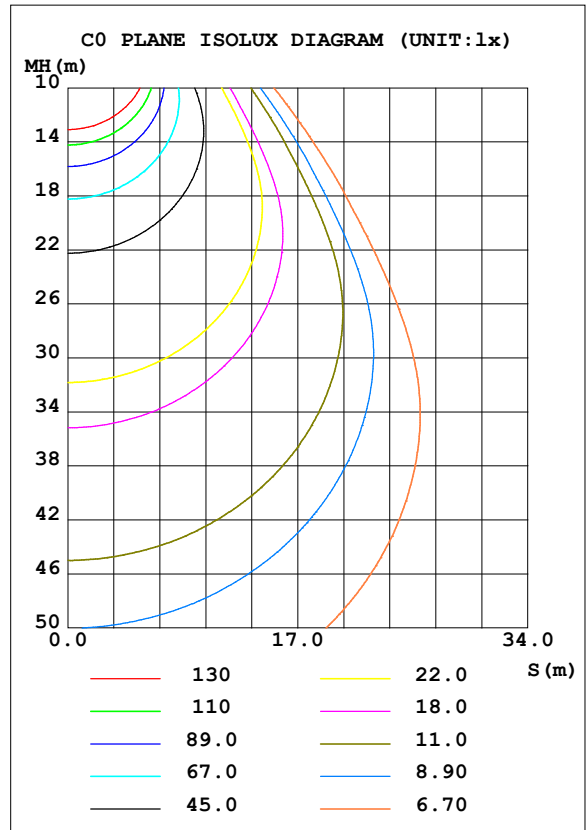
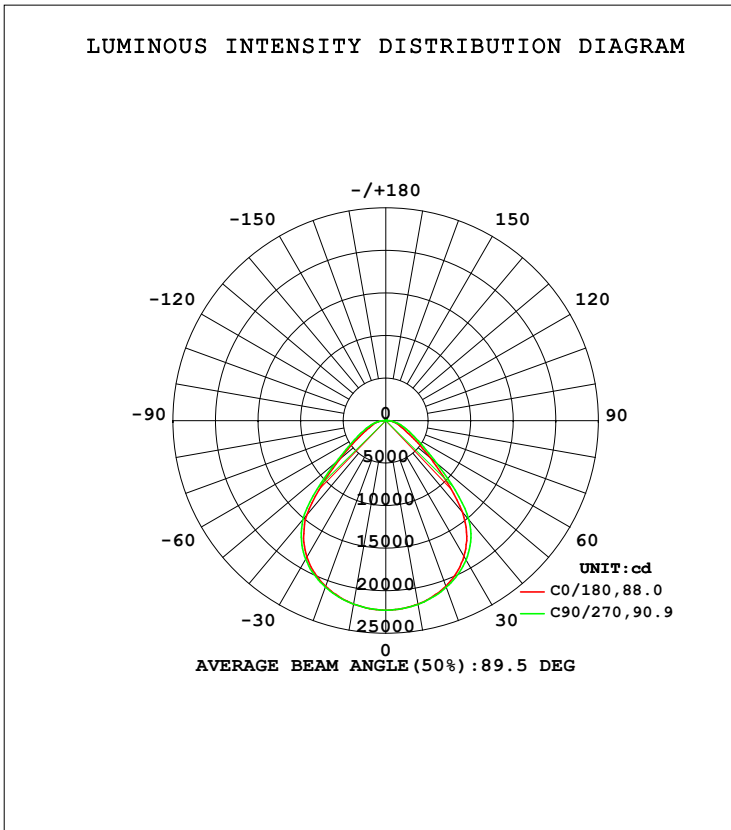


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:121.0V I:2.663A P:321.5W PF:0.9975 Freq:59.99Hz Lamp Flux:46135.3x1 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: 143.51 lm/W			
MODEL		I <sub>max</sub> (cd)	22272	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)	46135	<input type="checkbox"/> UP, DN (C0-180)	0.5, 49.6
NOMINAL FLUX (lm)	46135.3	CIE CLASS	DIRECT	<input type="checkbox"/> UP, DN (C180-360)	0.5, 49.5
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	1.30



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	2189	2186	2192	2191	2188	2191	2189	2187	0- 10	2107	2107	4.57,4.57
20	2070	2073	2083	2081	2072	2080	2080	2071	10- 20	6047	8154	17.7,17.7
30	1840	1863	1889	1876	1855	1871	1883	1858	20- 30	9142	17296	37.5,37.5
40	1398	1454	1520	1500	1441	1476	1520	1422	30- 40	10576	27872	60.4,60.4
50	692.4	717.9	783.5	771.2	715.6	758.9	774.0	700.2	40- 50	8389	36260	78.6,78.6
60	317.1	347.1	400.1	367.2	328.7	366.0	393.5	337.0	50- 60	4633	40893	88.6,88.6
70	176.1	201.3	225.3	210.3	182.7	210.9	221.7	196.6	60- 70	2663	43556	94.4,94.4
80	94.94	100.3	110.7	111.9	98.87	110.2	107.2	97.58	70- 80	1620	45175	97.9,97.9
90	1.517	1.578	1.771	1.975	1.454	1.623	1.538	1.513	80- 90	542.2	45718	99.1,99.1
100	2.474	2.574	2.634	2.472	2.346	2.407	2.550	2.495	90-100	21.47	45739	99.1,99.1
110	3.983	4.099	4.192	3.990	3.803	3.882	4.082	3.996	100-110	33.89	45773	99.2,99.2
120	5.900	6.013	6.115	5.900	5.694	5.766	5.993	5.906	110-120	48.83	45822	99.3,99.3
130	7.981	8.038	8.142	7.956	7.821	7.832	8.060	7.958	120-130	62.11	45884	99.5,99.5
140	9.796	9.961	10.03	9.867	9.767	9.853	10.04	9.976	130-140	69.09	45953	99.6,99.6
150	11.56	11.80	11.82	11.56	11.61	11.67	11.93	11.90	140-150	67.75	46021	99.8,99.8
160	13.50	13.68	13.72	13.37	13.59	13.57	13.89	13.84	150-160	58.42	46079	99.9,99.9
170	15.45	15.41	15.52	15.20	15.50	15.32	15.61	15.45	160-170	41.09	46120	100,100
180	16.23	16.10	16.34	16.09	16.24	16.10	16.34	16.10	170-180	15.09	46135	100,100
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

Conical surface Flux(90deg): 32617 lm

%lum = 70.7%

%lamp = 70.7%

Conical surface Flux(120deg): 40893 lm

%lum = 88.6%

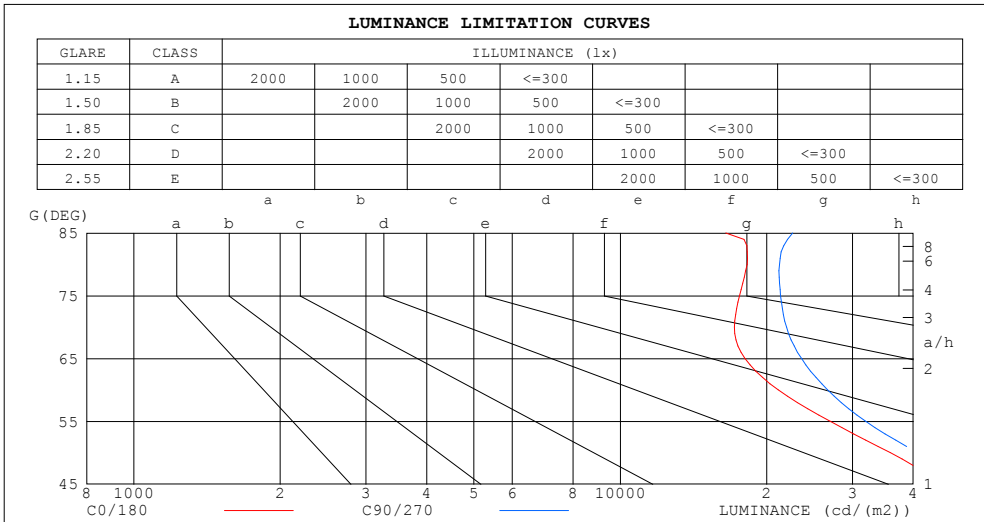
%lamp = 88.6%

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:2.663A P:321.5W PF:0.9975 Freq:59.99Hz Lamp Flux:46135.3x1 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	16463	22605
80	18225	21253
75	17591	21355
70	17166	21956
65	18051	23577
60	21137	26675
55	26977	31953
50	35906	40632
45	47761	54563

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:2.663A P:321.5W PF:0.9975 Freq:59.99Hz Lamp Flux:46135.3x1 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	.257 .146 .046	.250 .143 .045	.237 .136 .043	.224 .129 .042	.213 .123 .040	
2.0	.245 .134 .041	.239 .131 .040	.227 .126 .039	.216 .121 .038	.206 .117 .037	
3.0	.230 .122 .037	.225 .120 .036	.214 .116 .035	.205 .112 .034	.196 .108 .034	
4.0	.215 .112 .033	.211 .110 .033	.202 .107 .032	.193 .104 .031	.185 .101 .031	
5.0	.202 .103 .030	.198 .101 .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	.178 .088 .025	.175 .087 .025	.169 .085 .025	.163 .083 .024	.157 .082 .024	
8.0	.168 .082 .023	.165 .081 .023	.160 .080 .023	.154 .078 .023	.149 .076 .022	
9.0	.159 .077 .021	.156 .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	.123 .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:2.663A P:321.5W PF:0.9975 Freq:59.99Hz Lamp Flux:46135.3x1 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	23.6	24.9	23.9	25.1	25.3	24.2	25.5	24.5	25.7	25.9
3H	24.2	25.4	24.5	25.6	25.9	24.9	26.1	25.2	26.3	26.6
4H	24.5	25.6	24.8	25.9	26.1	25.3	26.4	25.6	26.7	26.9
6H	24.8	25.9	25.1	26.2	26.4	25.6	26.7	25.9	27.0	27.3
8H	24.9	26.0	25.3	26.3	26.6	25.8	26.8	26.1	27.1	27.4
12H	25.0	26.0	25.4	26.3	26.6	25.9	26.9	26.2	27.2	27.5
4H 2H	23.8	25.0	24.1	25.2	25.5	24.3	25.5	24.6	25.7	26.0
3H	24.6	25.6	24.9	25.9	26.2	25.2	26.2	25.6	26.5	26.9
4H	25.1	26.0	25.4	26.3	26.6	25.8	26.7	26.2	27.0	27.3
6H	25.5	26.3	26.0	26.7	27.1	26.3	27.1	26.7	27.4	27.8
8H	25.8	26.5	26.2	26.9	27.3	26.5	27.2	26.9	27.6	28.0
12H	25.9	26.6	26.3	27.0	27.4	26.7	27.4	27.1	27.8	28.2
8H 4H	25.3	26.0	25.7	26.4	26.8	25.9	26.7	26.3	27.0	27.4
6H	25.9	26.5	26.4	26.9	27.4	26.6	27.2	27.0	27.6	28.0
8H	26.2	26.8	26.7	27.2	27.7	26.9	27.4	27.4	27.9	28.3
12H	26.5	26.9	26.9	27.4	27.9	27.2	27.6	27.7	28.1	28.6
12H 4H	25.3	26.0	25.7	26.4	26.8	25.9	26.6	26.4	27.0	27.4
6H	26.0	26.5	26.5	27.0	27.4	26.6	27.2	27.1	27.6	28.1
8H	26.3	26.8	26.8	27.3	27.8	27.0	27.4	27.5	27.9	28.4
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	+ 1.3 / - 0.9					+ 1.4 / - 0.8				

CIE Pub.117, 46135 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 13.3)

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:2.663A P:321.5W PF:0.9975 Freq:59.99Hz Lamp Flux:46135.3x1 lm		
NAME: ASD-WHB5A-A320DAC-320W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:1.0*0.3m	Shielding Angle:

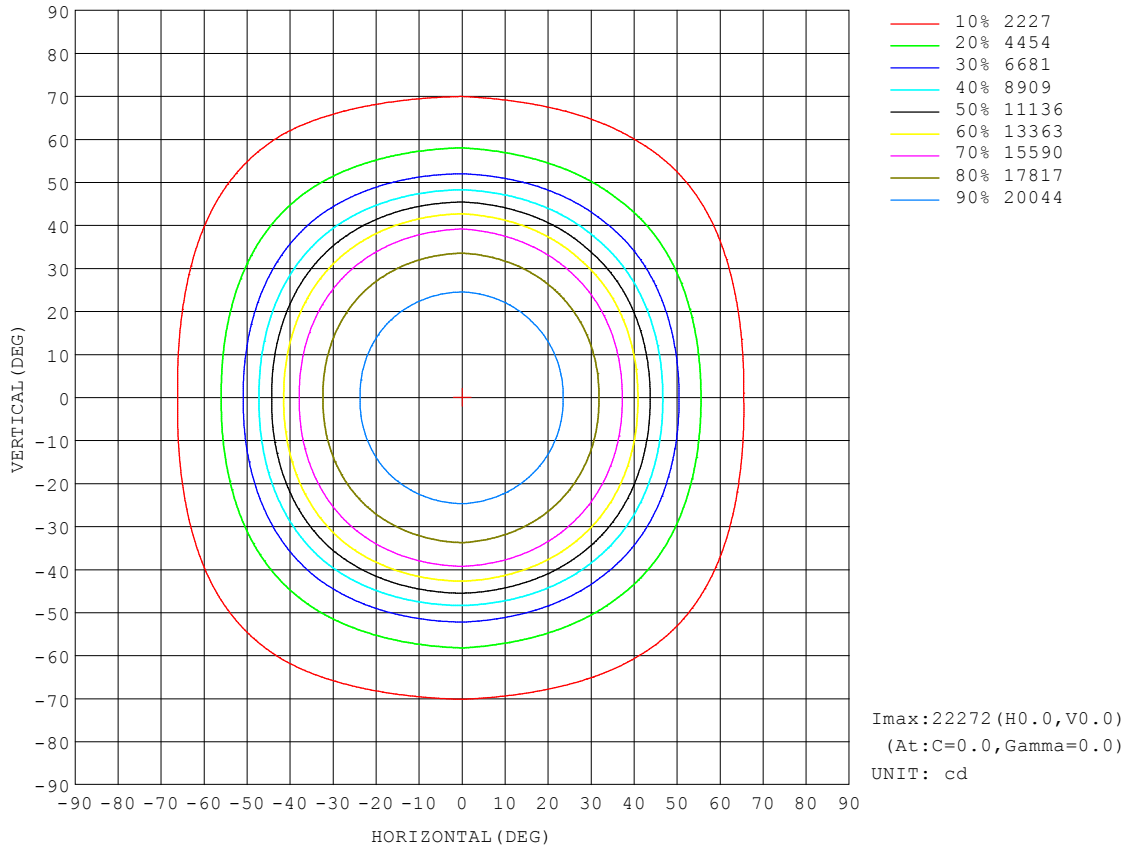
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	67	57	51	66	57	51	65	56	51	45
0.80	77	67	61	76	66	61	74	66	60	54
1.00	84	75	69	83	74	69	81	75	68	62
1.25	90	82	76	89	81	76	87	80	75	69
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:2.663A P:321.5W PF:0.9975 Freq:59.99Hz Lamp Flux:46135.3x1 lm		
NAME: ASD-WHB5A-A320DAC-320W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:1.0*0.3m	Shielding Angle:

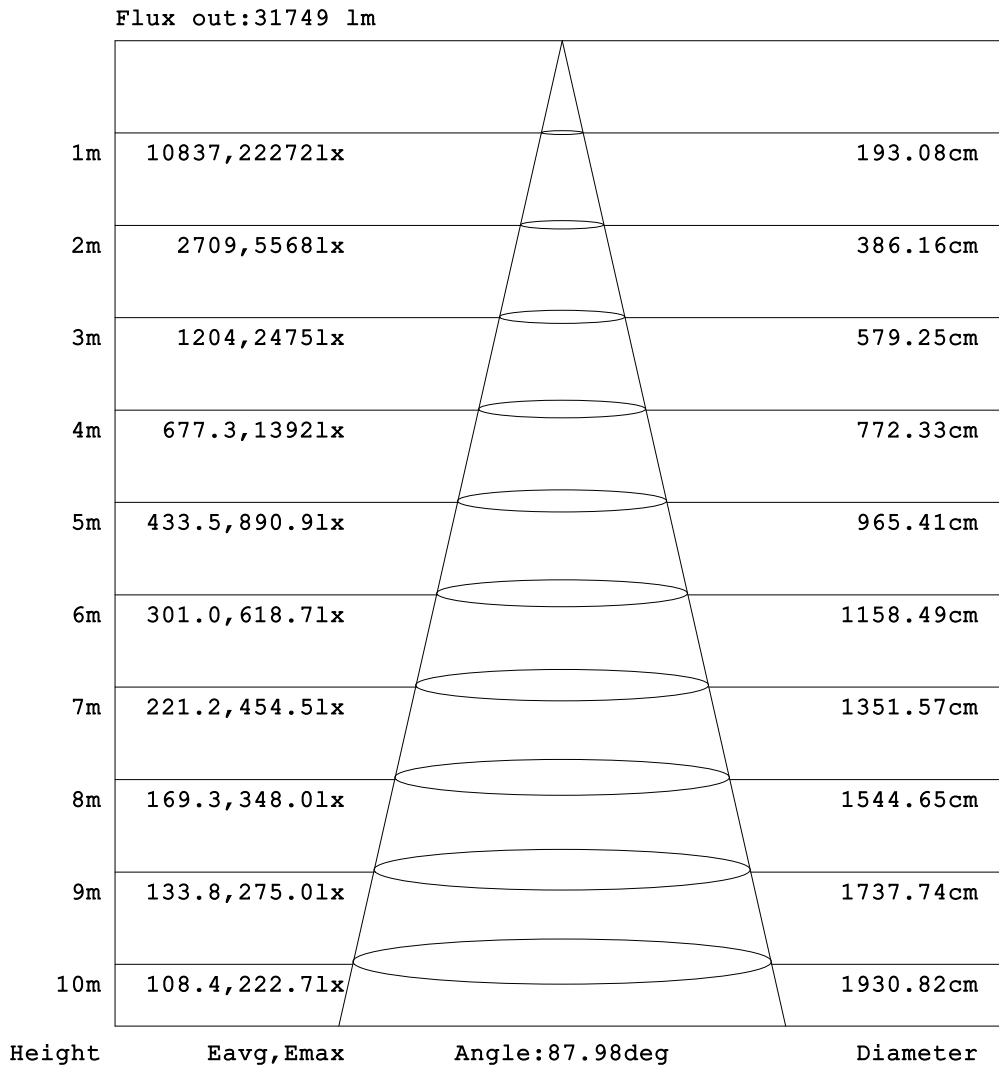


C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:27DEG  
 Operators:lianghaizhu  
 Test Date:2023-05-05

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:2.663A P:321.5W PF:0.9975 Freq:59.99Hz Lamp Flux:46135.3x1 lm		
NAME: ASD-WHB5A-A320DAC-320W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:1.0*0.3m	Shielding Angle:



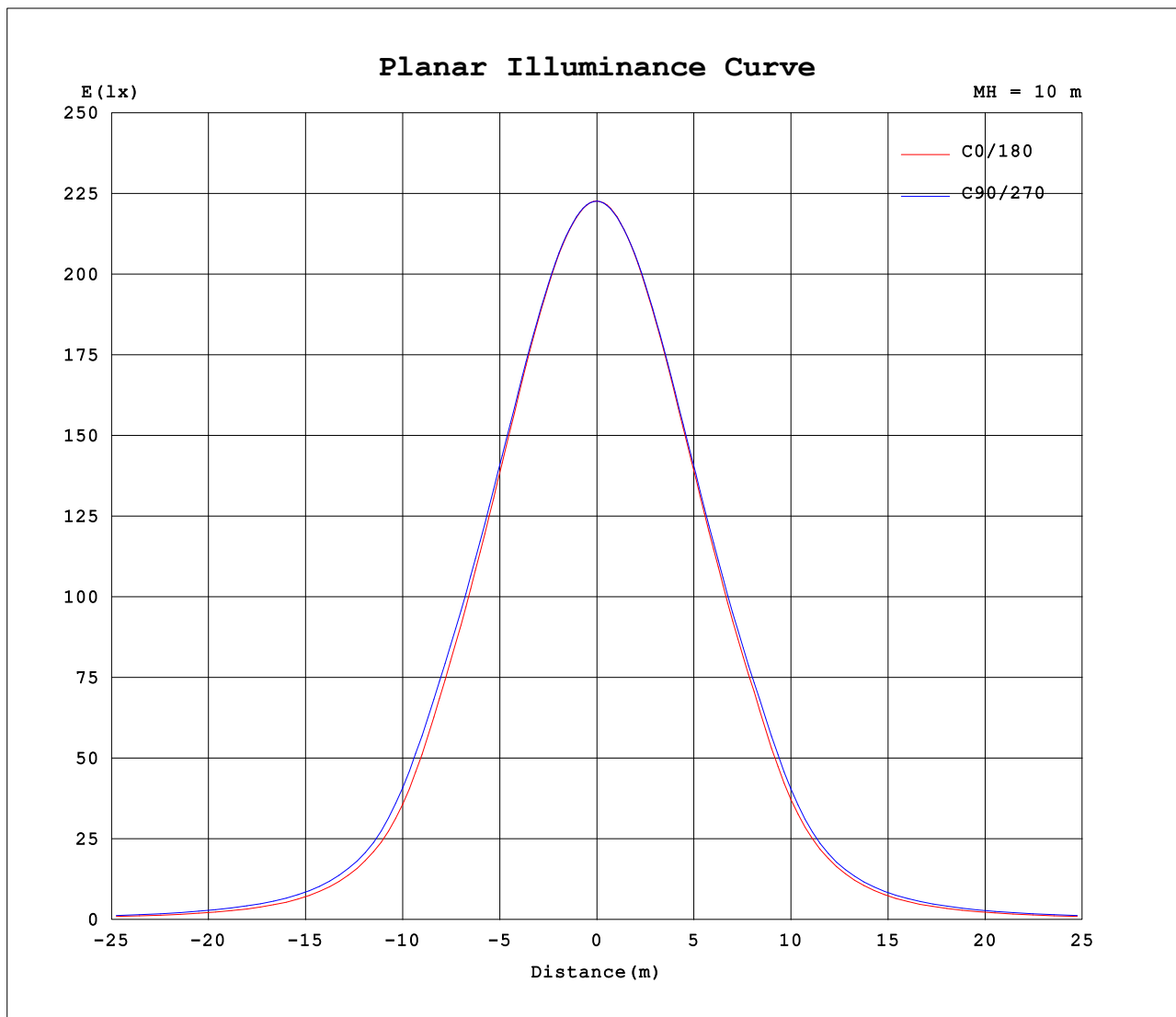
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:2.663A P:321.5W PF:0.9975 Freq:59.99Hz Lamp Flux:46135.3x1 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	2227	2227	2227	2227	2227	2227	2227	2227										
5	2217	2216	2218	2219	2218	2217	2216	2215										
10	2189	2186	2192	2191	2188	2191	2189	2187										
15	2140	2140	2147	2146	2139	2145	2145	2138										
20	2070	2073	2083	2081	2072	2080	2080	2071										
25	1973	1984	2000	1992	1979	1990	1994	1980										
30	1840	1863	1889	1876	1855	1871	1883	1858										
35	1661	1696	1741	1718	1685	1713	1730	1689										
40	1398	1454	1520	1500	1441	1476	1520	1422										
45	1013	1066	1157	1133	1055	1110	1146	1029										
50	692	718	784	771	716	759	774	700										
55	464	490	550	524	481	519	540	478										
60	317	347	400	367	329	366	393	337										
65	229	258	299	270	237	271	294	251										
70	176	201	225	210	183	211	222	197										
75	137	151	166	162	141	162	161	148										
80	94.9	100	111	112	98.9	110	107	97.6										
85	43.0	47.6	59.1	61.1	46.2	58.2	55.0	43.3										
90	1.52	1.58	1.77	1.98	1.45	1.62	1.54	1.51										
95	1.93	2.01	2.05	1.93	1.83	1.87	1.98	1.95										
100	2.47	2.57	2.63	2.47	2.35	2.41	2.55	2.49										
105	3.17	3.28	3.36	3.17	3.01	3.08	3.26	3.19										
110	3.98	4.10	4.19	3.99	3.80	3.88	4.08	4.00										
115	4.90	5.02	5.12	4.90	4.71	4.78	5.00	4.91										
120	5.90	6.01	6.12	5.90	5.69	5.77	5.99	5.91										
125	6.95	7.03	7.13	6.93	6.75	6.79	7.02	6.93										
130	7.98	8.04	8.14	7.96	7.82	7.83	8.06	7.96										
135	8.91	8.99	9.12	8.92	8.81	8.84	9.06	8.96										
140	9.80	9.96	10.0	9.87	9.77	9.85	10.0	9.98										
145	10.7	10.9	10.9	10.7	10.7	10.8	11.0	10.9										
150	11.6	11.8	11.8	11.6	11.6	11.7	11.9	11.9										
155	12.5	12.8	12.8	12.4	12.6	12.6	12.9	12.9										
160	13.5	13.7	13.7	13.4	13.6	13.6	13.9	13.8										
165	14.5	14.6	14.7	14.3	14.6	14.5	14.8	14.7										
170	15.5	15.4	15.5	15.2	15.5	15.3	15.6	15.5										
175	16.1	15.9	16.1	15.8	16.1	15.9	16.1	15.9										
180	16.2	16.1	16.3	16.1	16.2	16.1	16.3	16.1										

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: