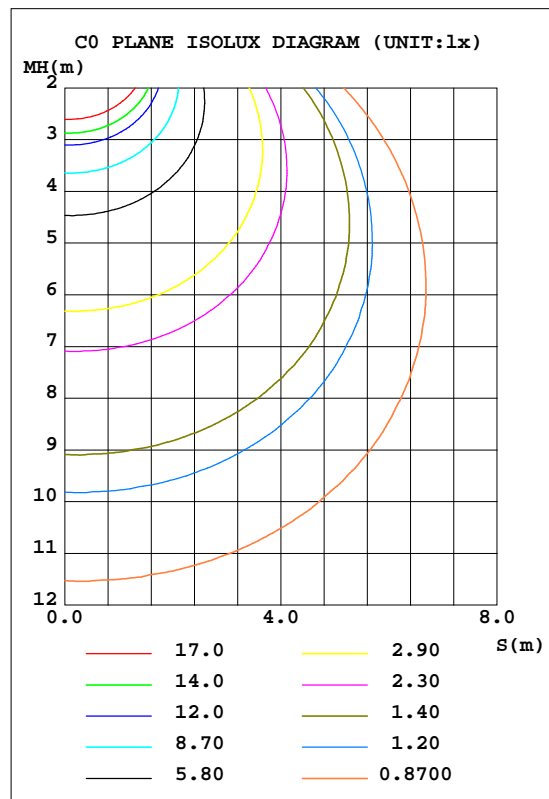
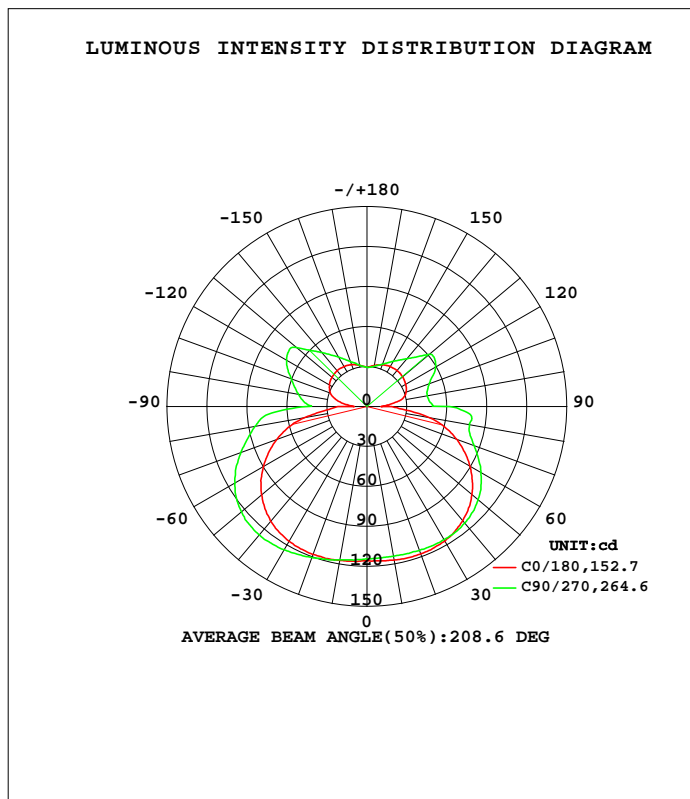


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.00V I:0.0950A P:11.360W PF:0.9800 Freq:60.00Hz Lamp Flux:855.36x1 lm		
NAME: ASD LWS12-D12AC-XX(5000K)	TYPE:	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 75.30 lm/W			
MODELASD	LWS12-D12AC-XX(5000K)	I <sub>max</sub> (cd)	126.2	S/MH(C0/180)	1.52
NOMINAL POWER(W)	12	LOR(%)	106.9	S/MH(C90/270)	1.67
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	855.36	h UP, DN(C0-180)	16.1, 35.4
NOMINAL FLUX(lm)	855.36	CIE CLASS	SEMI-D.	h UP, DN(C180-360)	17.7, 37.8
LAMPS INSIDE	1	h up(%)	33.8	CIBSE SHR NOM	1.75
TEST VOLTAGE(V)	120	h down(%)	73.2	CIBSE SHR MAX	1.75



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature: 25.3DEG  
 Operators:  
 Test Date:

g Range: 0 - 180DEG  
 g Interval: 0.5DEG  
 Test System: EVERFINE GO-2000\_V1 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 8.700m [K=1.1494]  
 Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

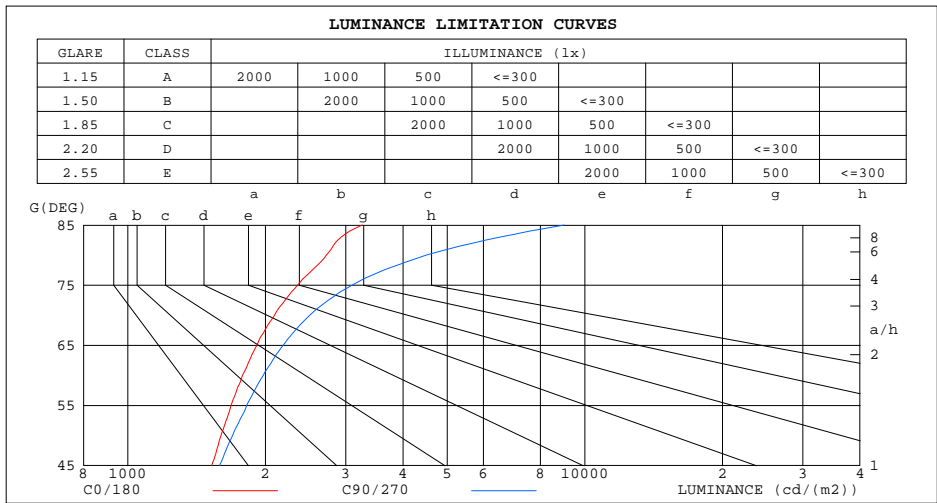
g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
10	117.1	115.5	114.1	114.1	117.4	117.8	116.8	116.1	0- 10	11.02	11.02	1.29,1.38
20	117.8	116.3	114.9	115.2	118.1	120.6	120.6	118.9	10- 20	33.19	44.21	5.17,5.53
30	116.7	116.4	115.5	115.2	116.9	122.4	124.3	120.9	20- 30	54.79	99.00	11.6,12.4
40	112.0	113.6	114.3	112.4	112.5	121.6	125.8	119.9	30- 40	74.02	173.0	20.2,21.6
50	102.8	106.8	108.9	105.5	103.1	116.2	123.0	114.6	40- 50	88.09	261.1	30.5,32.6
60	89.09	95.34	98.88	94.50	89.66	105.8	114.5	104.0	50- 60	94.22	355.3	41.5,44.4
70	71.61	81.14	85.46	80.53	71.90	90.93	100.7	89.41	60- 70	91.18	446.5	52.2,55.8
80	47.23	65.92	78.08	64.56	46.68	71.34	85.17	70.63	70- 80	80.12	526.6	61.6,65.8
90	17.38	39.12	62.10	40.08	21.26	34.55	45.20	30.42	80- 90	58.68	585.3	68.4,73.2
100	24.08	40.15	46.04	37.73	20.97	46.28	51.99	43.86	90-100	37.89	623.2	72.9,77.9
110	31.25	47.94	49.76	45.59	29.28	55.00	60.48	53.49	100-110	46.30	669.5	78.3,83.7
120	33.61	51.00	59.50	48.48	32.63	57.78	69.80	55.47	110-120	49.49	719.0	84.1,89.9
130	34.95	47.34	60.98	45.05	34.40	52.21	68.75	49.95	120-130	46.01	765.0	89.4,95.6
140	35.28	42.00	46.94	41.11	35.10	45.46	53.02	44.24	130-140	35.55	800.5	93.6,100
150	34.79	37.95	39.27	37.73	34.74	40.08	42.91	39.39	140-150	25.59	826.1	96.6,103
160	33.33	34.21	33.85	34.33	33.56	35.56	35.82	35.26	150-160	16.93	843.1	98.6,105
170	31.32	31.03	30.66	31.26	31.39	31.68	31.47	31.68	160-170	9.379	852.4	99.7,107
180	29.66	29.66	29.66	29.66	29.66	29.66	29.66	29.66	170-180	2.915	855.4	100,107
DEG	LUMINOUS INTENSITY:cd								UNIT:lm			

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:  
Test Date:

g Range: 0 - 180DEG  
g Interval: 0.5DEG  
Test System:EVERFINE GO-2000\_V1 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:8.700m [K=1.1494]  
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.00V I:0.0950A P:11.360W PF:0.9800 Freq:60.00Hz Lamp Flux:800x1 lm		
NAME: ASD LWS12-D12AC-XX(5000K)	TYPE:	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:



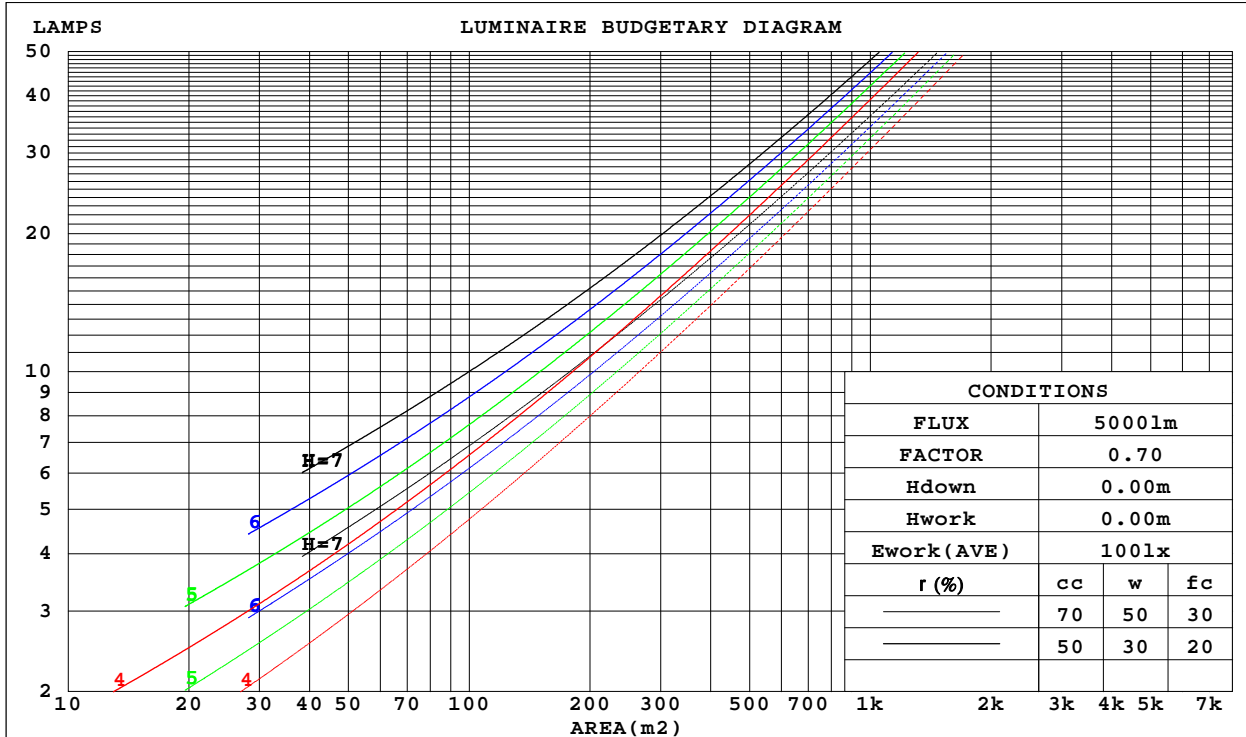
C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:  
 Test Date:

g Range: 0 - 180DEG  
 g Interval: 0.5DEG  
 Test System:EVERFINE GO-2000\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.700m [K=1.1494]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.00V I:0.0950A P:11.360W PF:0.9800 Freq:60.00Hz Lamp Flux:800x1 lm		
NAME: ASD LWS12-D12AC-XX(5000K)	TYPE:	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:

r <sub>cc</sub>	80%			70%			50%			30%			10%			0
r <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r <sub>fc</sub>	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.13	1.13	1.13	1.00	1.00	1.00	.89	.89	.89	.78	.78	.78	.73
1.0	.99	.93	.88	.93	.88	.83	.82	.78	.75	.72	.69	.66	.63	.61	.59	.54
2.0	.84	.76	.69	.79	.72	.65	.70	.64	.59	.61	.56	.52	.53	.50	.46	.42
3.0	.73	.63	.55	.68	.60	.53	.60	.53	.47	.53	.47	.42	.46	.41	.37	.34
4.0	.63	.53	.46	.60	.50	.43	.53	.45	.39	.46	.40	.35	.40	.35	.31	.28
5.0	.56	.46	.38	.53	.43	.37	.47	.39	.33	.41	.35	.30	.36	.30	.26	.23
6.0	.50	.40	.33	.47	.38	.31	.42	.34	.28	.37	.30	.25	.32	.27	.23	.20
7.0	.45	.35	.28	.42	.33	.27	.38	.30	.25	.33	.27	.22	.29	.24	.20	.17
8.0	.40	.31	.25	.38	.30	.24	.34	.27	.22	.30	.24	.19	.26	.21	.17	.15
9.0	.37	.28	.22	.35	.27	.21	.31	.24	.19	.28	.22	.17	.24	.19	.15	.13
10.0	.34	.25	.20	.32	.24	.19	.29	.22	.17	.25	.20	.15	.22	.17	.14	.12



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:  
 Test Date:

g Range: 0 - 180DEG  
 g Interval: 0.5DEG  
 Test System:EVERFINE GO-2000\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.700m [K=1.1494]  
 Remarks:

WEC AND CCEC

Test:U:120.00V I:0.0950A P:11.360W PF:0.9800 Freq:60.00Hz Lamp Flux:800x1 lm		
NAME: ASD LWS12-D12AC-XX(5000K)	TYPE:	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:

r cc	80%			70%			50%			30%			10%			0
r w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r fc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.409	.233	.074	.391	.223	.071	.358	.205	.066	.327	.188	.060	.298	.173	.056	
2.0	.355	.194	.060	.339	.186	.057	.308	.171	.053	.280	.157	.049	.254	.143	.045	
3.0	.315	.168	.050	.300	.161	.048	.272	.148	.045	.247	.135	.041	.223	.123	.038	
4.0	.283	.147	.043	.270	.141	.042	.245	.130	.039	.221	.119	.036	.199	.108	.033	
5.0	.257	.131	.038	.245	.126	.037	.222	.116	.034	.200	.106	.031	.180	.096	.029	
6.0	.236	.118	.034	.224	.113	.033	.203	.104	.030	.183	.095	.028	.164	.086	.026	
7.0	.217	.107	.030	.207	.103	.029	.187	.095	.027	.169	.086	.025	.151	.079	.023	
8.0	.201	.098	.028	.192	.094	.027	.174	.087	.025	.156	.079	.023	.140	.072	.021	
9.0	.187	.091	.025	.179	.087	.024	.162	.080	.023	.146	.073	.021	.131	.066	.019	
10.0	.175	.084	.023	.167	.081	.023	.151	.074	.021	.137	.068	.019	.122	.062	.018	

r cc	80%			70%			50%			30%			10%			0
r w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r fc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.461	.461	.461	.394	.394	.394	.269	.269	.269	.154	.154	.154	.049	.049	.049	
1.0	.458	.426	.397	.391	.365	.342	.268	.251	.236	.154	.145	.137	.049	.047	.044	
2.0	.451	.402	.361	.386	.346	.312	.265	.239	.217	.153	.139	.127	.049	.045	.042	
3.0	.443	.385	.338	.380	.332	.293	.261	.231	.206	.151	.135	.121	.048	.044	.040	
4.0	.436	.372	.323	.374	.321	.281	.257	.224	.198	.149	.131	.117	.048	.043	.038	
5.0	.428	.362	.313	.367	.313	.273	.253	.219	.192	.147	.128	.114	.047	.042	.038	
6.0	.420	.354	.306	.361	.306	.267	.249	.214	.189	.144	.126	.112	.047	.041	.037	
7.0	.413	.347	.301	.355	.301	.262	.245	.211	.186	.142	.124	.111	.046	.041	.037	
8.0	.406	.341	.297	.349	.296	.259	.242	.208	.184	.141	.123	.109	.045	.040	.036	
9.0	.399	.336	.294	.344	.292	.256	.238	.205	.182	.139	.121	.108	.045	.040	.036	
10.0	.393	.332	.291	.339	.288	.254	.235	.203	.181	.137	.120	.108	.044	.039	.036	

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:  
 Test Date:

g Range: 0 - 180DEG  
 g Interval: 0.5DEG  
 Test System:EVERFINE GO-2000\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.700m [K=1.1494]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.00V I:0.0950A P:11.360W PF:0.9800 Freq:60.00Hz Lamp Flux:800x1 lm										
NAME: ASD LWS12-D12AC-XX(5000K)					TYPE:			WEIGHT:		
SPEC.:N/A					DIM.:			SERIAL No.:		
MFR.: ASD LIGHTING CORP					SUR.:			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	11.6	12.8	12.4	13.6	14.6	12.2	13.4	13.0	14.2	15.2
3H	14.2	15.3	15.0	16.1	17.1	15.1	16.2	15.9	17.0	18.0
4H	15.5	16.5	16.3	17.3	18.3	16.7	17.7	17.4	18.5	19.5
6H	16.6	17.6	17.4	18.4	19.5	18.4	19.4	19.2	20.2	21.2
8H	17.1	18.0	17.9	18.9	19.9	19.4	20.4	20.3	21.2	22.2
12H	17.5	18.4	18.4	19.3	20.3	20.7	21.6	21.5	22.4	23.5
4H 2H	12.6	13.6	13.4	14.4	15.5	13.0	14.0	13.8	14.9	15.9
3H	15.4	16.3	16.2	17.2	18.2	16.2	17.1	17.0	18.0	19.0
4H	16.8	17.7	17.6	18.5	19.6	18.0	18.8	18.8	19.6	20.7
6H	18.2	18.9	19.0	19.8	20.8	19.9	20.7	20.8	21.5	22.6
8H	18.7	19.4	19.6	20.3	21.4	21.1	21.8	21.9	22.6	23.7
12H	19.2	19.9	20.1	20.7	21.8	22.4	23.1	23.3	24.0	25.0
8H 4H	17.6	18.3	18.5	19.2	20.3	18.5	19.2	19.4	20.1	21.2
6H	19.2	19.8	20.1	20.7	21.8	20.8	21.4	21.7	22.3	23.4
8H	19.9	20.5	20.8	21.3	22.4	22.2	22.7	23.0	23.6	24.7
12H	20.6	21.1	21.5	21.9	23.1	23.8	24.2	24.6	25.1	26.3
12H 4H	17.9	18.5	18.7	19.4	20.5	18.6	19.3	19.5	20.1	21.2
6H	19.6	20.1	20.5	21.0	22.1	21.0	21.5	21.9	22.4	23.5
8H	20.4	20.9	21.3	21.8	22.9	22.5	22.9	23.3	23.8	25.0
CIE190: 2010										

CIE190: 2010  
Area: 0.1 m2

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:  
Test Date:

g Range: 0 - 180DEG  
g Interval: 0.5DEG  
Test System:EVERFINE GO-2000\_V1 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:8.700m [K=1.1494]  
Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.00V I:0.0950A P:11.360W PF:0.9800 Freq:60.00Hz Lamp Flux:800x1 lm		
NAME: ASD LWS12-D12AC-XX(5000K)	TYPE:	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:

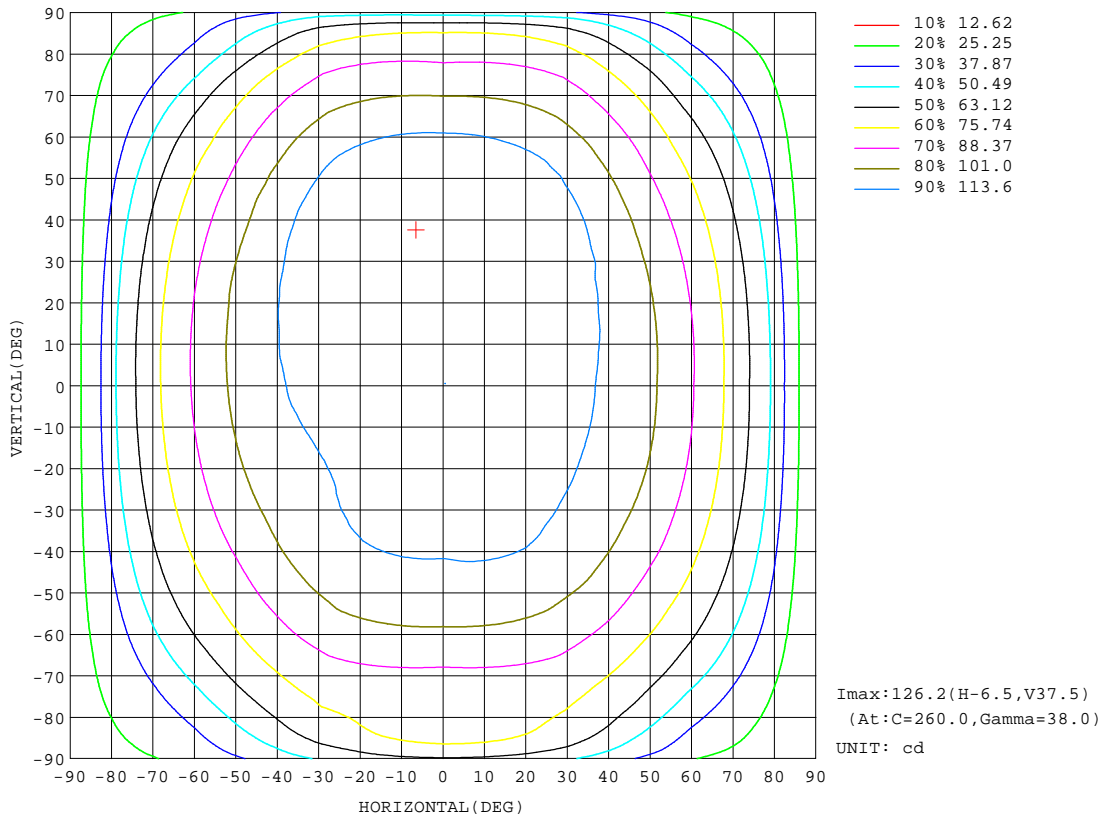
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	46	32	25	44	31	24	41	30	23	15
0.80	55	41	33	53	40	32	49	37	30	21
1.00	64	49	40	61	48	39	55	47	37	26
1.25	71	57	48	68	55	46	61	51	43	31
1.50	77	63	54	73	61	52	66	56	48	35
2.00	85	73	64	80	69	61	72	63	56	41
2.50	90	79	70	85	75	67	76	68	62	44
3.00	94	84	76	89	80	73	79	72	66	48
4.00	100	91	84	94	86	80	84	78	72	52
5.00	103	95	89	97	90	85	86	81	77	55
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:  
 Test Date:

g Range: 0 - 180DEG  
 g Interval: 0.5DEG  
 Test System:EVERFINE GO-2000\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.700m [K=1.1494]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.00V I:0.0950A P:11.360W PF:0.9800 Freq:60.00Hz Lamp Flux:800x1 lm		
NAME: ASD LWS12-D12AC-XX(5000K)	TYPE:	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:

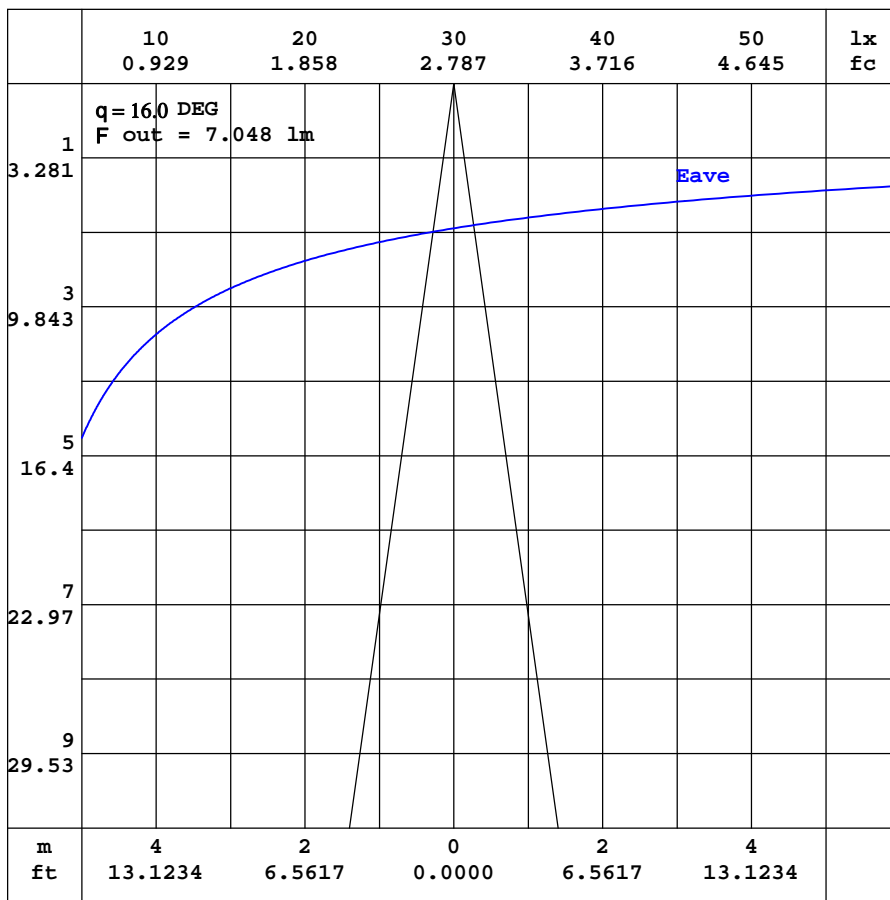


C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:  
 Test Date:

g Range: 0 - 180DEG  
 g Interval: 0.5DEG  
 Test System:EVERFINE GO-2000\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.700m [K=1.1494]  
 Remarks:

AAI CURVES

Test:U:120.00V I:0.0950A P:11.360W PF:0.9800 Freq:60.00Hz Lamp Flux:800x1 lm		
NAME: ASD LWS12-D12AC-XX(5000K)	TYPE:	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:



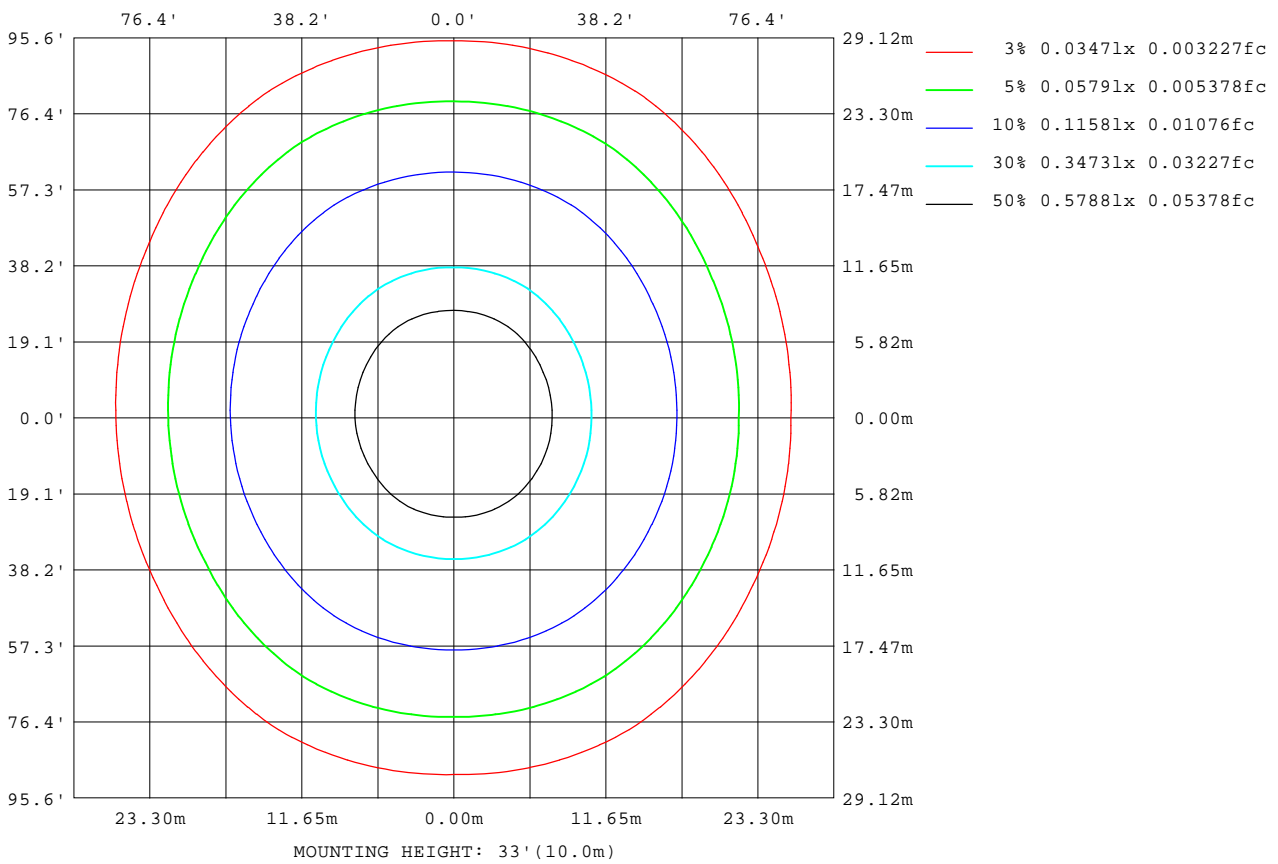
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:  
 Test Date:

g Range: 0 - 180DEG  
 g Interval: 0.5DEG  
 Test System:EVERFINE GO-2000\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.700m [K=1.1494]  
 Remarks:

ISOLUX DIAGRAM

Test:U:120.00V I:0.0950A P:11.360W PF:0.9800 Freq:60.00Hz Lamp Flux:800x1 lm		
NAME: ASD LWS12-D12AC-XX(5000K)	TYPE:	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:  
 Test Date:

g Range: 0 - 180DEG  
 g Interval: 0.5DEG  
 Test System:EVERFINE GO-2000\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.700m [K=1.1494]  
 Remarks:

## LED Avg.L Report

Test:U:120.00V I:0.0950A P:11.360W PF:0.9800 Freq:60.00Hz Lamp Flux:800x1 lm		
NAME: ASD LWS12-D12AC-XX(5000K)	TYPE:	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:

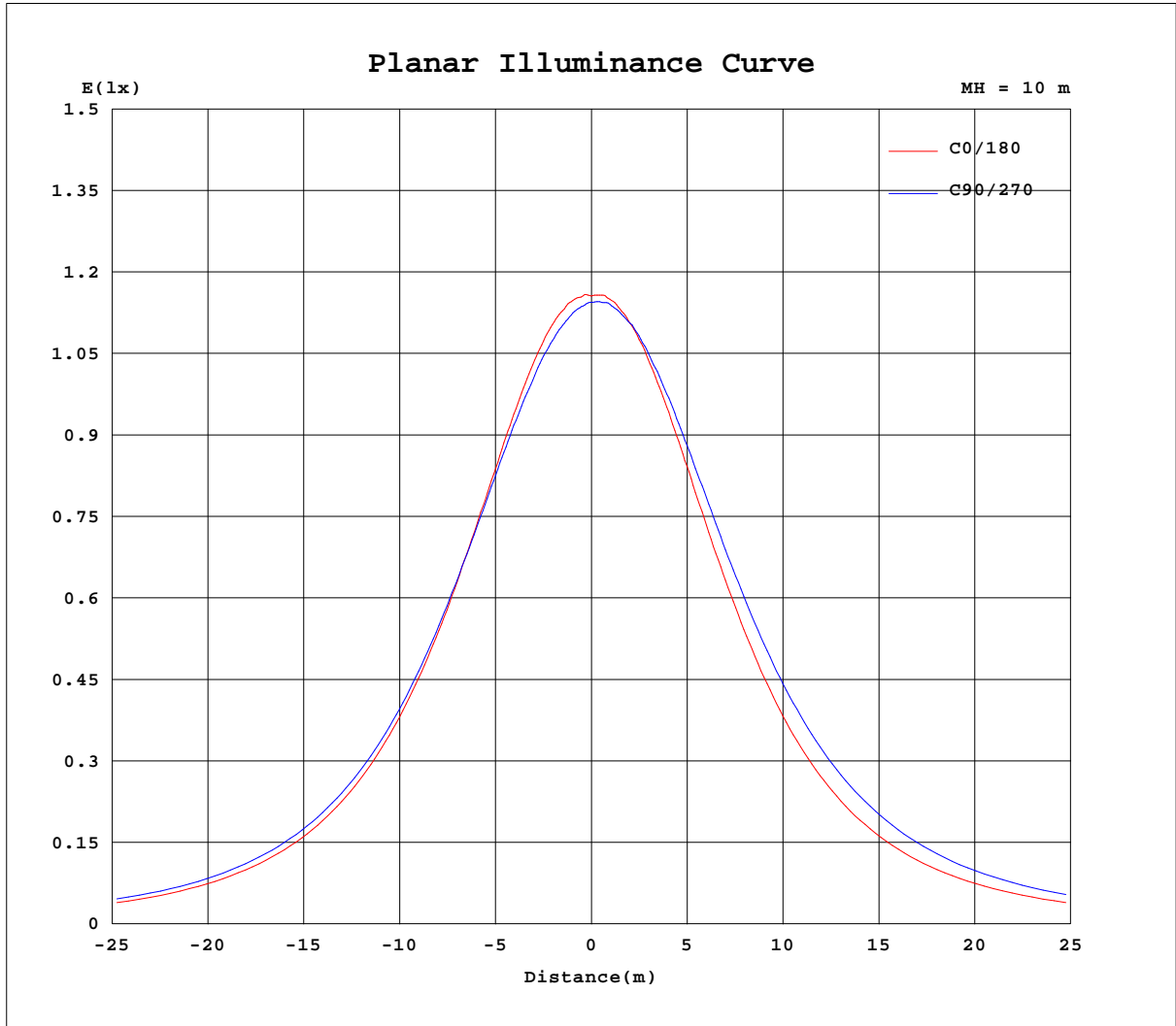
AvgL	cd/m2
L_0~180(65)av	1920
L_0~180(75)av	2357
L_0~180(85)av	3343
L_90~270(65)av	2375
L_90~270(75)av	3335
L_90~270(85)av	8877
L_45(65)av	2202
L_45(75)av	2993
L_45(85)av	6411

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:  
Test Date:

g Range: 0 - 180DEG  
g Interval: 0.5DEG  
Test System:EVERFINE GO-2000\_V1 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:8.700m [K=1.1494]  
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature: 25.3DEG  
 Operators:  
 Test Date:

g Range: 0 - 180DEG  
 g Interval: 0.5DEG  
 Test System: EVERFINE GO-2000\_V1 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 8.700m [K=1.1494]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.00V I:0.0950A P:11.360W PF:0.9800 Freq:60.00Hz Lamp Flux:800x1 lm		
NAME: ASD LWS12-D12AC-XX(5000K)	TYPE:	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	116	116	116	116	116	116	116	115	115	115	115	115	115	115	115	115	115	114	114
5	116	116	116	116	116	116	115	115	115	115	115	115	115	115	114	114	114	114	114
10	117	117	117	116	116	116	116	116	116	115	115	115	115	115	115	115	114	114	114
15	118	117	117	117	117	117	116	116	116	116	116	116	116	115	115	115	115	115	114
20	118	118	117	117	117	117	117	117	116	116	116	116	116	116	116	115	115	115	115
25	117	117	117	117	117	117	117	117	117	117	117	117	117	116	116	116	116	116	115
30	117	116	116	116	116	116	116	116	116	116	117	117	117	117	117	116	116	116	115
35	115	115	114	114	114	114	115	115	115	115	116	116	116	116	116	116	116	115	115
40	112	112	112	112	112	112	112	113	113	114	114	114	115	115	115	115	115	114	114
45	108	108	108	108	108	108	109	109	110	111	111	112	113	113	113	113	112	112	112
50	103	103	103	103	103	104	104	105	106	107	108	108	109	109	109	109	109	109	109
55	96.5	96.5	96.6	96.9	97.3	97.8	98.4	99.4	100	102	103	104	104	105	105	105	105	105	104
60	89.1	89.2	89.4	89.8	90.2	90.9	91.6	92.8	94.1	95.3	96.6	97.7	98.8	99.1	99.3	99.3	99.2	99.1	98.9
65	80.9	81.1	81.3	81.8	82.4	83.1	84.0	85.5	87.0	88.6	90.1	91.5	92.7	93.0	93.1	93.1	92.9	92.6	92.3
70	71.6	71.8	72.2	72.8	73.6	74.5	75.6	77.4	79.3	81.1	83.0	84.6	86.1	86.4	86.5	86.4	86.1	85.8	85.5
75	60.9	61.2	61.7	62.5	63.6	64.8	66.4	68.7	71.3	73.8	76.3	78.5	80.5	81.0	81.2	81.1	80.9	80.5	80.0
80	47.2	47.8	48.6	49.9	51.4	53.3	55.5	58.8	62.3	65.9	69.4	72.7	75.6	77.0	77.8	78.3	78.5	78.4	78.1
85	28.4	29.5	31.1	33.0	35.5	38.3	41.5	46.2	51.1	56.1	61.0	65.8	70.1	72.8	75.1	76.7	77.8	78.4	78.5
90	17.4	17.6	18.3	19.4	21.1	23.3	26.0	30.1	34.5	39.1	43.7	48.2	52.4	55.3	57.7	59.6	60.9	61.8	62.1
95	16.2	16.8	18.0	19.6	21.6	24.1	26.7	29.8	32.9	36.0	39.0	41.9	44.4	45.7	46.6	47.2	47.4	47.4	47.1
100	24.1	24.7	25.8	27.3	29.2	31.4	33.7	35.9	38.0	40.1	42.1	43.9	45.5	46.1	46.5	46.6	46.6	46.4	46.0
105	29.0	29.7	31.0	32.6	34.6	36.8	39.0	40.8	42.6	44.2	45.6	46.9	47.9	48.2	48.2	48.1	47.8	47.4	47.0
110	31.3	32.2	33.7	35.7	38.0	40.5	43.0	44.8	46.4	47.9	49.3	50.4	51.2	51.3	51.3	51.0	50.6	50.2	49.8
115	32.6	33.5	35.0	36.8	39.0	41.4	43.9	46.2	48.4	50.5	52.5	54.2	55.6	55.9	56.0	55.8	55.4	55.0	54.5
120	33.6	34.1	35.0	36.3	38.0	40.0	42.3	45.1	48.1	51.0	53.8	56.4	58.7	59.6	60.1	60.3	60.2	59.9	59.5
125	34.4	34.6	35.2	36.2	37.5	39.3	41.3	44.4	47.7	51.0	54.3	57.4	60.1	61.3	62.1	62.5	62.7	62.5	62.2
130	35.0	35.1	35.6	36.4	37.5	38.8	40.5	42.6	44.9	47.3	49.8	52.1	54.4	56.2	57.8	59.1	60.1	60.7	61.0
135	35.3	35.4	35.8	36.4	37.3	38.3	39.5	41.0	42.6	44.2	45.8	47.4	48.9	50.0	51.0	51.8	52.3	52.7	52.8
140	35.3	35.4	35.7	36.2	36.8	37.6	38.4	39.6	40.8	42.0	43.2	44.3	45.4	46.0	46.4	46.7	46.9	47.0	46.9
145	35.1	35.2	35.4	35.8	36.3	36.8	37.5	38.3	39.1	40.0	40.8	41.5	42.2	42.5	42.7	42.8	42.8	42.8	42.7
150	34.8	34.9	35.0	35.3	35.6	36.0	36.4	36.9	37.4	38.0	38.4	38.9	39.3	39.4	39.5	39.5	39.4	39.4	39.3
155	34.2	34.2	34.3	34.5	34.7	34.9	35.1	35.4	35.7	35.9	36.2	36.4	36.6	36.6	36.6	36.5	36.4	36.3	36.3
160	33.3	33.4	33.4	33.5	33.6	33.7	33.9	34.0	34.1	34.2	34.3	34.4	34.4	34.3	34.2	34.1	34.0	33.9	33.9
165	32.3	32.3	32.3	32.4	32.4	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.4	32.3	32.3	32.2	32.2	32.1
170	31.3	31.3	31.2	31.2	31.2	31.2	31.1	31.1	31.1	31.0	31.0	31.0	30.9	30.9	30.8	30.8	30.7	30.7	30.7
175	30.3	30.2	30.2	30.1	30.1	30.0	30.0	29.9	29.9	29.9	29.8	29.8	29.8	29.8	29.8	29.7	29.7	29.7	29.7
180	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:  
 Test Date:

g Range: 0 - 180DEG  
 g Interval: 0.5DEG  
 Test System:EVERFINE GO-2000\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.700m [K=1.1494]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.00V I:0.0950A P:11.360W PF:0.9800 Freq:60.00Hz Lamp Flux:800x1 lm		
NAME: ASD LWS12-D12AC-XX(5000K)	TYPE:	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:

Table--2

UNIT: cd

C(DEG) g (DEG)	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185
0	114	114	114	114	114	114	114	114	114	114	114	114	114	114	115	115	115	116	116
5	114	114	114	114	114	114	114	114	114	114	114	114	115	115	115	116	116	117	117
10	114	114	114	114	114	114	114	114	114	114	114	114	115	115	116	116	117	117	118
15	115	115	115	115	115	115	115	115	115	115	115	115	115	116	116	117	118	118	118
20	115	115	115	115	115	115	115	115	115	115	115	115	116	116	117	117	118	118	118
25	115	116	116	116	116	116	116	116	115	115	115	115	115	116	116	117	117	118	118
30	116	116	116	116	116	116	116	115	115	115	115	114	115	115	115	116	116	117	117
35	115	115	115	115	115	115	115	115	114	114	113	113	113	113	113	114	114	115	115
40	114	114	115	115	115	114	114	113	112	112	111	111	111	111	111	111	112	112	113
45	112	112	112	112	112	112	111	110	110	109	108	107	107	107	107	107	108	108	109
50	109	109	109	109	109	108	108	107	105	104	104	103	102	102	102	102	103	103	104
55	104	105	105	105	104	104	103	102	100	99.2	98.1	97.0	96.6	96.3	96.3	96.4	96.7	97.3	98.1
60	99.1	99.2	99.3	99.3	99.1	98.7	97.4	96.0	94.5	93.0	91.5	90.2	89.6	89.1	88.9	88.9	89.2	89.7	90.5
65	92.6	92.9	93.0	93.0	92.9	92.5	91.1	89.5	87.7	86.0	84.3	82.8	81.9	81.3	80.9	80.8	80.9	81.3	82.2
70	85.9	86.2	86.5	86.6	86.5	86.1	84.5	82.6	80.5	78.4	76.4	74.5	73.4	72.5	71.9	71.6	71.6	71.9	72.8
75	80.4	80.7	80.9	81.0	80.7	80.1	78.0	75.6	73.0	70.4	67.8	65.4	63.9	62.6	61.7	61.2	61.0	61.2	62.0
80	78.2	78.1	77.7	77.0	75.9	74.5	71.4	68.1	64.6	61.0	57.5	54.2	51.9	49.9	48.4	47.3	46.8	46.7	47.5
85	77.9	76.9	75.3	73.3	70.8	67.8	63.6	59.1	54.5	49.9	45.4	41.1	38.0	35.3	33.1	31.5	30.4	29.9	30.4
90	61.6	60.5	58.9	56.9	54.5	51.7	48.0	44.1	40.1	36.1	32.3	28.8	26.6	24.7	23.3	22.3	21.6	21.3	21.2
95	46.9	46.5	45.8	44.9	43.6	42.0	39.5	36.7	33.7	30.7	27.7	24.8	22.6	20.6	18.8	17.1	15.7	14.4	16.9
100	46.1	46.0	45.8	45.4	44.8	43.9	42.0	40.0	37.7	35.4	33.0	30.6	28.8	27.0	25.4	23.8	22.3	21.0	23.8
105	47.1	47.3	47.3	47.2	46.9	46.4	45.1	43.5	41.8	39.9	37.9	35.9	34.2	32.5	30.8	29.1	27.5	25.8	28.9
110	50.0	50.2	50.4	50.5	50.4	50.0	48.8	47.3	45.6	43.8	41.8	39.8	38.1	36.3	34.6	32.8	31.1	29.3	32.6
115	54.8	55.0	55.2	55.1	54.8	54.2	52.3	50.0	47.6	45.0	42.4	39.9	38.1	36.4	34.8	33.4	32.2	31.1	33.9
120	59.7	59.7	59.5	59.1	58.4	57.2	54.6	51.6	48.5	45.3	42.1	39.2	37.3	35.7	34.5	33.5	32.9	32.6	34.4
125	62.2	62.0	61.6	60.8	59.8	58.3	55.4	52.1	48.7	45.3	42.0	38.9	37.1	35.6	34.5	33.9	33.6	33.7	34.7
130	60.3	59.3	57.9	56.2	54.4	52.3	49.9	47.5	45.1	42.7	40.4	38.4	37.1	36.0	35.2	34.6	34.4	34.4	35.3
135	52.5	52.0	51.3	50.3	49.2	48.0	46.3	44.6	42.9	41.2	39.5	38.0	37.0	36.2	35.6	35.2	34.9	34.8	35.7
140	46.9	46.7	46.4	45.9	45.4	44.7	43.6	42.4	41.1	39.9	38.6	37.5	36.8	36.2	35.7	35.4	35.2	35.1	35.8
145	42.7	42.7	42.6	42.4	42.1	41.8	41.1	40.3	39.4	38.6	37.7	37.0	36.4	36.0	35.6	35.4	35.2	35.1	35.6
150	39.3	39.3	39.3	39.3	39.2	39.0	38.6	38.2	37.7	37.2	36.8	36.3	36.0	35.6	35.4	35.1	34.9	34.7	35.2
155	36.3	36.4	36.5	36.5	36.5	36.5	36.4	36.2	35.9	35.7	35.5	35.2	35.0	34.8	34.7	34.5	34.4	34.2	34.6
160	33.9	34.0	34.1	34.3	34.4	34.5	34.4	34.4	34.3	34.2	34.2	34.1	34.0	33.9	33.8	33.7	33.6	33.6	33.8
165	32.2	32.3	32.4	32.5	32.7	32.8	32.8	32.7	32.7	32.7	32.6	32.6	32.6	32.6	32.6	32.5	32.5	32.5	32.6
170	30.7	30.8	30.9	31.0	31.1	31.2	31.2	31.2	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.4	31.4	31.4	31.4
175	29.8	29.8	29.9	29.9	30.0	30.0	30.0	30.1	30.1	30.1	30.2	30.2	30.2	30.2	30.3	30.3	30.3	30.4	30.3
180	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:  
 Test Date:

g Range: 0 - 180DEG  
 g Interval: 0.5DEG  
 Test System:EVERFINE GO-2000\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.700m [K=1.1494]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.00V I:0.0950A P:11.360W PF:0.9800 Freq:60.00Hz Lamp Flux:800x1 lm		
NAME: ASD LWS12-D12AC-XX(5000K)	TYPE:	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:

Table--3

UNIT: cd

C(DEG) g (DEG)	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280
0	116	116	116	116	116	115	115	115	115	115	115	115	115	115	115	114	114	114	114
5	117	117	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116
10	118	118	118	118	118	118	118	118	118	118	118	118	117	117	117	117	117	117	117
15	118	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119
20	119	119	119	120	120	120	120	121	121	121	121	121	121	121	121	121	121	121	121
25	119	119	119	120	120	121	121	122	122	122	123	123	123	123	123	123	122	122	122
30	118	119	119	120	120	121	122	122	123	124	124	124	124	124	124	124	124	124	124
35	116	117	118	119	119	120	121	122	123	124	125	125	126	126	126	126	125	125	125
40	114	115	115	116	117	119	120	122	123	124	125	126	126	126	126	126	126	126	126
45	110	111	112	113	115	116	118	120	121	123	124	124	125	125	125	125	125	125	125
50	105	106	107	109	110	112	114	116	118	120	121	122	123	123	123	123	123	123	123
55	99.1	100	102	103	105	107	109	112	114	116	118	119	119	120	120	120	120	120	119
60	91.7	93.0	94.6	96.3	98.2	101	103	106	108	111	113	114	114	115	115	115	114	114	114
65	83.3	84.7	86.3	88.2	90.2	93.0	95.9	98.8	102	104	106	108	108	109	109	109	108	108	108
70	74.0	75.5	77.3	79.3	81.6	84.6	87.8	90.9	94.0	96.8	99.3	100	101	101	101	101	101	101	101
75	63.2	64.8	66.7	69.0	71.5	75.0	78.6	82.2	85.6	88.8	91.7	92.7	93.3	93.5	93.4	93.1	92.6	92.9	93.0
80	48.8	50.6	52.9	55.5	58.6	62.7	67.0	71.3	75.5	79.5	82.9	84.4	85.3	85.8	85.8	85.6	85.2	85.4	85.5
85	31.5	33.2	35.5	38.3	41.6	46.3	51.2	56.3	61.3	66.1	70.4	72.6	74.3	75.5	76.2	76.4	76.3	76.4	76.2
90	21.6	22.2	23.2	24.5	26.2	28.8	31.6	34.6	37.4	40.2	42.6	43.9	44.8	45.3	45.6	45.5	45.2	44.8	44.2
95	19.4	21.9	24.6	27.3	30.0	33.4	36.8	40.0	43.0	45.8	48.1	49.0	49.4	49.5	49.2	48.7	48.1	47.7	47.2
100	26.6	29.3	32.0	34.8	37.4	40.5	43.5	46.3	48.8	51.1	53.0	53.5	53.7	53.6	53.2	52.7	52.0	51.9	51.8
105	32.0	34.9	37.7	40.4	43.0	45.9	48.5	51.0	53.2	55.1	56.7	57.2	57.4	57.4	57.1	56.7	56.2	56.3	56.4
110	35.8	38.9	41.8	44.6	47.3	50.0	52.6	55.0	57.1	59.0	60.5	61.1	61.3	61.4	61.2	60.9	60.5	60.7	60.9
115	36.8	39.6	42.4	45.2	48.0	51.2	54.4	57.4	60.2	62.6	64.8	65.6	66.1	66.3	66.2	65.9	65.5	65.8	66.0
120	36.3	38.5	40.8	43.4	46.3	50.1	53.9	57.8	61.5	64.9	67.8	69.1	70.0	70.4	70.4	70.2	69.8	70.0	70.1
125	36.0	37.7	39.7	42.1	44.8	48.8	53.0	57.2	61.3	65.2	68.6	70.3	71.5	72.2	72.5	72.4	72.0	71.7	71.1
130	36.5	37.9	39.5	41.4	43.5	46.3	49.2	52.2	55.2	58.1	60.8	63.0	65.0	66.5	67.7	68.5	68.7	68.0	66.7
135	36.7	37.8	39.1	40.5	42.1	44.2	46.4	48.6	50.8	52.9	54.8	56.2	57.4	58.4	59.1	59.5	59.6	59.2	58.5
140	36.6	37.4	38.4	39.5	40.7	42.2	43.8	45.5	47.0	48.5	49.9	50.9	51.7	52.3	52.7	53.0	53.0	52.8	52.3
145	36.2	36.8	37.6	38.3	39.2	40.3	41.5	42.7	43.8	44.8	45.8	46.4	46.8	47.1	47.3	47.4	47.4	47.2	47.0
150	35.6	36.1	36.6	37.2	37.8	38.6	39.3	40.1	40.8	41.5	42.1	42.4	42.7	42.9	43.0	43.0	42.9	42.8	42.7
155	35.0	35.4	35.8	36.1	36.5	36.9	37.3	37.7	38.1	38.4	38.7	38.8	39.0	39.0	39.1	39.1	39.0	39.0	39.0
160	34.0	34.2	34.4	34.6	34.9	35.1	35.3	35.6	35.8	35.9	36.1	36.1	36.1	36.0	36.0	35.9	35.8	35.9	35.9
165	32.7	32.8	32.9	33.0	33.1	33.3	33.4	33.5	33.7	33.8	33.9	33.9	33.9	33.9	33.8	33.8	33.7	33.7	33.7
170	31.5	31.5	31.5	31.6	31.6	31.6	31.6	31.7	31.7	31.7	31.7	31.7	31.6	31.6	31.5	31.5	31.5	31.5	31.5
175	30.3	30.3	30.3	30.3	30.3	30.3	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2
180	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:  
 Test Date:

g Range: 0 - 180DEG  
 g Interval: 0.5DEG  
 Test System:EVERFINE GO-2000\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:8.700m [K=1.1494]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.00V I:0.0950A P:11.360W PF:0.9800 Freq:60.00Hz Lamp Flux:800x1 lm		
NAME: ASD LWS12-D12AC-XX(5000K)	TYPE:	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:

Table--4

UNIT: cd

C(DEG) g (DEG)	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355			
0	114	114	114	114	114	114	114	114	114	114	114	114	114	115	115			
5	115	115	115	115	115	115	115	115	114	114	115	115	115	115	116			
10	117	117	117	117	116	116	116	116	116	116	116	116	116	116	117			
15	119	118	118	118	118	118	118	117	117	117	117	117	117	117	117			
20	120	120	120	120	120	119	119	118	118	118	118	117	117	117	118			
25	122	122	122	122	121	121	120	120	119	118	118	118	118	117	117			
30	124	124	124	123	123	122	121	120	119	118	118	117	117	117	117			
35	125	125	125	124	123	122	121	120	119	118	117	116	116	115	115			
40	125	125	125	124	123	121	120	118	117	116	115	114	113	113	112			
45	125	124	124	123	121	120	118	116	115	113	112	111	110	109	108			
50	123	122	121	120	119	117	115	113	111	109	107	106	105	104	103			
55	119	118	117	116	114	112	110	107	105	103	101	100	98.9	97.9	97.1			
60	114	113	112	111	109	107	104	101	98.7	96.3	94.5	93.0	91.7	90.6	89.8			
65	108	107	106	105	103	100.0	97.2	94.3	91.5	88.8	86.9	85.3	83.8	82.6	81.7			
70	101	100	99.2	98.0	95.4	92.5	89.4	86.2	83.1	80.1	78.0	76.2	74.7	73.4	72.4			
75	92.9	92.5	91.7	90.5	87.6	84.4	80.9	77.3	73.7	70.3	68.0	65.9	64.2	62.8	61.7			
80	85.2	84.6	83.6	82.0	78.6	74.8	70.6	66.4	62.2	58.2	55.5	53.1	51.1	49.5	48.2			
85	75.6	74.4	72.8	70.5	66.3	61.5	56.6	51.5	46.4	41.7	38.4	35.5	33.1	31.1	29.5			
90	43.4	42.2	40.8	39.1	36.4	33.4	30.4	27.4	24.6	21.9	20.3	19.0	18.1	17.5	17.3			
95	46.5	45.7	44.6	43.2	41.2	39.0	36.6	34.1	31.5	28.9	26.1	23.4	21.0	19.0	17.3			
100	51.5	51.1	50.5	49.6	47.9	46.0	43.9	41.6	39.2	36.8	34.1	31.5	29.1	27.0	25.3			
105	56.3	56.1	55.7	55.0	53.4	51.5	49.4	47.1	44.8	42.3	39.5	36.8	34.2	32.0	30.2			
110	60.9	60.8	60.3	59.6	57.9	55.8	53.5	51.0	48.4	45.7	42.6	39.6	36.9	34.5	32.6			
115	65.9	65.6	64.9	63.8	61.1	58.1	54.8	51.4	47.9	44.5	41.6	39.0	36.7	34.8	33.4			
120	69.8	69.2	68.2	66.7	63.3	59.5	55.5	51.4	47.3	43.5	40.7	38.4	36.5	35.1	34.1			
125	70.2	68.9	67.3	65.2	61.7	58.0	54.0	50.0	46.2	42.6	40.2	38.2	36.6	35.5	34.7			
130	65.1	63.1	60.9	58.4	55.6	52.8	49.9	47.1	44.4	41.9	40.0	38.4	37.1	36.0	35.3			
135	57.5	56.3	54.9	53.2	51.2	49.1	46.9	44.8	42.7	40.8	39.3	38.0	37.0	36.2	35.6			
140	51.7	50.9	50.0	48.9	47.4	45.8	44.2	42.6	41.1	39.6	38.5	37.5	36.7	36.0	35.6			
145	46.7	46.2	45.6	44.9	43.9	42.9	41.8	40.6	39.5	38.5	37.6	36.9	36.2	35.7	35.3			
150	42.4	42.1	41.8	41.4	40.7	40.1	39.4	38.7	38.0	37.3	36.7	36.2	35.7	35.3	35.0			
155	38.9	38.8	38.6	38.4	38.0	37.6	37.2	36.7	36.3	35.8	35.5	35.1	34.8	34.5	34.3			
160	36.0	36.0	36.0	35.9	35.7	35.5	35.3	35.0	34.7	34.4	34.2	34.0	33.8	33.6	33.4			
165	33.7	33.7	33.7	33.7	33.6	33.5	33.4	33.2	33.1	33.0	32.9	32.7	32.6	32.5	32.4			
170	31.6	31.7	31.7	31.7	31.7	31.7	31.7	31.6	31.6	31.6	31.5	31.5	31.4	31.4	31.4			
175	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.2	30.3	30.3	30.3	30.3	30.3	30.3			
180	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7			

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:  
 Test Date:

g Range: 0 - 180DEG  
 g Interval: 0.5DEG  
 Test System:EVERFINE GO-2000\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
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 Remarks: