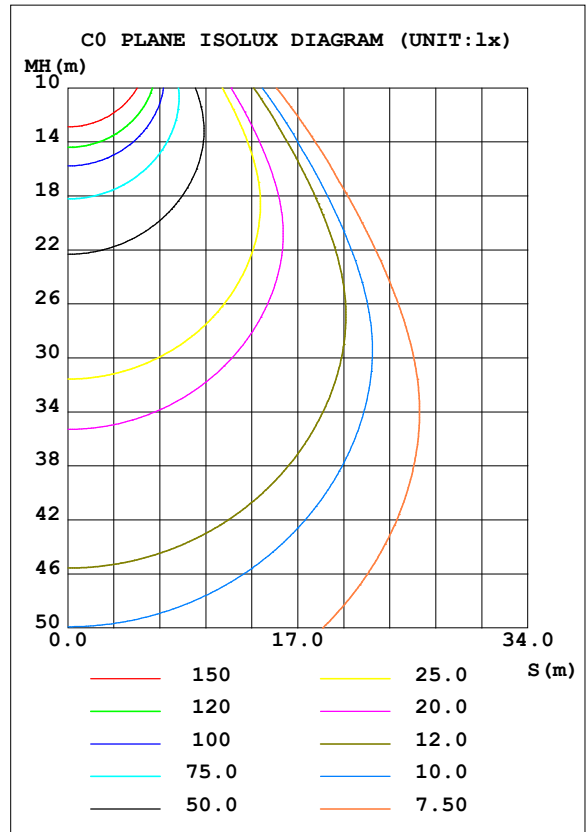
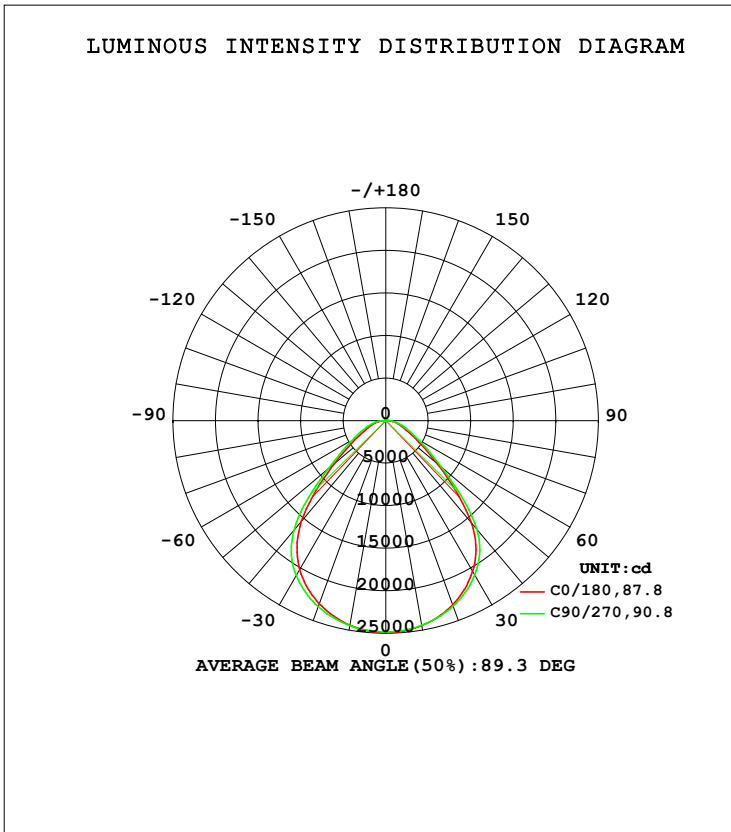


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.2V I:2.650A P:317.5W PF:0.9971 Freq:59.98Hz Lamp Flux:51290.7x1 lm		
NAME: ASD-WHB5A-PRO-320-320W-5000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp.	SUR.:1.0*0.3	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 161.53 lm/W			
MODEL	ASD-WHB5A-PRO-320	I <sub>max</sub> (cd)	24907	S/MH (C0/180)	1.21
NOMINAL POWER (W)	320	LOR (%)	100.0	S/MH (C90/270)	1.25
RATED VOLTAGE (V)	120-277	TOTAL FLUX (lm)	51291	<input type="checkbox"/> UP, DN (C0-180)	0.5, 49.5
NOMINAL FLUX (lm)	51290.7	CIE CLASS	DIRECT	<input type="checkbox"/> UP, DN (C180-360)	0.6, 49.5
LAMPS INSIDE	1	<input type="checkbox"/> up (%)	1.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	120	<input type="checkbox"/> down (%)	99.0	CIBSE SHR MAX	1.30



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 27DEG  
 Operators: lianghaizhu  
 Test Date: 2023-08-29

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	2445	2443	2442	2437	2440	2443	2446	2437	0- 10	2352	2352	4.59,4.59
20	2302	2308	2318	2300	2289	2307	2326	2304	10- 20	6731	9083	17.7,17.7
30	2043	2060	2093	2053	2023	2060	2105	2051	20- 30	10124	19207	37.4,37.4
40	1564	1591	1665	1605	1545	1598	1676	1563	30- 40	11625	30833	60.1,60.1
50	788.7	813.3	858.0	845.1	794.1	839.7	892.0	793.9	40- 50	9284	40117	78.2,78.2
60	373.4	394.8	437.2	407.8	371.5	407.5	451.3	387.6	50- 60	5226	45343	88.4,88.4
70	203.6	224.3	242.6	229.9	203.1	232.6	253.2	222.8	60- 70	2999	48342	94.3,94.3
80	107.7	111.3	117.6	118.4	107.1	121.6	123.8	110.7	70- 80	1795	50138	97.8,97.8
90	1.974	1.955	2.062	2.991	2.360	5.623	3.016	2.060	80- 90	616.8	50754	99,99
100	2.846	2.979	3.122	2.910	3.228	3.213	3.308	3.286	90-100	27.32	50782	99,99
110	4.567	4.731	4.929	4.650	5.212	5.166	5.374	5.354	100-110	42.18	50824	99.1,99.1
120	6.856	7.032	7.242	6.954	8.014	7.878	8.170	8.203	110-120	61.68	50886	99.2,99.2
130	9.332	9.489	9.654	9.439	11.13	10.90	11.14	11.11	120-130	79.80	50965	99.4,99.4
140	11.64	11.96	12.00	11.80	13.53	13.36	13.52	13.48	130-140	88.74	51054	99.5,99.5
150	14.11	14.67	14.56	14.11	15.69	15.49	15.71	15.65	140-150	86.37	51140	99.7,99.7
160	17.26	17.77	17.64	17.00	18.74	18.52	18.70	18.66	150-160	75.78	51216	99.9,99.9
170	20.22	20.34	20.29	19.78	21.05	20.74	20.93	20.68	160-170	54.53	51271	100,100
180	21.56	21.49	21.57	21.20	21.59	21.45	21.60	21.18	170-180	20.02	51291	100,100
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

Conical surface Flux(90deg): 36048 lm

%lum = 70.3%

%lamp = 70.3%

Conical surface Flux(120deg): 45343 lm

%lum = 88.4%

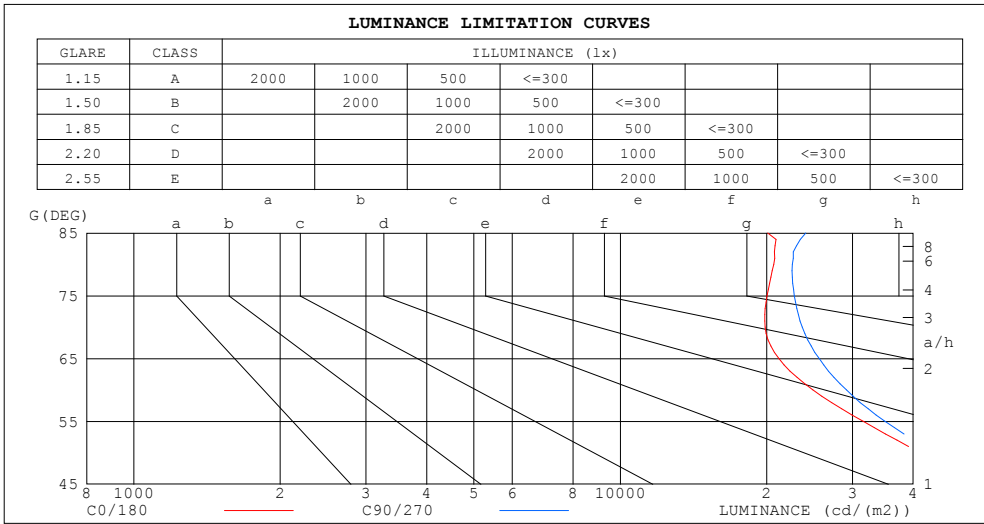
%lamp = 88.4%

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:27DEG  
 Operators:lianghaizhu  
 Test Date:2023-08-29

□ 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:120.2V I:2.650A P:317.5W PF:0.9971 Freq:59.98Hz Lamp Flux:51290.7x1 lm		
NAME: ASD-WHB5A-PRO-320-320W-5000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp.	SUR.:1.0*0.3	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	20092	24066
80	20673	22582
75	20037	22796
70	19846	23646
65	21182	25636
60	24894	29147
55	31550	34995
50	40900	44494
45	54663	59246

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:27DEG  
 Operators:lianghaizhu  
 Test Date:2023-08-29

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:120.2V I:2.650A P:317.5W PF:0.9971 Freq:59.98Hz Lamp Flux:51290.7x1 lm		
NAME: ASD-WHB5A-PRO-320-320W-5000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp.	SUR.:1.0*0.3	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 .108 .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 .081 .024	
8.0	.168 .082 .023	.165 .081 .023	.160 .080 .023	.154 .078 .023	.149 .076 .022	
9.0	.159 .077 .022	.156 .076 .021	.151 .075 .021	.146 .073 .021	.141 .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	.198 .198 .198	.170 .170 .170	.116 .116 .116	.066 .066 .066	.021 .021 .021	
1.0	.185 .165 .146	.158 .141 .126	.108 .097 .087	.062 .056 .051	.020 .018 .016	
2.0	.174 .140 .112	.149 .121 .097	.102 .084 .067	.059 .049 .039	.019 .016 .013	
3.0	.165 .122 .088	.141 .105 .076	.097 .073 .054	.056 .043 .032	.018 .014 .010	
4.0	.157 .108 .071	.135 .094 .062	.093 .065 .044	.054 .038 .026	.017 .012 .009	
5.0	.149 .098 .060	.128 .084 .052	.088 .059 .037	.051 .035 .022	.016 .011 .007	
6.0	.142 .089 .051	.122 .077 .044	.084 .054 .031	.049 .032 .019	.016 .010 .006	
7.0	.136 .082 .044	.117 .071 .039	.081 .050 .027	.047 .029 .016	.015 .010 .005	
8.0	.130 .076 .039	.112 .066 .034	.077 .046 .024	.045 .027 .014	.015 .009 .005	
9.0	.125 .071 .035	.107 .062 .031	.074 .043 .022	.043 .026 .013	.014 .008 .004	
10.0	.119 .067 .032	.103 .058 .028	.071 .041 .020	.042 .024 .012	.014 .008 .004	

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:27DEG  
 Operators:lianghaizhu  
 Test Date:2023-08-29

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:120.2V I:2.650A P:317.5W PF:0.9971 Freq:59.98Hz Lamp Flux:51290.7x1 lm		
NAME: ASD-WHB5A-PRO-320-320W-5000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp.	SUR.:1.0*0.3	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	24.1	25.5	24.4	25.7	25.9	24.5	25.8	24.8	26.0	26.3
3H	24.7	25.9	25.0	26.2	26.4	25.2	26.4	25.5	26.7	26.9
4H	25.0	26.2	25.3	26.4	26.7	25.6	26.7	25.9	27.0	27.2
6H	25.3	26.4	25.7	26.7	27.0	25.9	27.0	26.2	27.2	27.5
8H	25.5	26.5	25.8	26.8	27.1	26.0	27.0	26.4	27.3	27.6
12H	25.6	26.6	25.9	26.9	27.2	26.1	27.1	26.5	27.4	27.7
4H 2H	24.3	25.5	24.6	25.7	26.0	24.7	25.8	25.0	26.1	26.3
3H	25.1	26.1	25.5	26.4	26.7	25.6	26.6	25.9	26.9	27.2
4H	25.6	26.5	26.0	26.8	27.2	26.1	27.0	26.4	27.3	27.6
6H	26.1	26.9	26.5	27.2	27.6	26.5	27.3	26.9	27.7	28.1
8H	26.3	27.0	26.7	27.4	27.8	26.7	27.5	27.2	27.9	28.3
12H	26.4	27.1	26.9	27.5	27.9	26.9	27.6	27.4	28.0	28.4
8H 4H	25.8	26.5	26.2	26.9	27.3	26.2	27.0	26.6	27.3	27.7
6H	26.4	27.0	26.9	27.4	27.9	26.8	27.5	27.3	27.9	28.3
8H	26.7	27.2	27.2	27.7	28.2	27.1	27.7	27.6	28.1	28.6
12H	27.0	27.4	27.4	27.9	28.4	27.4	27.9	27.9	28.3	28.8
12H 4H	25.8	26.5	26.2	26.9	27.3	26.2	26.9	26.7	27.3	27.7
6H	26.5	27.0	26.9	27.4	27.9	26.9	27.4	27.4	27.9	28.3
8H	26.8	27.3	27.3	27.7	28.2	27.2	27.7	27.7	28.2	28.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.6 / - 0.7					+ 0.6 / - 0.6				
1.5H	+ 0.5 / - 0.5					+ 0.5 / - 0.5				
2.0H	+ 1.3 / - 0.8					+ 1.3 / - 0.8				

CIE Pub.117, 51291 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 13.7)

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:27DEG  
 Operators:lianghaizhu  
 Test Date:2023-08-29

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:120.2V I:2.650A P:317.5W PF:0.9971 Freq:59.98Hz Lamp Flux:51290.7x1 lm		
NAME: ASD-WHB5A-PRO-320-320W-5000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp.	SUR.:1.0*0.3	Shielding Angle:

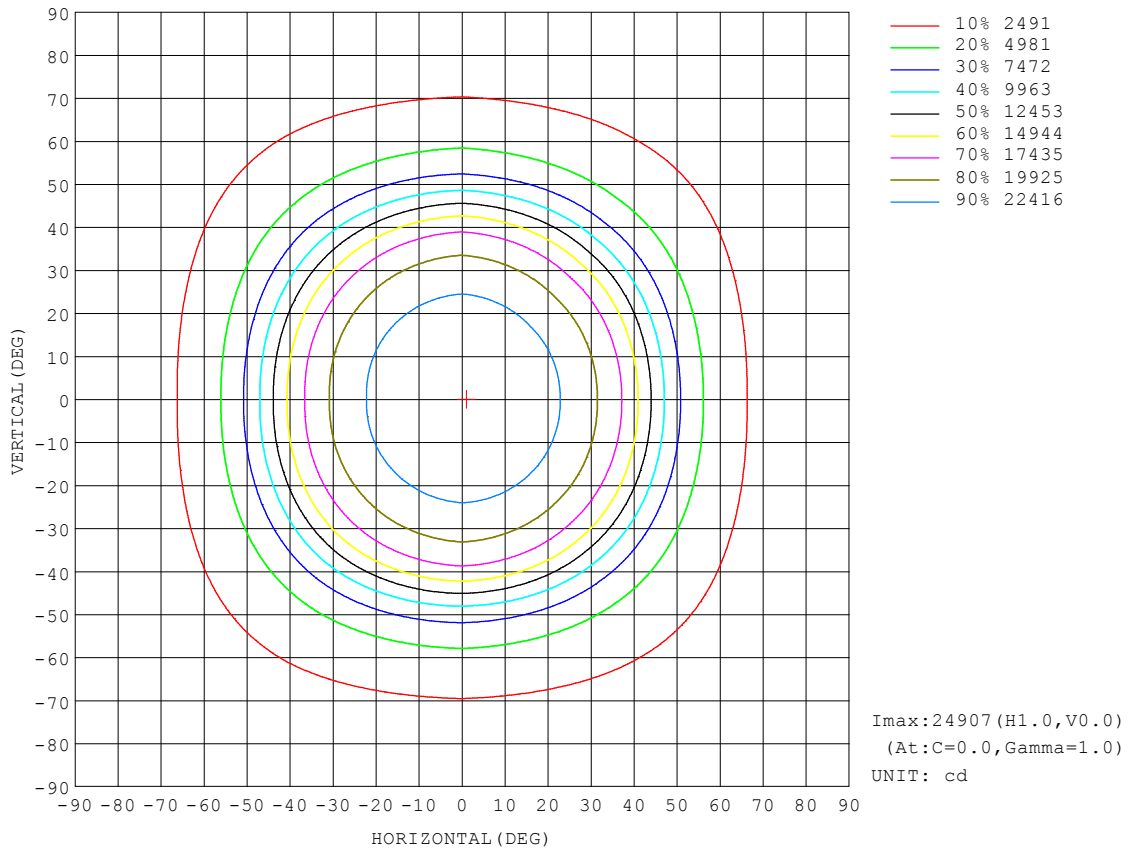
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	67	57	51	66	56	51	65	56	50	45
0.80	76	67	60	75	66	60	74	65	60	54
1.00	84	75	69	83	74	69	81	75	68	62
1.25	90	82	76	89	81	75	86	80	75	68
1.50	95	87	81	93	86	80	90	84	79	73
2.00	100	93	88	98	92	87	95	90	85	78
2.50	103	97	92	101	95	91	97	93	89	81
3.00	106	100	96	104	98	94	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	98	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:2023-08-29

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:120.2V I:2.650A P:317.5W PF:0.9971 Freq:59.98Hz Lamp Flux:51290.7x1 lm		
NAME: ASD-WHB5A-PRO-320-320W-5000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp.	SUR.:1.0*0.3	Shielding Angle:

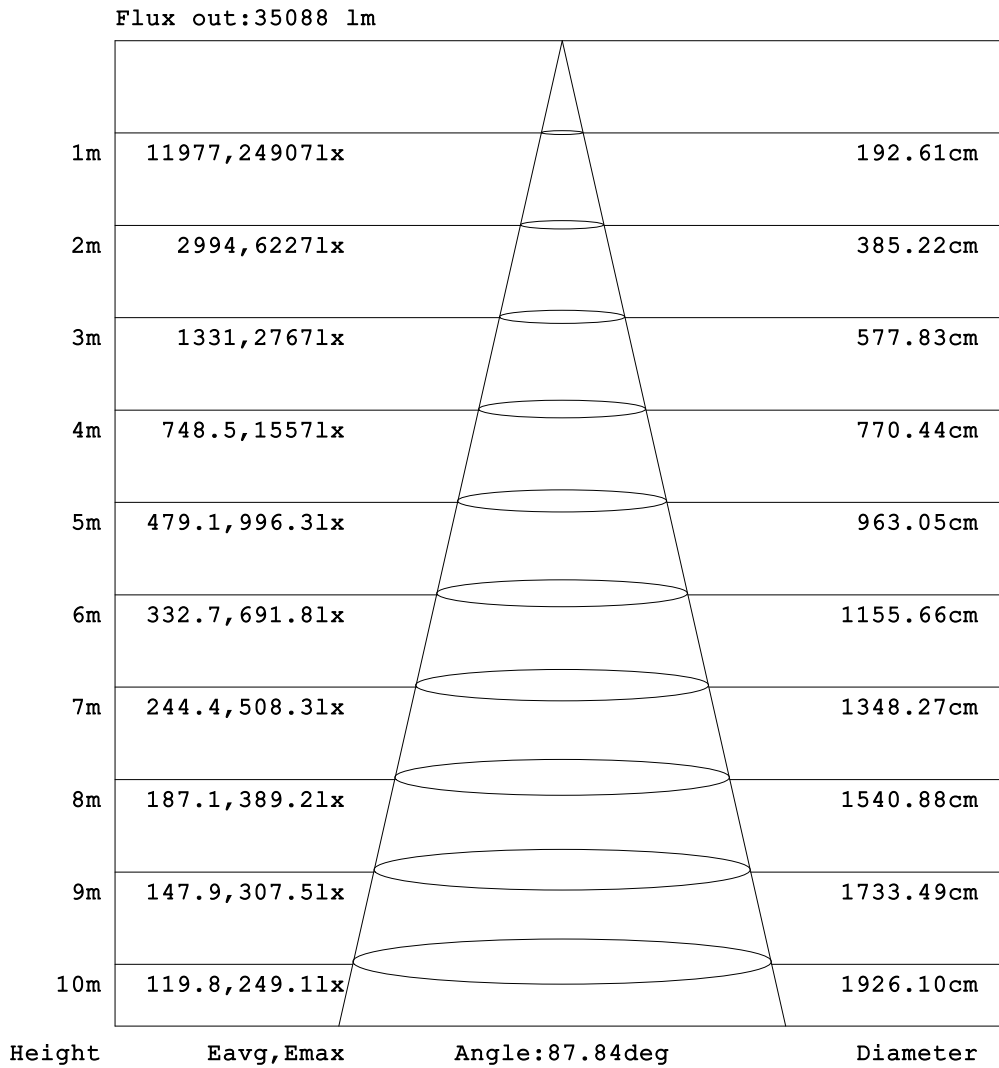


C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:27DEG  
 Operators:lianghaizhu  
 Test Date:2023-08-29

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:120.2V I:2.650A P:317.5W PF:0.9971 Freq:59.98Hz Lamp Flux:51290.7x1 lm		
NAME: ASD-WHB5A-PRO-320-320W-5000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp.	SUR.:1.0*0.3	Shielding Angle:



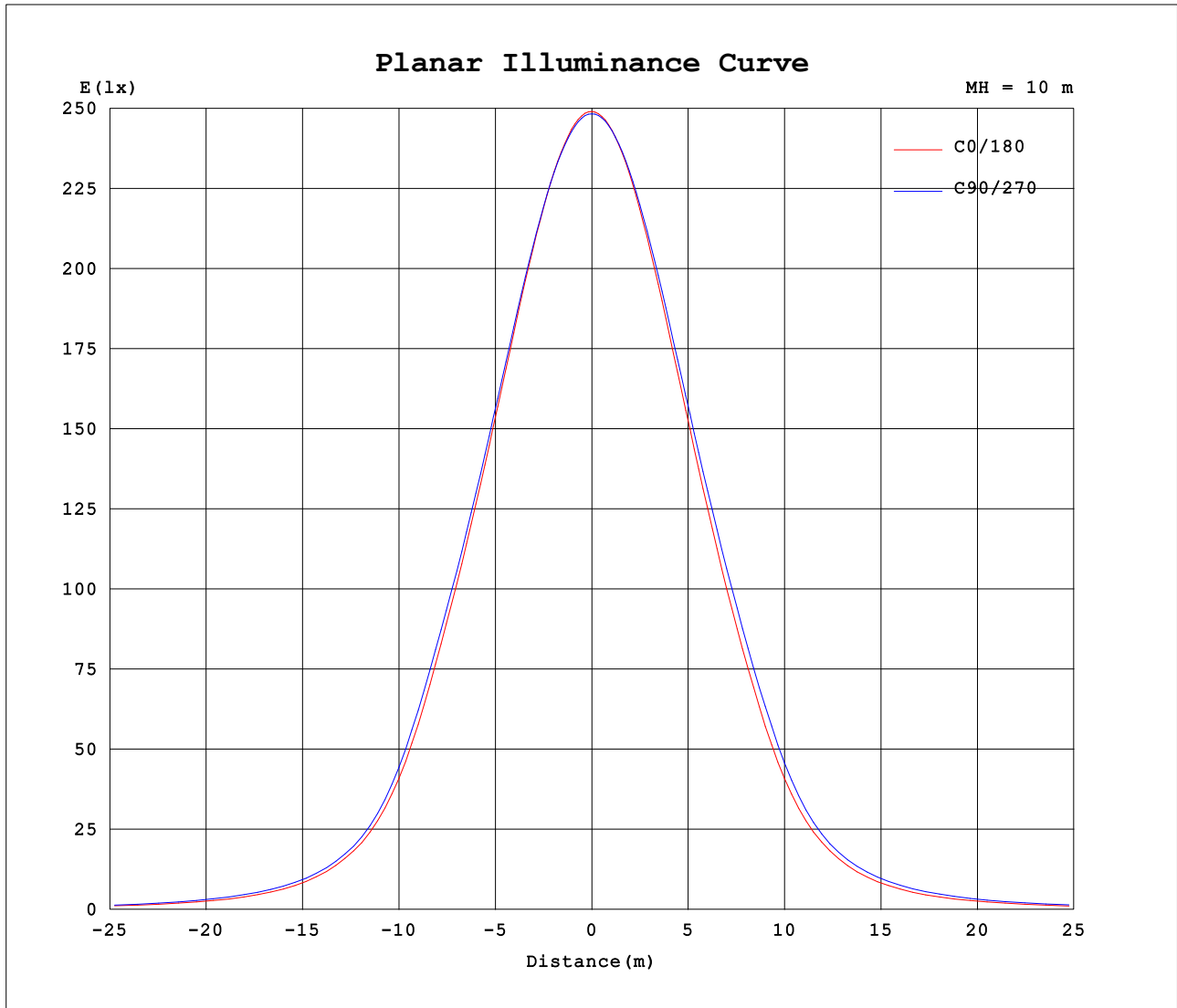
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:27DEG  
 Operators:lianghaizhu  
 Test Date:2023-08-29

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: 2023-08-29

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:120.2V I:2.650A P:317.5W PF:0.9971 Freq:59.98Hz Lamp Flux:51290.7x1 lm		
NAME: ASD-WHB5A-PRO-320-320W-5000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp.	SUR.:1.0*0.3	Shielding Angle:

Table--1

UNIT: x10cd

C (DEG) □ (DEG)	0	45	90	135	180	225	270	315										
0	2491	2486	2483	2480	2491	2486	2483	2480										
5	2480	2476	2473	2470	2477	2476	2475	2470										
10	2445	2443	2442	2437	2440	2443	2446	2437										
15	2386	2388	2391	2380	2377	2387	2396	2383										
20	2302	2308	2318	2300	2289	2307	2326	2304										
25	2189	2201	2220	2193	2174	2201	2230	2196										
30	2043	2060	2093	2053	2023	2060	2105	2051										
35	1850	1870	1923	1868	1821	1873	1935	1854										
40	1564	1591	1665	1605	1545	1598	1676	1563										
45	1160	1188	1257	1226	1156	1215	1294	1160										
50	789	813	858	845	794	840	892	794										
55	543	559	602	580	540	579	621	547										
60	373	395	437	408	371	407	451	388										
65	269	292	325	300	267	301	337	288										
70	204	224	243	230	203	233	253	223										
75	156	167	177	174	154	178	187	167										
80	108	111	118	118	107	122	124	111										
85	52.5	55.2	62.9	63.5	54.9	63.5	67.0	52.0										
90	1.97	1.95	2.06	2.99	2.36	5.62	3.02	2.06										
95	2.23	2.34	2.44	2.28	2.53	2.52	2.58	2.57										
100	2.85	2.98	3.12	2.91	3.23	3.21	3.31	3.29										
105	3.63	3.77	3.95	3.71	4.12	4.09	4.24	4.21										
110	4.57	4.73	4.93	4.65	5.21	5.17	5.37	5.35										
115	5.67	5.84	6.06	5.76	6.52	6.43	6.70	6.71										
120	6.86	7.03	7.24	6.95	8.01	7.88	8.17	8.20										
125	8.10	8.24	8.45	8.18	9.64	9.41	9.70	9.70										
130	9.33	9.49	9.65	9.44	11.1	10.9	11.1	11.1										
135	10.5	10.7	10.8	10.6	12.4	12.2	12.4	12.3										
140	11.6	12.0	12.0	11.8	13.5	13.4	13.5	13.5										
145	12.8	13.3	13.2	12.9	14.5	14.4	14.6	14.5										
150	14.1	14.7	14.6	14.1	15.7	15.5	15.7	15.7										
155	15.6	16.2	16.0	15.5	17.1	16.9	17.1	17.1										
160	17.3	17.8	17.6	17.0	18.7	18.5	18.7	18.7										
165	18.9	19.2	19.1	18.5	20.1	19.8	20.0	19.9										
170	20.2	20.3	20.3	19.8	21.0	20.7	20.9	20.7										
175	21.2	21.1	21.2	20.7	21.6	21.3	21.5	21.1										
180	21.6	21.5	21.6	21.2	21.6	21.4	21.6	21.2										

C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:27DEG  
 Operators:lianghaizhu  
 Test Date:2023-08-29

□ 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: