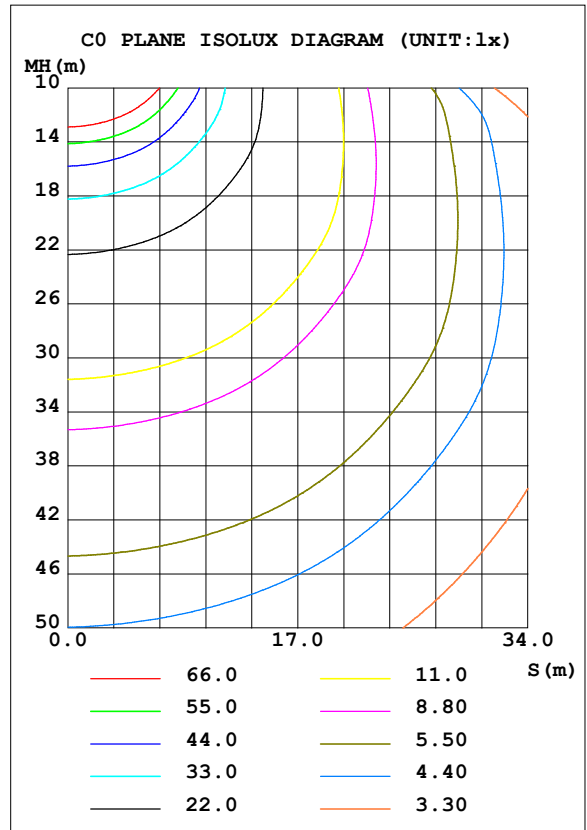
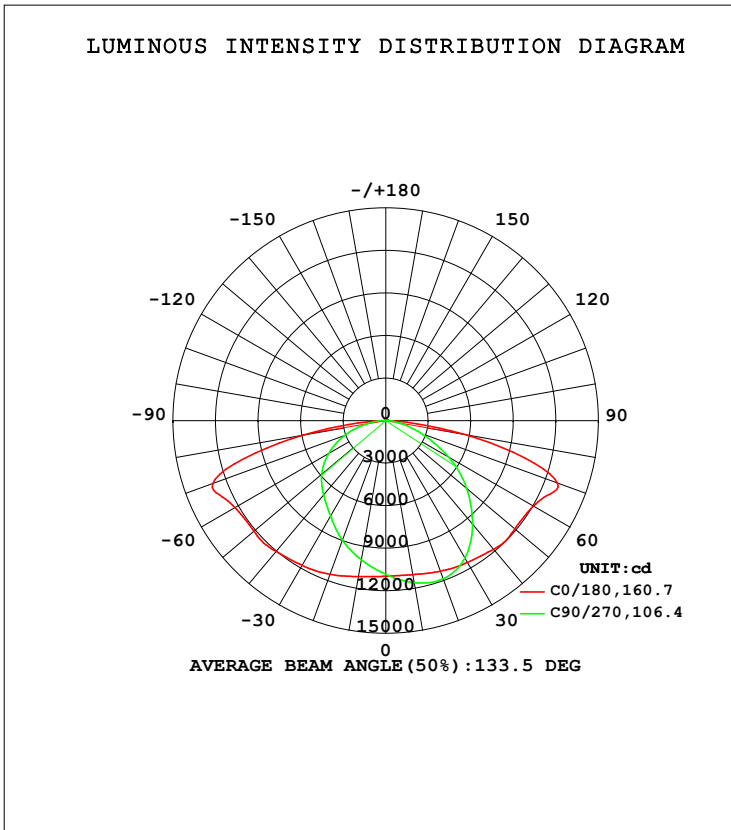


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.5V I:2.439A P:293.3W PF:0.9973 Freq:59.98Hz Lamp Flux:43637.6x1 lm		
NAME: ASD-WHB5A-320D50	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:0.3*0.3m	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 148.80 lm/W			
MODEL	ASD-WHB5A-320D50	I _{max} (cd)	13105	S/MH (C0/180)	1.66
NOMINAL POWER (W)	320	LOR (%)	100.0	S/MH (C90/270)	1.09
RATED VOLTAGE (V)	120-277	TOTAL FLUX (lm)	43638	<input type="checkbox"/> UP, DN (C0-180)	0.4, 54.3
NOMINAL FLUX (lm)	43637.6	CIE CLASS	DIRECT	<input type="checkbox"/> UP, DN (C180-360)	0.6, 44.7
LAMPS INSIDE	1	<input type="checkbox"/> up (%)	1.0	CIBSE SHR NOM	1.50
TEST VOLTAGE (V)	120	<input type="checkbox"/> down (%)	99.0	CIBSE SHR MAX	1.55



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 27DEG
 Operators: lianghaizhu
 Test Date: 2023-09-05

Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity: 56%
 Test Distance: 6.500m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

mm	C0	C45	C90	C135	C180	C225	C270	C315	mm	□ zone	□ total	%lum, lamp
10	1103	1145	1160	1144	1117	1037	996.8	1017	0- 10	1035	1035	2.37,2.37
20	1130	1189	1186	1206	1153	980.0	897.2	962.8	10- 20	3079	4115	9.43,9.43
30	1154	1189	1117	1220	1180	896.5	779.6	880.9	20- 30	4947	9062	20.8,20.8
40	1184	1115	952.4	1156	1204	797.8	683.0	780.0	30- 40	6385	15447	35.4,35.4
50	1189	948.5	744.9	993.5	1214	700.3	590.4	672.7	40- 50	7239	22686	52,52
60	1204	727.8	509.7	763.7	1228	582.0	466.1	544.9	50- 60	7313	29999	68.7,68.7
70	1288	573.2	268.7	597.6	1298	420.5	312.1	361.4	60- 70	6730	36729	84.2,84.2
80	566.1	432.9	93.41	495.4	592.8	254.2	128.6	190.7	70- 80	5000	41728	95.6,95.6
90	4.272	2.721	1.869	6.516	4.980	6.074	3.298	3.646	80- 90	1473	43201	99,99
100	5.179	3.553	2.555	3.161	6.171	5.307	3.683	5.096	90-100	43.60	43245	99.1,99.1
110	6.258	4.628	3.451	4.063	7.171	6.457	5.118	6.561	100-110	52.16	43297	99.2,99.2
120	7.721	5.877	4.568	5.519	7.983	7.560	6.617	7.959	110-120	60.63	43358	99.4,99.4
130	9.165	7.155	5.752	7.220	9.008	8.629	7.970	9.209	120-130	66.31	43424	99.5,99.5
140	10.16	8.272	7.041	8.416	9.896	9.390	9.050	10.03	130-140	66.14	43490	99.7,99.7
150	10.66	9.185	8.243	9.339	10.40	9.985	9.951	10.51	140-150	58.93	43549	99.8,99.8
160	11.04	9.975	9.421	10.26	11.07	10.84	11.09	11.44	150-160	47.00	43596	99.9,99.9
170	11.34	10.64	10.52	11.13	11.43	11.22	11.61	11.81	160-170	30.90	43627	100,100
180	11.47	11.10	11.31	11.67	11.50	11.12	11.33	11.67	170-180	10.75	43638	100,100
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

Conical surface Flux(90deg): 19007 lm

%lum = 43.6%

%lamp = 43.6%

Conical surface Flux(120deg): 29999 lm

%lum = 68.7%

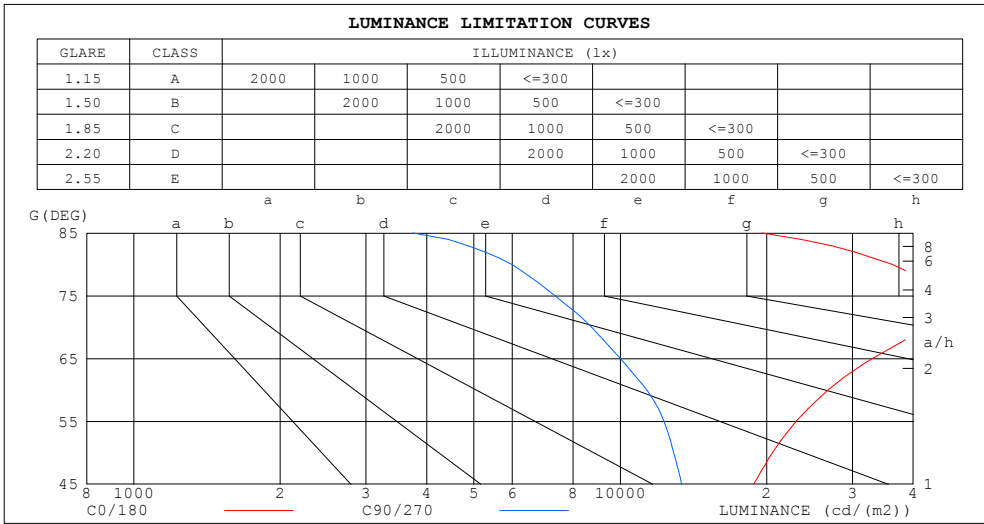
%lamp = 68.7%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:lianghaizhu
 Test Date:2023-09-05

□ Range: 0 - 180DEG
 □ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.5V I:2.439A P:293.3W PF:0.9973 Freq:59.98Hz Lamp Flux:43637.6x1 lm		
NAME: ASD-WHB5A-320D50	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:0.3*0.3m	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	19550	3752
80	36222	5977
75	43499	7345
70	41838	8728
65	32967	10002
60	26751	11326
55	23001	12304
50	20546	12876
45	18801	13374

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:lianghaizhu
 Test Date:2023-09-05

Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:120.5V I:2.439A P:293.3W PF:0.9973 Freq:59.98Hz Lamp Flux:43637.6x1 lm		
NAME: ASD-WHB5A-320D50	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:0.3*0.3m	Shielding Angle:

<input type="checkbox"/> cc	80%			70%			50%			30%			10%			0
<input type="checkbox"/> w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
<input type="checkbox"/> fc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.359	.204	.065	.352	.201	.064	.338	.194	.062	.325	.187	.060	.313	.181	.058	
2.0	.330	.181	.055	.323	.178	.055	.310	.173	.054	.299	.168	.052	.288	.163	.051	
3.0	.299	.159	.048	.294	.157	.047	.282	.153	.047	.272	.149	.046	.262	.145	.045	
4.0	.272	.142	.042	.267	.140	.041	.257	.136	.041	.248	.133	.040	.239	.130	.040	
5.0	.249	.127	.037	.244	.125	.037	.235	.123	.036	.227	.120	.036	.219	.117	.035	
6.0	.229	.115	.033	.225	.113	.033	.217	.111	.032	.209	.109	.032	.202	.106	.032	
7.0	.211	.104	.030	.208	.103	.029	.200	.101	.029	.194	.099	.029	.188	.097	.029	
8.0	.196	.096	.027	.193	.095	.027	.186	.093	.027	.180	.091	.026	.175	.090	.026	
9.0	.183	.088	.025	.180	.088	.025	.174	.086	.024	.169	.085	.024	.164	.083	.024	
10.0	.171	.082	.023	.168	.081	.023	.163	.080	.023	.158	.079	.022	.154	.077	.022	

<input type="checkbox"/> cc	80%			70%			50%			30%			10%			0
<input type="checkbox"/> w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
<input type="checkbox"/> fc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.198	.198	.198	.169	.169	.169	.116	.116	.116	.066	.066	.066	.021	.021	.021	
1.0	.191	.163	.138	.164	.140	.119	.112	.096	.082	.064	.056	.048	.021	.018	.015	
2.0	.185	.139	.101	.158	.120	.087	.109	.083	.061	.063	.048	.036	.020	.016	.012	
3.0	.178	.122	.078	.153	.105	.068	.105	.073	.047	.060	.043	.028	.019	.014	.009	
4.0	.170	.109	.063	.146	.094	.054	.101	.066	.038	.058	.039	.023	.019	.013	.007	
5.0	.163	.099	.052	.140	.086	.045	.096	.060	.032	.056	.035	.019	.018	.011	.006	
6.0	.155	.091	.045	.133	.079	.039	.092	.055	.028	.053	.032	.016	.017	.011	.005	
7.0	.148	.084	.039	.127	.073	.034	.088	.051	.024	.051	.030	.014	.017	.010	.005	
8.0	.141	.078	.035	.121	.068	.031	.084	.048	.022	.049	.028	.013	.016	.009	.004	
9.0	.135	.073	.032	.116	.064	.028	.080	.045	.020	.047	.026	.012	.015	.009	.004	
10.0	.129	.069	.030	.111	.060	.026	.077	.042	.018	.045	.025	.011	.015	.008	.004	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:lianghaizhu
 Test Date:2023-09-05

Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.5V I:2.439A P:293.3W PF:0.9973 Freq:59.98Hz Lamp Flux:43637.6x1 lm										
NAME: ASD-WHB5A-320D50					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: ASD LIGHTING CORP.					SUR.:0.3*0.3m			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	24.9	26.5	25.2	26.7	27.0	21.4	23.1	21.7	23.3	23.5
3H	28.2	29.7	28.5	30.0	30.2	22.5	24.0	22.8	24.3	24.6
4H	29.7	31.1	30.0	31.4	31.7	22.9	24.3	23.2	24.6	24.9
6H	30.6	32.0	31.0	32.3	32.6	23.0	24.4	23.4	24.7	25.0
8H	30.8	32.2	31.2	32.5	32.8	23.1	24.4	23.4	24.7	25.0
12H	30.9	32.2	31.3	32.5	32.8	23.1	24.3	23.4	24.7	25.0
4H 2H	25.2	26.7	25.5	26.9	27.2	22.6	24.1	22.9	24.3	24.6
3H	28.7	30.0	29.1	30.3	30.6	23.9	25.2	24.3	25.5	25.9
4H	30.3	31.5	30.7	31.9	32.2	24.4	25.6	24.8	25.9	26.3
6H	31.4	32.5	31.8	32.8	33.2	24.6	25.7	25.1	26.1	26.5
8H	31.7	32.7	32.1	33.1	33.5	24.7	25.7	25.1	26.1	26.5
12H	31.8	32.7	32.2	33.1	33.6	24.7	25.6	25.2	26.0	26.5
8H 4H	30.5	31.5	30.9	31.9	32.3	25.7	26.7	26.2	27.1	27.5
6H	31.8	32.6	32.2	33.0	33.5	26.3	27.1	26.7	27.5	28.0
8H	32.1	32.8	32.6	33.3	33.8	26.4	27.1	26.8	27.5	28.0
12H	32.3	32.9	32.8	33.4	33.9	26.4	27.0	26.9	27.5	28.0
12H 4H	30.5	31.4	30.9	31.8	32.2	26.0	26.9	26.4	27.3	27.7
6H	31.8	32.5	32.3	33.0	33.5	26.7	27.5	27.2	27.9	28.4
8H	32.2	32.8	32.7	33.3	33.8	26.9	27.6	27.4	28.0	28.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.0 / - 0.0					+ 0.1 / - 0.2				
1.5H	+ 0.1 / - 0.1					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4				

CIE Pub.117, 43638 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 13.1)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:lianghaizhu
 Test Date:2023-09-05

Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.5V I:2.439A P:293.3W PF:0.9973 Freq:59.98Hz Lamp Flux:43637.6x1 lm		
NAME: ASD-WHB5A-320D50	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:0.3*0.3m	Shielding Angle:

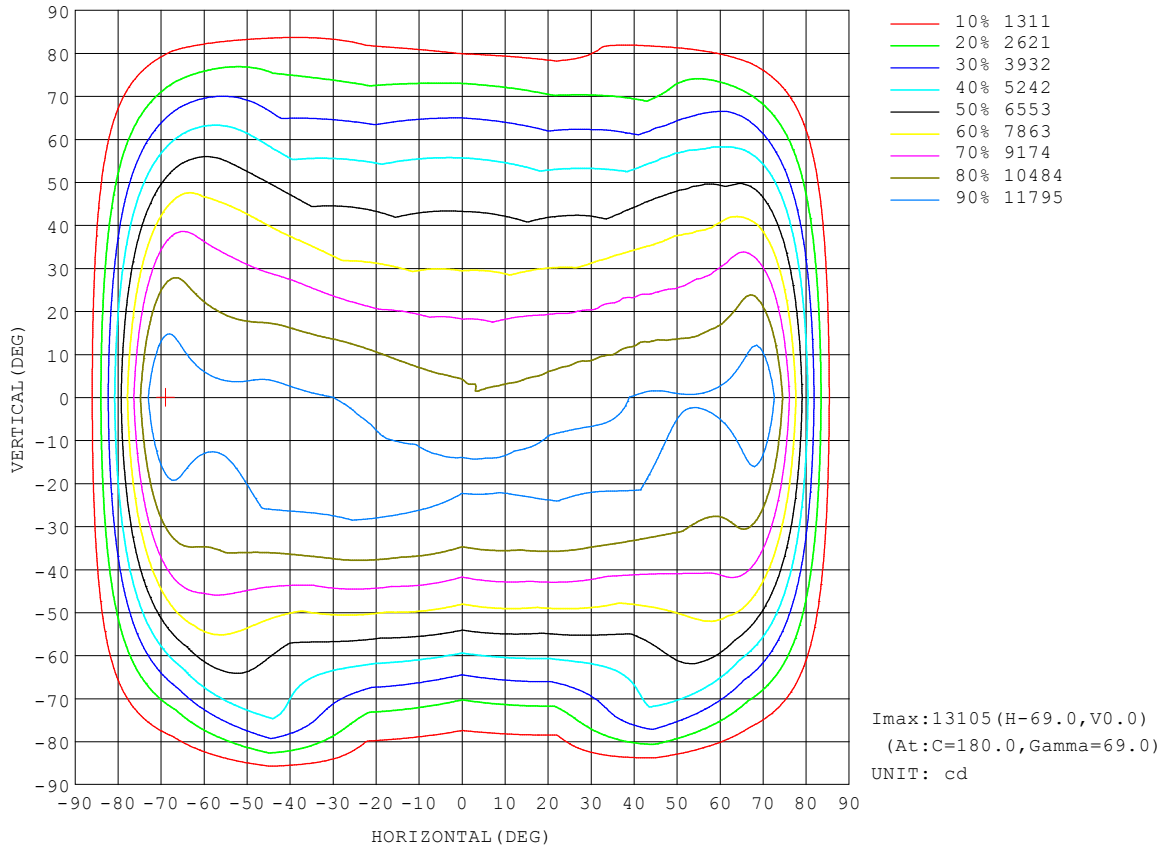
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	53	40	33	52	40	33	50	39	32	25
0.80	62	50	42	61	49	41	59	48	41	33
1.00	71	58	50	69	58	50	67	59	49	41
1.25	78	66	58	76	65	58	73	64	57	48
1.50	83	72	64	81	71	63	78	69	62	54
2.00	91	81	73	89	79	73	85	77	71	62
2.50	95	86	79	93	85	78	89	82	76	67
3.00	99	91	85	97	89	83	92	86	81	72
4.00	104	97	91	101	95	90	96	91	87	77
5.00	106	101	96	104	99	94	99	95	91	81
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:lianghaizhu
 Test Date:2023-09-05

Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.5V I:2.439A P:293.3W PF:0.9973 Freq:59.98Hz Lamp Flux:43637.6x1 lm		
NAME: ASD-WHB5A-320D50	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:0.3*0.3m	Shielding Angle:

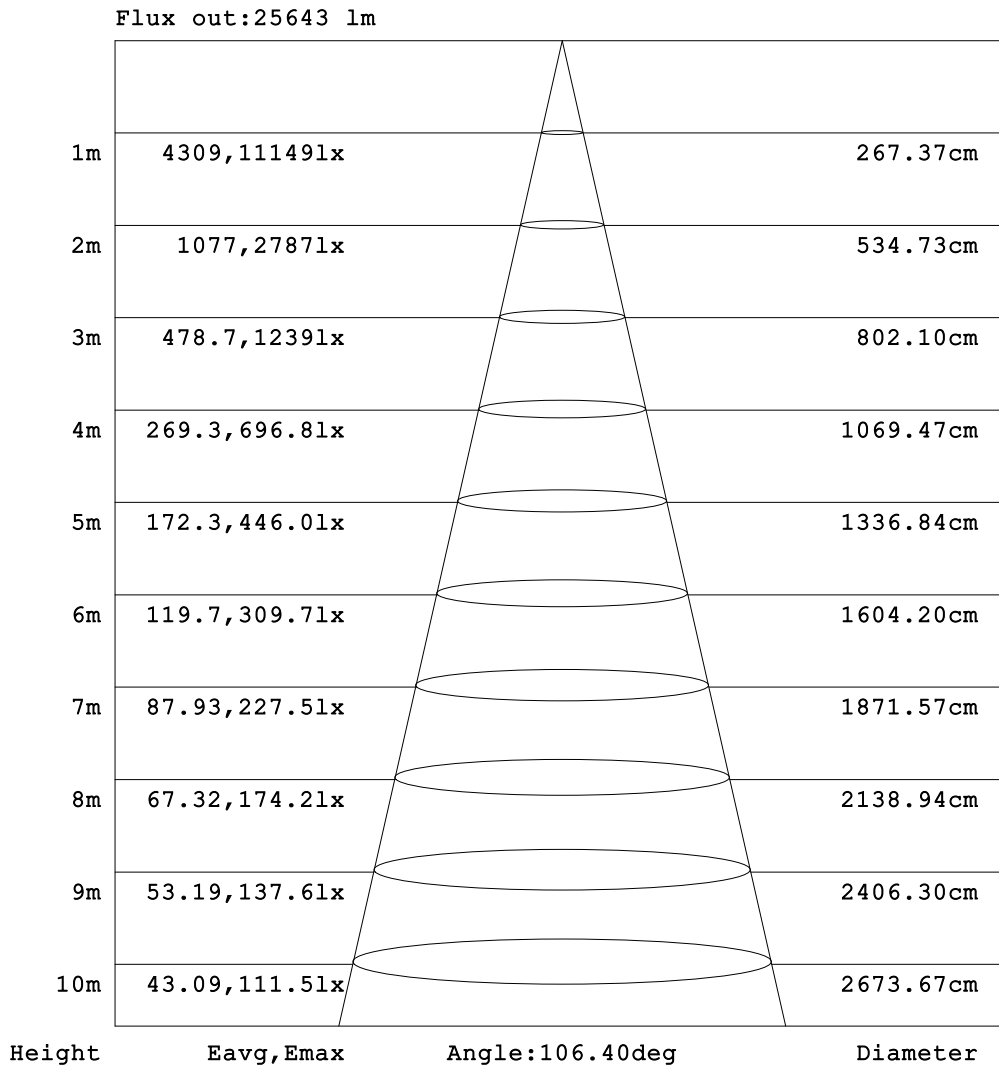


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:lianghaizhu
 Test Date:2023-09-05

Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

AAI Figure

Test:U:120.5V I:2.439A P:293.3W PF:0.9973 Freq:59.98Hz Lamp Flux:43637.6x1 lm		
NAME: ASD-WHB5A-320D50	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:0.3*0.3m	Shielding Angle:

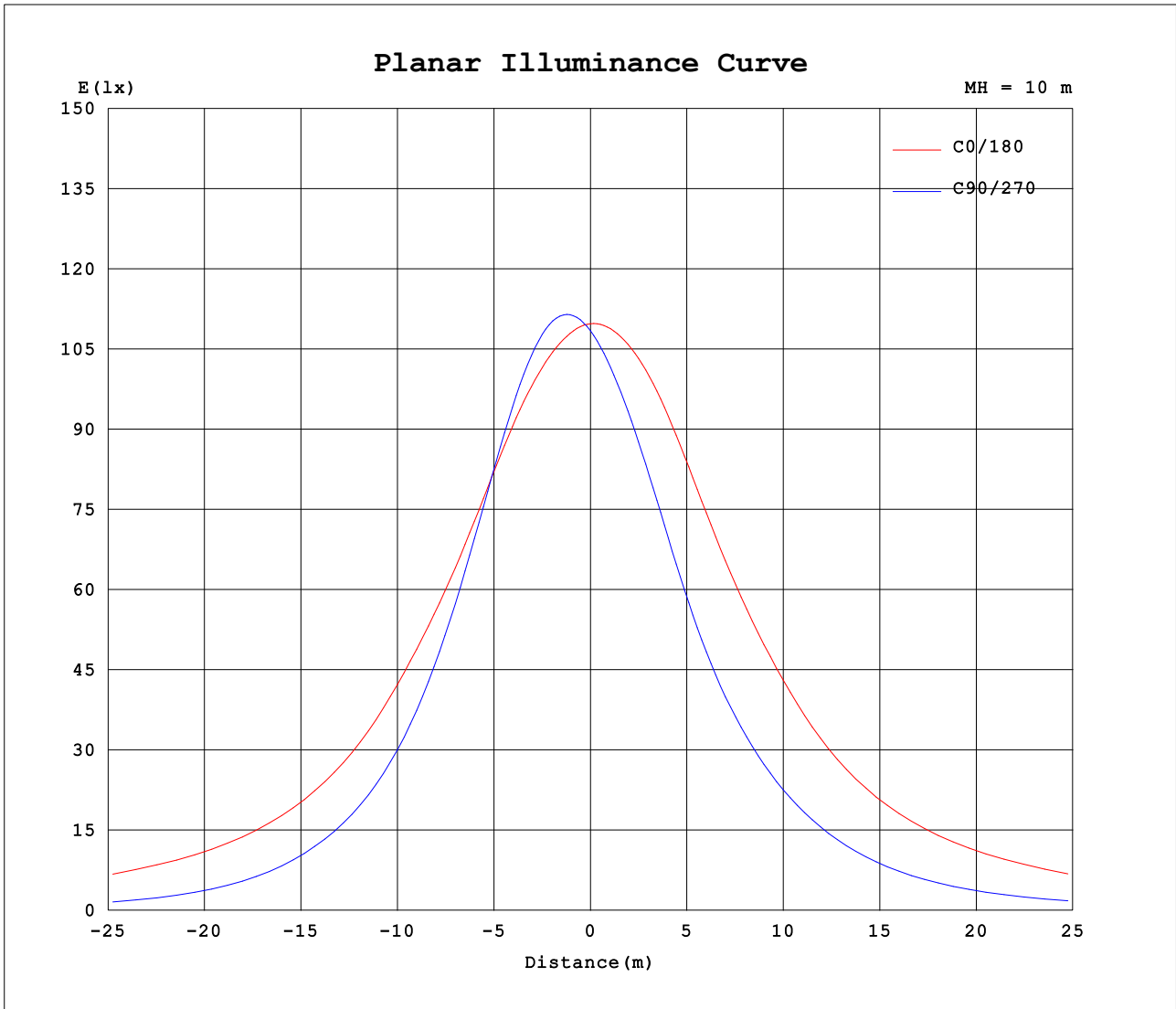


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:lianghaizhu
 Test Date:2023-09-05

Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 27DEG
 Operators: lianghaizhu
 Test Date: 2023-09-05

Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity: 56%
 Test Distance: 6.500m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.5V I:2.439A P:293.3W PF:0.9973 Freq:59.98Hz Lamp Flux:43637.6x1 lm		
NAME: ASD-WHB5A-320D50	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:0.3*0.3m	Shielding Angle:

Table--1

UNIT: x10cd

C (DEG) □ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	1098	1093	1090	1087	1085	1075	1075	1056	1098	1093	1090	1087	1085	1075	1075	1056			
5	1097	1108	1118	1124	1125	1115	1109	1082	1104	1082	1063	1049	1041	1034	1044	1043			
10	1103	1127	1145	1156	1160	1153	1144	1112	1117	1075	1037	1009	997	994	1017	1031			
15	1115	1149	1170	1179	1183	1183	1178	1143	1134	1072	1010	966	950	953	991	1020			
20	1130	1171	1189	1186	1186	1198	1206	1172	1153	1070	980	918	897	905	963	1012			
25	1143	1190	1196	1175	1165	1194	1222	1201	1169	1065	942	861	838	850	927	1006			
30	1154	1201	1189	1142	1117	1167	1220	1221	1180	1054	897	801	780	790	881	994			
35	1166	1205	1163	1086	1044	1113	1199	1229	1190	1038	847	744	728	734	830	980			
40	1184	1203	1115	1011	952	1037	1156	1236	1204	1021	798	693	683	684	780	968			
45	1196	1185	1041	918	851	943	1087	1227	1219	1001	750	647	639	635	728	944			
50	1189	1144	948	810	745	835	994	1195	1214	970	700	598	590	582	673	916			
55	1187	1084	840	698	635	722	882	1145	1212	937	645	541	532	521	612	877			
60	1204	1014	728	586	510	611	764	1083	1228	906	582	473	466	450	545	838			
65	1254	935	633	463	380	493	663	1006	1272	860	505	395	392	373	462	782			
70	1288	851	573	336	269	368	598	904	1298	789	421	316	312	289	361	697			
75	1013	692	545	220	171	249	570	736	1033	660	334	242	223	204	255	567			
80	566	406	433	120	93.4	143	495	461	593	438	254	164	129	115	191	389			
85	153	122	168	45.7	29.4	63.0	251	167	196	190	145	101	73.5	85.1	99.4	141			
90	4.27	3.66	2.72	2.05	1.87	1.99	6.52	4.15	4.98	15.6	6.07	8.54	3.30	2.81	3.65	5.56			
95	4.66	4.08	3.13	2.40	2.19	2.27	2.98	4.44	5.54	5.99	4.70	3.50	3.01	3.40	4.39	6.14			
100	5.18	4.56	3.55	2.79	2.55	2.59	3.16	4.52	6.17	6.49	5.31	4.10	3.68	4.11	5.10	6.79			
105	5.71	5.08	4.04	3.23	2.96	2.98	3.56	4.47	6.74	6.94	5.88	4.77	4.38	4.87	5.82	7.42			
110	6.26	5.63	4.63	3.74	3.45	3.45	4.06	4.90	7.17	7.37	6.46	5.47	5.12	5.63	6.56	7.99			
115	6.96	6.29	5.24	4.31	4.00	4.06	4.79	5.59	7.56	7.77	7.00	6.17	5.88	6.38	7.27	8.55			
120	7.72	6.93	5.88	4.92	4.57	4.65	5.52	6.55	7.98	8.17	7.56	6.87	6.62	7.11	7.96	9.11			
125	8.47	7.58	6.53	5.56	5.17	5.33	6.37	7.48	8.47	8.61	8.11	7.52	7.32	7.80	8.61	9.58			
130	9.17	8.23	7.15	6.21	5.75	6.00	7.22	8.33	9.01	9.12	8.63	8.12	7.97	8.43	9.21	10.0			
135	9.74	8.80	7.74	6.85	6.39	6.66	7.87	8.85	9.50	9.53	9.05	8.62	8.54	8.97	9.68	10.3			
140	10.2	9.28	8.27	7.47	7.04	7.31	8.42	9.22	9.90	9.84	9.39	9.06	9.05	9.43	10.0	10.5			
145	10.4	9.65	8.75	8.02	7.65	7.92	8.88	9.53	10.2	10.0	9.67	9.45	9.50	9.83	10.3	10.6			
150	10.7	9.95	9.18	8.55	8.24	8.50	9.34	9.83	10.4	10.2	9.99	9.86	9.95	10.2	10.5	10.7			
155	10.9	10.2	9.58	9.05	8.82	9.09	9.80	10.1	10.7	10.5	10.4	10.4	10.5	10.7	11.0	11.0			
160	11.0	10.5	9.97	9.54	9.42	9.69	10.3	10.5	11.1	10.9	10.8	10.9	11.1	11.2	11.4	11.4			
165	11.2	10.8	10.3	10.0	9.99	10.3	10.7	10.8	11.3	11.1	11.1	11.3	11.5	11.5	11.7	11.6			
170	11.3	11.0	10.6	10.4	10.5	10.8	11.1	11.0	11.4	11.2	11.2	11.4	11.6	11.6	11.8	11.6			
175	11.4	11.1	10.9	10.8	11.0	11.2	11.4	11.3	11.5	11.3	11.2	11.3	11.6	11.6	11.8	11.6			
180	11.5	11.2	11.1	11.1	11.3	11.5	11.7	11.6	11.5	11.2	11.1	11.1	11.3	11.5	11.7	11.5			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:lianghaizhu
 Test Date:2023-09-05

□ Range: 0 - 180DEG
 □ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks: