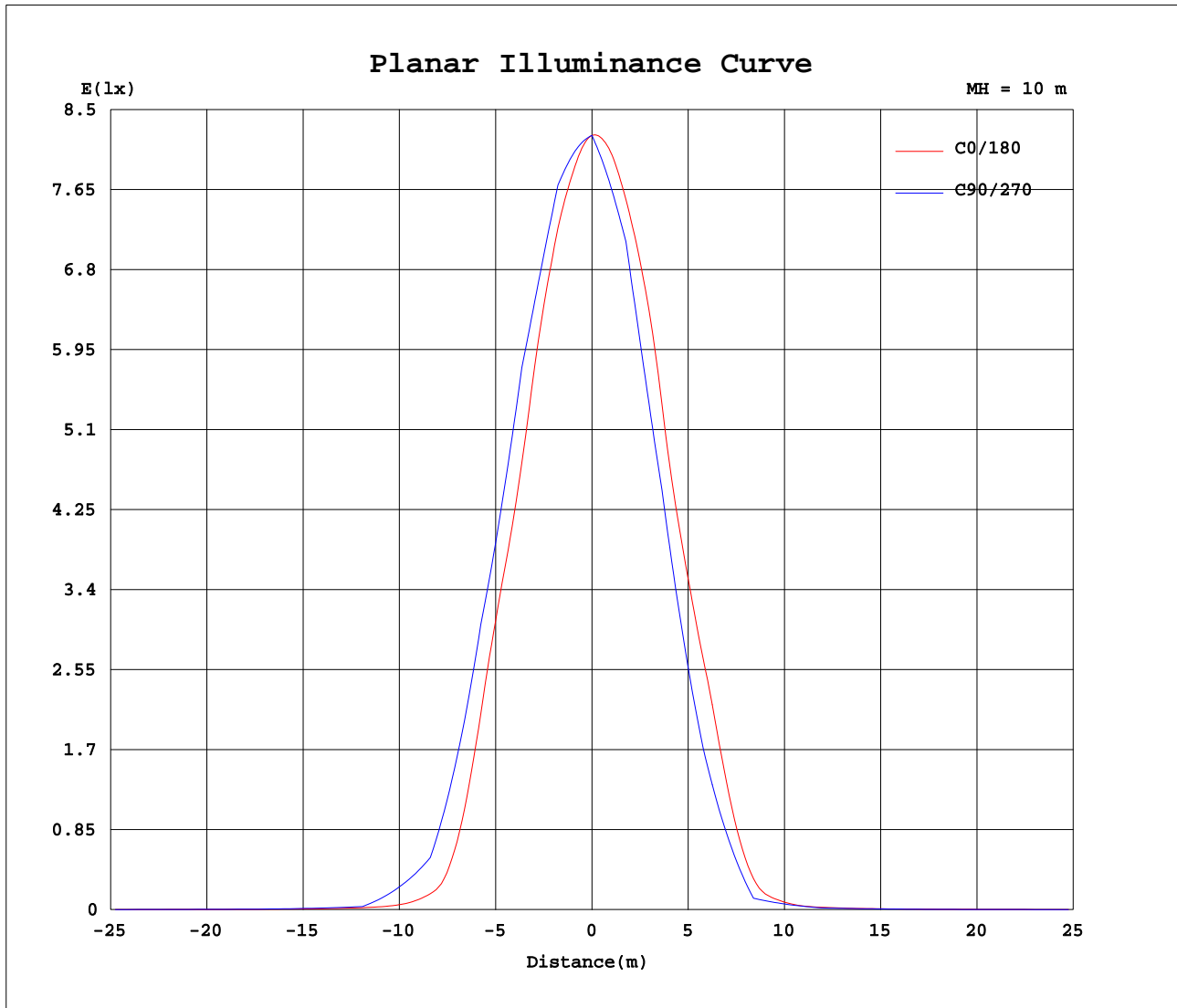
AvgL	cd/m2
L_0~180(65)av	3500
L_0~180(75)av	2083
L_0~180(85)av	521
L_90~270(65)av	4172
L_90~270(75)av	2788
L_90~270(85)av	0
L_45(65)av	3863
L_45(75)av	2632
L_45(85)av	1176

Standard: GB/T 29293-2012

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2019-10-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.402  
Humidity:65.0%  
Test Distance:6.880m [K=1.0000]  
Remarks:

Planar Illuminance Curve



H( $\beta$ ) Range:-90 - 90DEG  
 H( $\beta$ ) Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:25DEG  
 Operators:  
 Test Date:2019-10-05

V(B) Range:-80 - 80DEG  
 V(B) Interval: 5.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.402  
 Humidity:65.0%  
 Test Distance:6.880m [K=1.0000]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.39V I:0.0373A P:7.8315W PF:0.9521 Freq:50.01Hz Lamp Flux:651.544x1 lm		
NAME: ED110-2 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding 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	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823
5	799	799	800	800	801	802	803	804	806	807	808	810	811	812	813	814	815	815	815
10	758	759	761	763	766	769	773	774	777	779	782	786	789	792	795	798	801	804	806
15	686	690	696	703	710	712	716	721	728	729	731	733	736	739	742	745	748	750	751
20	572	579	590	602	604	609	620	629	636	642	644	646	651	659	668	677	684	690	694
25	466	475	488	489	492	498	509	522	524	527	530	535	544	555	565	572	577	580	581
30	320	342	360	358	368	383	389	393	402	405	410	420	427	439	448	453	458	463	466
35	132	157	166	166	193	203	200	222	243	246	245	257	279	290	294	293	293	294	295
40	37.8	44.8	44.5	48.9	59.6	52.7	70.8	89.1	81.7	79.2	110	133	138	129	119	114	115	118	124
45	15.0	18.1	16.5	20.1	18.9	21.7	24.1	22.4	27.2	33.1	38.7	33.9	30.8	34.6	41.3	51.3	60.6	65.8	68.5
50	8.13	8.89	8.75	9.20	9.28	10.1	9.72	11.4	12.4	10.4	12.0	14.9	17.3	17.5	17.4	17.1	15.5	13.5	12.7
55	5.31	5.69	5.89	5.66	6.14	6.06	6.49	6.34	6.64	7.15	7.32	7.16	7.12	7.47	7.83	8.32	8.58	8.77	8.83
60	3.58	3.75	3.91	4.03	3.97	4.21	4.13	4.43	4.48	4.43	4.66	4.91	5.00	4.99	4.97	5.05	5.01	4.96	4.96
65	2.32	2.42	2.46	2.56	2.72	2.72	2.83	2.83	2.99	3.05	3.03	3.03	3.14	3.19	3.24	3.38	3.44	3.47	3.48
70	1.41	1.56	1.62	1.66	1.65	1.66	1.77	1.79	1.75	1.87	1.96	2.00	2.01	1.98	1.94	2.00	1.99	1.99	1.99
75	0.85	0.90	0.93	0.96	0.96	0.99	0.99	1.06	1.06	1.04	1.06	1.11	1.15	1.18	1.18	1.25	1.27	1.27	1.28
80	0.32	0.42	0.45	0.46	0.44	0.47	0.47	0.50	0.51	0.51	0.56	0.58	0.60	0.59	0.56	0.58	0.58	0.56	0.56
85	0.08	0.08	0.08	0.07	0.10	0.12	0.09	0.07	0.08	0.08	0.09	0.08	0.07	0.05	0.03	0.02	0.01	0.00	0.00
90	0.08	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

H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2019-10-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.402  
Humidity:65.0%  
Test Distance:6.880m [K=1.0000]  
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.39V I:0.0373A P:7.8315W PF:0.9521 Freq:50.01Hz Lamp Flux:651.544x1 lm		
NAME: ED110-2 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding Angle:

Table--2

UNIT: cd

γ (DEG)\C (DEG)	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185
0	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823
5	815	815	815	815	814	814	814	814	814	814	814	814	814	815	816	816	817	818	815
10	807	807	806	805	804	802	799	796	793	790	787	784	784	784	784	786	788	790	783
15	751	750	750	749	748	748	749	752	758	762	754	746	739	731	730	733	737	743	727
20	696	695	692	687	680	672	664	658	658	663	669	676	660	640	623	624	634	647	623
25	580	580	578	575	572	569	568	568	559	547	535	537	542	537	518	506	513	525	501
30	468	468	465	462	457	450	438	435	440	454	440	421	412	422	416	392	395	411	377
35	296	297	301	308	318	325	323	299	280	277	290	290	252	244	266	226	214	245	196
40	126	129	134	139	144	151	153	149	132	115	106	111	103	78.3	85.7	76.9	57.2	73.4	51.5
45	67.5	65.2	60.9	52.3	43.6	37.3	42.8	47.8	37.5	33.5	31.8	27.9	27.5	26.8	21.7	24.8	18.3	22.8	16.4
50	13.8	16.3	18.8	19.4	18.8	18.6	17.2	14.7	12.2	13.5	12.1	11.3	10.7	10.5	9.83	9.78	8.97	9.61	8.48
55	8.81	8.69	8.53	8.26	7.98	7.73	7.87	7.78	7.40	7.31	7.20	6.76	6.87	6.43	6.73	6.14	6.08	6.31	5.77
60	5.02	5.13	5.24	5.28	5.28	5.20	5.08	5.00	4.90	4.84	4.64	4.71	4.45	4.54	4.23	4.18	4.21	4.25	4.00
65	3.48	3.48	3.47	3.45	3.41	3.36	3.29	3.27	3.20	3.16	3.15	3.02	3.02	2.86	2.93	2.92	2.82	2.80	2.66
70	2.01	2.03	2.06	2.09	2.11	2.11	2.08	2.04	2.02	1.97	1.92	1.86	1.85	1.78	1.68	1.64	1.63	1.73	1.55
75	1.28	1.28	1.27	1.26	1.24	1.21	1.17	1.15	1.15	1.13	1.11	1.09	1.05	1.05	1.00	0.98	0.98	1.02	0.94
80	0.56	0.57	0.59	0.60	0.60	0.61	0.60	0.59	0.55	0.53	0.55	0.56	0.54	0.51	0.48	0.46	0.46	0.51	0.44
85	0.00	0.01	0.02	0.03	0.05	0.07	0.09	0.10	0.10	0.09	0.07	0.08	0.13	0.12	0.09	0.08	0.08	0.07	0.19
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	0.07	0.00

H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2019-10-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.402  
Humidity:65.0%  
Test Distance:6.880m [K=1.0000]  
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.39V I:0.0373A P:7.8315W PF:0.9521 Freq:50.01Hz Lamp Flux:651.544x1 lm		
NAME: ED110-2 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding 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	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823
5	811	808	805	802	799	797	795	793	791	789	788	787	786	786	785	785	784	784	784
10	776	769	764	760	756	755	754	753	752	751	750	749	749	748	746	745	743	742	740
15	714	702	695	696	699	702	706	696	684	673	665	658	652	648	645	643	642	641	641
20	603	590	592	596	599	588	579	570	565	561	556	552	549	546	543	540	537	535	534
25	482	483	490	481	464	452	454	456	459	444	429	417	411	407	405	403	402	401	400
30	359	373	364	332	321	333	341	316	292	276	272	268	268	269	269	268	265	260	258
35	187	205	174	161	169	171	157	143	132	124	135	143	146	148	148	147	147	145	145
40	52.3	53.7	47.2	46.9	48.7	49.4	48.1	36.8	41.7	47.9	53.4	54.5	50.3	43.0	35.3	29.6	27.3	28.9	34.0
45	19.2	16.0	16.4	16.9	15.9	13.9	15.7	16.4	16.2	13.9	12.4	13.8	15.1	16.1	16.8	17.2	17.2	17.1	16.6
50	8.69	8.31	8.34	8.01	8.03	7.81	7.94	7.71	7.71	7.78	7.89	8.15	8.31	8.18	7.76	7.40	7.20	7.40	7.69
55	5.57	5.79	5.35	5.43	5.22	5.27	5.26	5.21	5.22	5.10	5.07	5.14	5.20	5.27	5.31	5.36	5.37	5.40	5.35
60	3.80	3.69	3.77	3.58	3.67	3.55	3.60	3.59	3.61	3.59	3.62	3.62	3.61	3.58	3.56	3.53	3.52	3.53	3.55
65	2.61	2.49	2.38	2.44	2.42	2.48	2.47	2.49	2.48	2.48	2.51	2.53	2.56	2.58	2.59	2.60	2.62	2.63	2.62
70	1.48	1.48	1.56	1.61	1.65	1.69	1.71	1.75	1.76	1.76	1.76	1.76	1.76	1.74	1.72	1.71	1.72	1.72	1.73
75	0.92	0.97	1.07	1.16	1.19	1.20	1.22	1.25	1.23	1.20	1.18	1.19	1.20	1.19	1.19	1.18	1.22	1.23	1.22
80	0.50	0.64	0.77	0.76	0.86	0.87	0.84	0.82	0.80	0.76	0.73	0.73	0.72	0.70	0.67	0.68	0.73	0.72	0.72
85	0.45	0.57	0.60	0.62	0.61	0.45	0.33	0.25	0.18	0.13	0.09	0.07	0.04	0.02	0.01	0.00	0.00	0.00	0.01
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

H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:25DEG  
Operators:  
Test Date:2019-10-05

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.402  
Humidity:65.0%  
Test Distance:6.880m [K=1.0000]  
Remarks:

**LUMINOUS DISTRIBUTION INTENSITY DATA**

Test:U:220.39V I:0.0373A P:7.8315W PF:0.9521 Freq:50.01Hz Lamp Flux:651.544x1 lm		
NAME: ED110-2 WW BK	TYPE:	WEIGHT:
SPEC.:10W	DIM.:	SERIAL No.:
MFR.: OBALS	SUR.:47mm	Shielding 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	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823				
5	784	784	784	784	784	785	785	786	787	788	789	790	792	794	797				
10	739	737	736	735	734	734	735	736	738	741	743	744	747	750	754				
15	642	643	645	649	652	656	660	662	660	661	665	671	673	675	680				
20	533	534	536	539	544	550	552	548	545	545	549	557	567	568	568				
25	402	403	405	411	418	425	427	429	435	434	440	448	455	465	464				
30	253	251	249	254	264	272	273	268	271	288	297	295	301	322	322				
35	143	136	123	103	84.5	104	125	132	115	103	124	127	115	132	139				
40	41.1	47.6	50.7	47.7	39.3	33.4	30.4	39.6	40.6	34.3	33.7	39.4	36.8	38.0	41.3				
45	15.7	14.4	12.7	11.6	13.0	16.0	16.4	13.7	12.3	15.6	14.3	14.1	15.9	14.3	16.8				
50	8.11	8.28	8.12	8.07	7.85	7.62	7.22	7.94	7.99	7.54	8.12	7.86	8.19	8.08	8.54				
55	5.33	5.24	5.12	5.02	5.04	5.25	5.33	5.09	5.00	5.30	5.05	5.33	5.08	5.45	5.48				
60	3.59	3.63	3.66	3.69	3.69	3.62	3.51	3.56	3.62	3.43	3.57	3.43	3.63	3.64	3.62				
65	2.61	2.59	2.56	2.51	2.43	2.48	2.55	2.51	2.39	2.43	2.33	2.35	2.25	2.25	2.31				
70	1.76	1.78	1.80	1.83	1.84	1.83	1.77	1.70	1.73	1.71	1.59	1.54	1.52	1.49	1.49				
75	1.23	1.23	1.24	1.25	1.28	1.29	1.28	1.29	1.28	1.24	1.20	1.12	1.02	0.91	0.87				
80	0.73	0.74	0.76	0.80	0.84	0.87	0.89	0.92	0.91	0.77	0.78	0.80	0.69	0.54	0.40				
85	0.02	0.04	0.07	0.10	0.15	0.20	0.28	0.37	0.50	0.67	0.67	0.66	0.63	0.54	0.25				
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				

H(β) Range:-90 - 90DEG  
 H(β) Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:25DEG  
 Operators:  
 Test Date:2019-10-05

V(B) Range:-80 - 80DEG  
 V(B) Interval: 5.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.402  
 Humidity:65.0%  
 Test Distance:6.880m [K=1.0000]  
 Remarks: