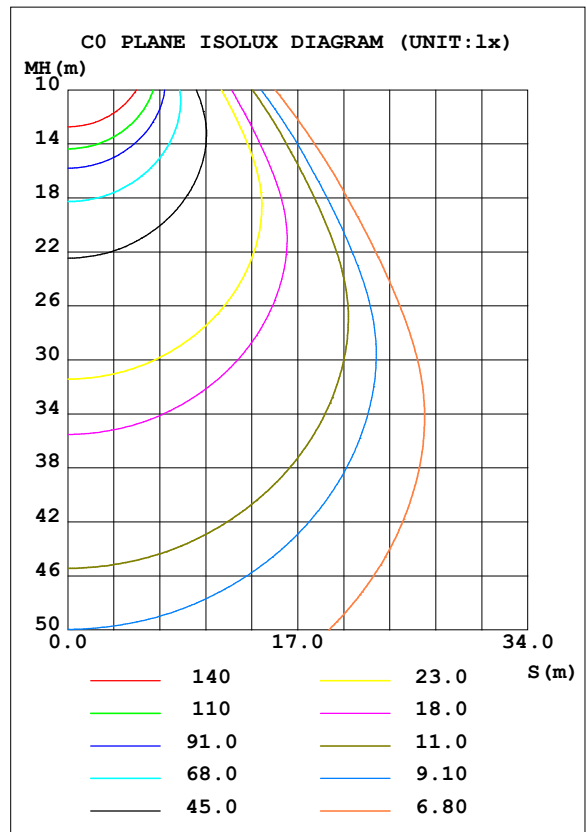
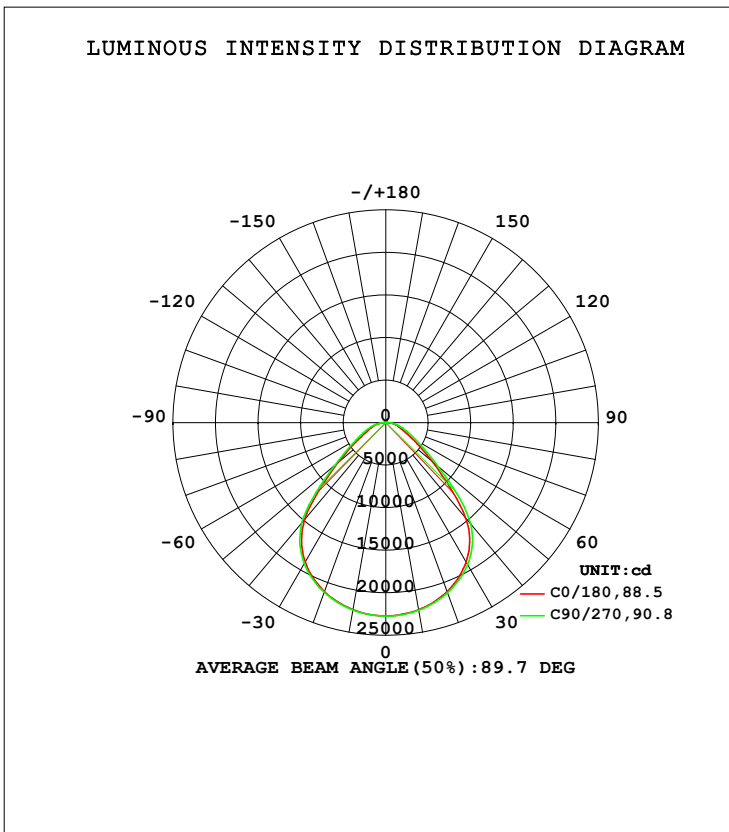


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:121.0V I:2.581A P:311.7W PF:0.9977 Freq:59.98Hz Lamp Flux:47277.3x1 lm		
NAME: ASD-WHB5A-A320DAC-320W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:1.0*0.3m	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 151.69 lm/W			
MODEL		I _{max} (cd)	22742	S/MH (C0/180)	1.24
NOMINAL POWER (W)	320	LOR (%)	100.0	S/MH (C90/270)	1.25
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	47277	<input type="checkbox"/> UP, DN (C0-180)	0.5, 49.7
NOMINAL FLUX (lm)	47277.3	CIE CLASS	DIRECT	<input type="checkbox"/> UP, DN (C180-360)	0.5, 49.4
LAMPS INSIDE	1	<input type="checkbox"/> up (%)	0.9	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	120	<input type="checkbox"/> down (%)	99.1	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 27DEG
 Operators: lianghaizhu
 Test Date: 2023-05-05

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	2232	2230	2238	2238	2230	2237	2235	2233	0- 10	2151	2151	4.55,4.55
20	2112	2113	2125	2126	2112	2124	2121	2113	10- 20	6170	8321	17.6,17.6
30	1890	1899	1926	1921	1895	1915	1916	1897	20- 30	9330	17651	37.3,37.3
40	1461	1493	1550	1548	1488	1521	1541	1466	30- 40	10834	28485	60.3,60.3
50	718.9	737.4	804.3	797.5	736.8	775.5	783.8	720.5	40- 50	8635	37120	78.5,78.5
60	329.3	356.4	411.4	379.4	338.3	376.8	400.3	347.6	50- 60	4767	41887	88.6,88.6
70	181.9	206.7	232.0	217.1	187.8	217.1	225.9	202.5	60- 70	2740	44627	94.4,94.4
80	98.06	103.1	114.4	115.3	101.8	113.4	108.8	100.4	70- 80	1665	46292	97.9,97.9
90	1.561	1.624	1.893	2.013	1.503	1.654	1.586	1.561	80- 90	557.1	46849	99.1,99.1
100	2.545	2.648	2.688	2.545	2.427	2.471	2.634	2.577	90-100	22.10	46871	99.1,99.1
110	4.094	4.213	4.279	4.101	3.934	3.982	4.205	4.120	100-110	34.86	46906	99.2,99.2
120	6.053	6.172	6.245	6.056	5.872	5.907	6.165	6.077	110-120	50.16	46956	99.3,99.3
130	8.173	8.237	8.317	8.152	8.040	8.017	8.275	8.176	120-130	63.72	47020	99.5,99.5
140	10.02	10.20	10.25	10.10	10.01	10.08	10.31	10.24	130-140	70.79	47091	99.6,99.6
150	11.81	12.08	12.09	11.83	11.88	11.94	12.25	12.21	140-150	69.37	47160	99.8,99.8
160	13.80	14.01	14.03	13.70	13.91	13.89	14.25	14.20	150-160	59.81	47220	99.9,99.9
170	15.79	15.76	15.88	15.56	15.86	15.68	15.99	15.85	160-170	42.06	47262	100,100
180	16.60	16.46	16.73	16.48	16.59	16.47	16.73	16.49	170-180	15.44	47277	100,100
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

Conical surface Flux(90deg): 33372 lm

%lum = 70.6%

%lamp = 70.6%

Conical surface Flux(120deg): 41887 lm

%lum = 88.6%

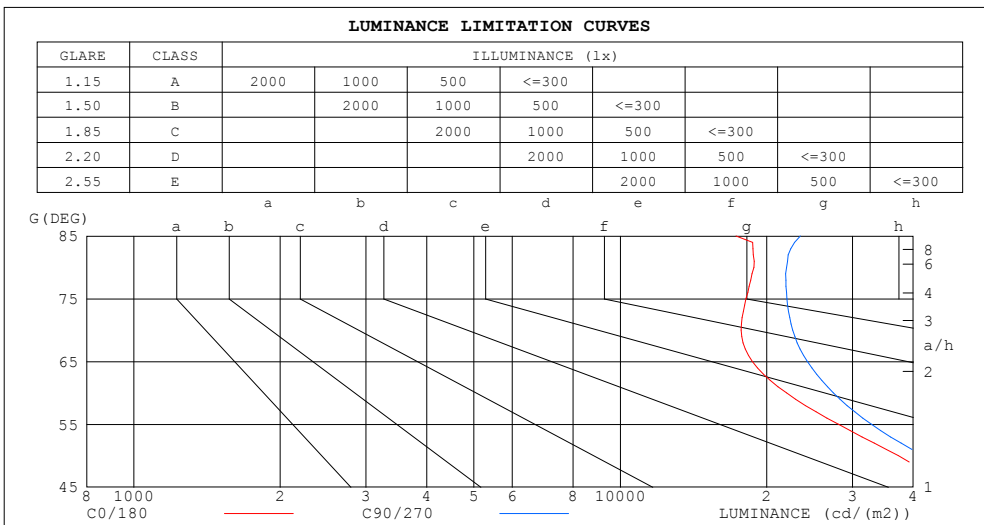
%lamp = 88.6%

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:lianghaizhu
 Test Date:2023-05-05

□ 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:121.0V I:2.581A P:311.7W PF:0.9977 Freq:59.98Hz Lamp Flux:47277.3x1 lm		
NAME: ASD-WHB5A-A320DAC-320W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:1.0*0.3m	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	17304	23444
80	18823	21953
75	18135	22017
70	17724	22606
65	18691	24253
60	21955	27424
55	28081	32815
50	37281	41708
45	49820	55893

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:lianghaizhu
 Test Date:2023-05-05

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:121.0V I:2.581A P:311.7W PF:0.9977 Freq:59.98Hz Lamp Flux:47277.3x1 lm		
NAME: ASD-WHB5A-A320DAC-320W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:1.0*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	.258 .147 .046	.251 .143 .045	.237 .136 .043	.225 .130 .042	.213 .124 .040	
2.0	.245 .134 .041	.239 .132 .041	.227 .126 .039	.216 .121 .038	.206 .117 .037	
3.0	.230 .123 .037	.225 .120 .036	.214 .116 .035	.205 .112 .034	.196 .109 .034	
4.0	.216 .112 .033	.211 .110 .033	.202 .107 .032	.193 .104 .031	.185 .101 .031	
5.0	.202 .103 .030	.198 .102 .030	.190 .099 .029	.182 .096 .029	.175 .094 .028	
6.0	.190 .095 .027	.186 .094 .027	.179 .092 .027	.172 .089 .026	.166 .087 .026	
7.0	.179 .088 .025	.175 .087 .025	.169 .085 .025	.163 .083 .024	.157 .082 .024	
8.0	.169 .082 .023	.165 .081 .023	.160 .080 .023	.154 .078 .023	.149 .077 .022	
9.0	.159 .077 .022	.157 .076 .021	.151 .075 .021	.146 .073 .021	.142 .072 .021	
10.0	.151 .072 .020	.148 .072 .020	.144 .070 .020	.139 .069 .020	.135 .068 .019	

<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	.197 .197 .197	.169 .169 .169	.115 .115 .115	.066 .066 .066	.021 .021 .021	
1.0	.184 .164 .145	.157 .140 .125	.107 .097 .087	.062 .056 .050	.020 .018 .016	
2.0	.173 .139 .111	.148 .120 .096	.102 .083 .067	.059 .048 .039	.019 .016 .013	
3.0	.164 .121 .087	.140 .104 .075	.096 .073 .053	.056 .042 .031	.018 .014 .010	
4.0	.156 .107 .070	.134 .093 .061	.092 .065 .043	.053 .038 .025	.017 .012 .008	
5.0	.148 .097 .058	.127 .084 .051	.088 .058 .036	.051 .034 .021	.016 .011 .007	
6.0	.141 .088 .050	.121 .076 .043	.084 .053 .031	.049 .031 .018	.016 .010 .006	
7.0	.135 .081 .043	.116 .070 .038	.080 .049 .027	.047 .029 .016	.015 .009 .005	
8.0	.129 .075 .038	.111 .065 .033	.077 .046 .024	.045 .027 .014	.014 .009 .005	
9.0	.124 .070 .034	.106 .061 .030	.074 .043 .021	.043 .025 .013	.014 .008 .004	
10.0	.118 .066 .031	.102 .057 .027	.071 .040 .019	.041 .024 .011	.013 .008 .004	

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:lianghaizhu
 Test Date:2023-05-05

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:121.0V I:2.581A P:311.7W PF:0.9977 Freq:59.98Hz Lamp Flux:47277.3x1 lm										
NAME: ASD-WHB5A-A320DAC-320W-4000K					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: ASD LIGHTING CORP					SUR.:1.0*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	23.8	25.1	24.0	25.3	25.5	24.3	25.6	24.6	25.8	26.0
3H	24.3	25.5	24.6	25.8	26.0	25.0	26.2	25.3	26.4	26.7
4H	24.6	25.8	24.9	26.0	26.3	25.4	26.5	25.7	26.8	27.0
6H	24.9	26.0	25.3	26.3	26.6	25.7	26.8	26.1	27.1	27.4
8H	25.1	26.1	25.4	26.4	26.7	25.9	26.9	26.2	27.2	27.5
12H	25.2	26.2	25.5	26.5	26.8	26.0	27.0	26.3	27.3	27.6
4H 2H	24.0	25.1	24.3	25.4	25.6	24.4	25.6	24.7	25.8	26.1
3H	24.7	25.7	25.1	26.0	26.3	25.3	26.3	25.7	26.6	27.0
4H	25.2	26.1	25.6	26.4	26.8	25.9	26.8	26.3	27.1	27.5
6H	25.7	26.5	26.1	26.8	27.2	26.4	27.2	26.8	27.5	27.9
8H	25.9	26.6	26.3	27.0	27.4	26.6	27.3	27.0	27.7	28.1
12H	26.0	26.7	26.5	27.1	27.5	26.8	27.5	27.2	27.9	28.3
8H 4H	25.4	26.2	25.8	26.5	26.9	26.0	26.8	26.4	27.1	27.5
6H	26.0	26.7	26.5	27.1	27.5	26.7	27.3	27.1	27.7	28.1
8H	26.3	26.9	26.8	27.3	27.8	27.0	27.5	27.5	28.0	28.4
12H	26.6	27.1	27.1	27.5	28.0	27.3	27.8	27.8	28.2	28.7
12H 4H	25.4	26.1	25.9	26.5	26.9	26.0	26.7	26.5	27.1	27.5
6H	26.1	26.7	26.6	27.1	27.6	26.7	27.3	27.2	27.7	28.2
8H	26.5	26.9	26.9	27.4	27.9	27.1	27.5	27.6	28.0	28.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.7 / - 0.8					+ 0.6 / - 0.6				
1.5H	+ 0.6 / - 0.5					+ 0.5 / - 0.5				
2.0H	+ 1.4 / - 0.9					+ 1.4 / - 0.8				

CIE Pub.117, 47277 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 13.4)

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:lianghaizhu
 Test Date:2023-05-05

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:121.0V I:2.581A P:311.7W PF:0.9977 Freq:59.98Hz Lamp Flux:47277.3x1 lm		
NAME: ASD-WHB5A-A320DAC-320W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:1.0*0.3m	Shielding Angle:

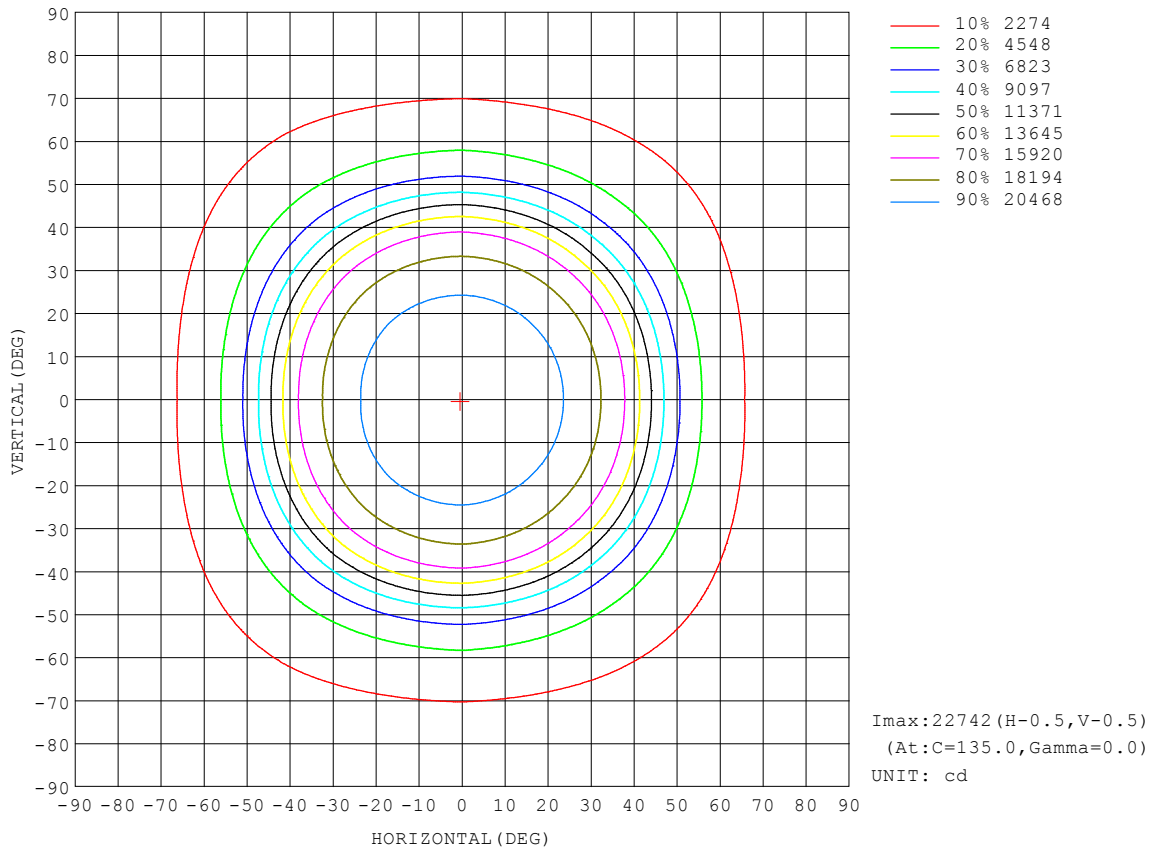
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	67	57	51	66	57	51	65	56	51	45
0.80	76	67	61	75	66	60	74	66	60	54
1.00	84	75	69	83	74	69	81	75	68	62
1.25	90	82	76	89	81	76	86	80	75	68
1.50	95	87	81	93	86	81	90	84	79	73
2.00	100	93	88	98	92	87	95	90	86	79
2.50	103	97	92	101	95	91	97	93	89	81
3.00	106	100	96	104	99	95	100	96	92	84
4.00	109	104	100	106	102	99	102	99	96	88
5.00	111	107	103	108	105	102	104	101	99	90
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:lianghaizhu
 Test Date:2023-05-05

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:121.0V I:2.581A P:311.7W PF:0.9977 Freq:59.98Hz Lamp Flux:47277.3x1 lm		
NAME: ASD-WHB5A-A320DAC-320W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:1.0*0.3m	Shielding Angle:

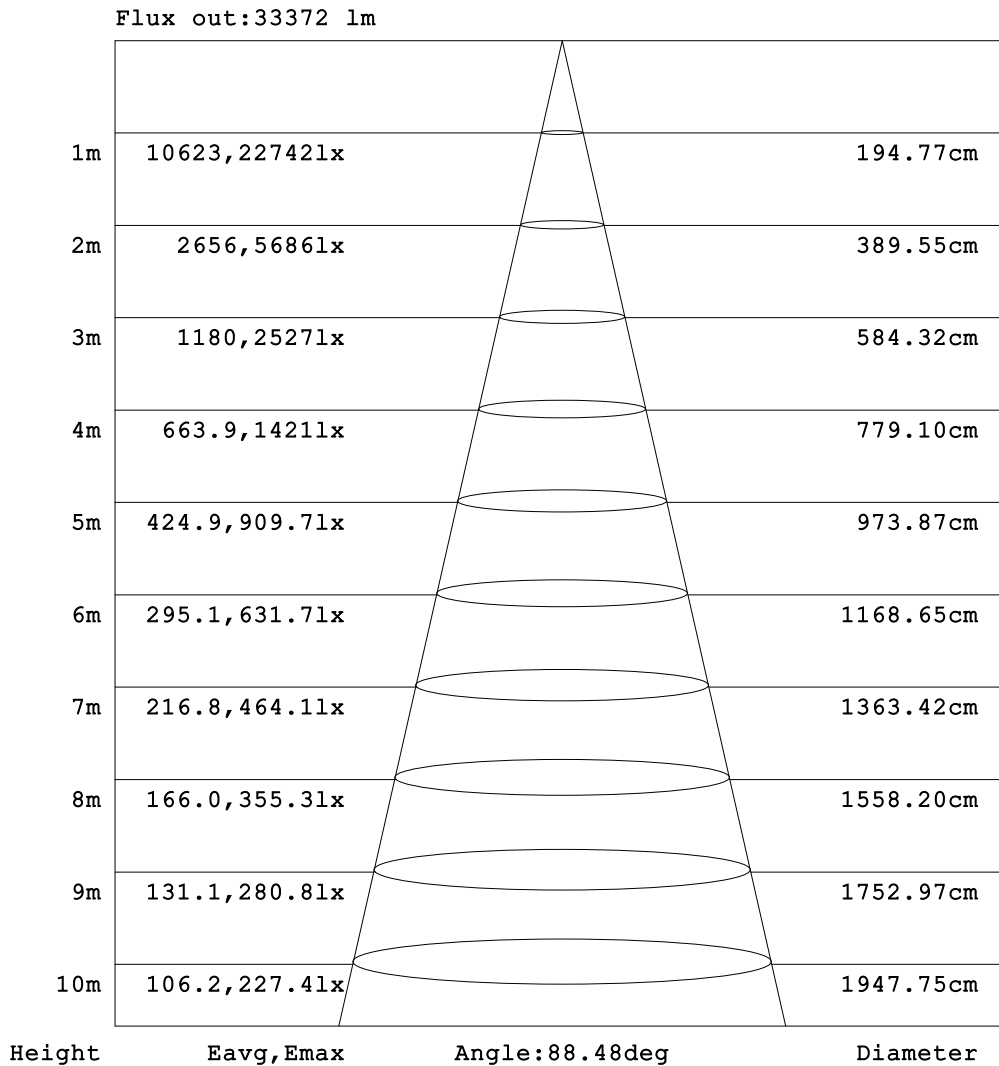


C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:lianghaizhu
 Test Date:2023-05-05

□ 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:121.0V I:2.581A P:311.7W PF:0.9977 Freq:59.98Hz Lamp Flux:47277.3x1 lm		
NAME: ASD-WHB5A-A320DAC-320W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:1.0*0.3m	Shielding Angle:

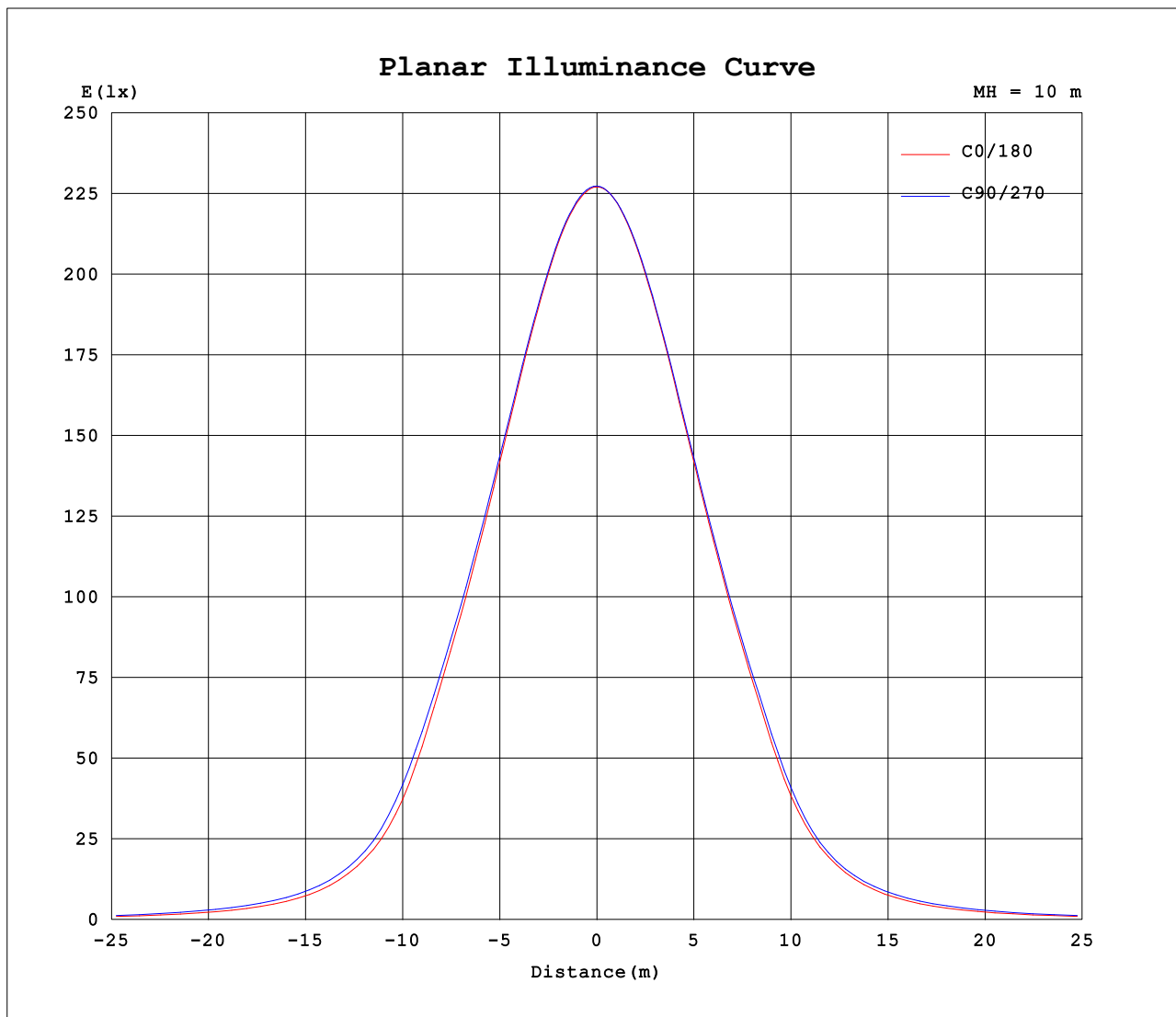


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:lianghaizhu
 Test Date:2023-05-05

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: 45.0DEG
Test Speed: HIGH
Temperature: 27DEG
Operators: lianghaizhu
Test Date: 2023-05-05

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:121.0V I:2.581A P:311.7W PF:0.9977 Freq:59.98Hz Lamp Flux:47277.3x1 lm		
NAME: ASD-WHB5A-A320DAC-320W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:1.0*0.3m	Shielding Angle:

Table--1

UNIT: x10cd

C (DEG) □ (DEG)	0	45	90	135	180	225	270	315										
0	2271	2272	2273	2274	2271	2272	2273	2274										
5	2260	2260	2265	2268	2262	2263	2262	2262										
10	2232	2230	2238	2238	2230	2237	2235	2233										
15	2182	2182	2191	2192	2181	2191	2188	2183										
20	2112	2113	2125	2126	2112	2124	2121	2113										
25	2017	2020	2039	2038	2017	2033	2031	2020										
30	1890	1899	1926	1921	1895	1915	1916	1897										
35	1720	1734	1774	1765	1728	1757	1758	1730										
40	1461	1493	1550	1548	1488	1521	1541	1466										
45	1057	1095	1186	1173	1089	1146	1159	1063										
50	719	737	804	798	737	776	784	720										
55	483	503	565	541	496	535	548	493										
60	329	356	411	379	338	377	400	348										
65	237	265	307	279	244	279	300	259										
70	182	207	232	217	188	217	226	203										
75	141	155	171	167	145	166	164	153										
80	98.1	103	114	115	102	113	109	100										
85	45.2	49.3	61.3	63.3	48.4	59.9	54.5	44.9										
90	1.56	1.62	1.89	2.01	1.50	1.65	1.59	1.56										
95	1.98	2.07	2.09	1.98	1.89	1.93	2.05	2.01										
100	2.54	2.65	2.69	2.54	2.43	2.47	2.63	2.58										
105	3.26	3.37	3.43	3.26	3.11	3.16	3.36	3.29										
110	4.09	4.21	4.28	4.10	3.93	3.98	4.21	4.12										
115	5.03	5.15	5.23	5.04	4.86	4.90	5.15	5.06										
120	6.05	6.17	6.24	6.06	5.87	5.91	6.17	6.08										
125	7.13	7.22	7.28	7.11	6.96	6.95	7.22	7.13										
130	8.17	8.24	8.32	8.15	8.04	8.02	8.27	8.18										
135	9.11	9.22	9.32	9.13	9.04	9.05	9.31	9.20										
140	10.0	10.2	10.3	10.1	10.0	10.1	10.3	10.2										
145	10.9	11.1	11.2	11.0	10.9	11.0	11.3	11.2										
150	11.8	12.1	12.1	11.8	11.9	11.9	12.2	12.2										
155	12.8	13.0	13.1	12.7	12.9	12.9	13.3	13.2										
160	13.8	14.0	14.0	13.7	13.9	13.9	14.2	14.2										
165	14.9	15.0	15.0	14.7	15.0	14.9	15.2	15.1										
170	15.8	15.8	15.9	15.6	15.9	15.7	16.0	15.8										
175	16.4	16.3	16.5	16.2	16.4	16.2	16.5	16.3										
180	16.6	16.5	16.7	16.5	16.6	16.5	16.7	16.5										

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:lianghaizhu
 Test Date:2023-05-05

□ 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: