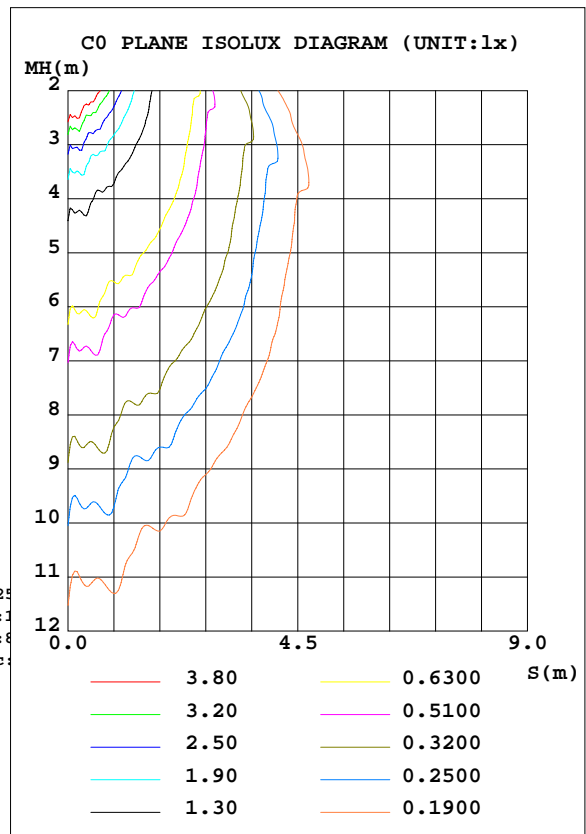
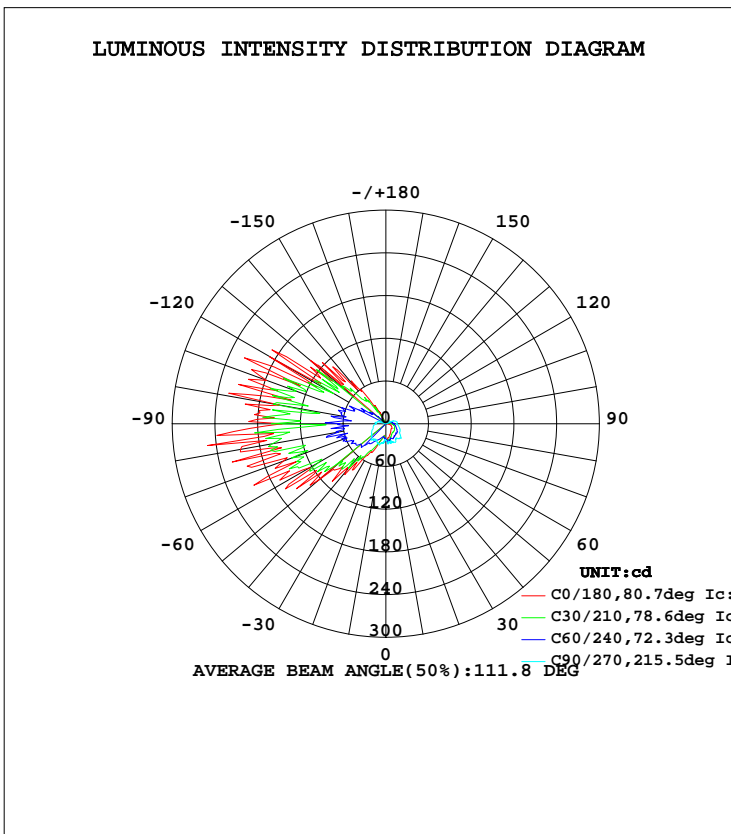


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.0V I:0.1045A P:12.34W PF:0.9838 Lamp Flux:498.225x1 lm		
NAME: ASD-LWS26S-13D12CC-BK 3000K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 40.38 lm/W			
MODEL	ASD-LWS26S-13D12CC-BK	Imax(cd)	252.4	S/MH(C0/180)	3.86
NOMINAL POWER(W)	11.5W	LOR(%)	100.0	S/MH(C90/270)	1.83
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	498.22	η UP, DN(C0-180)	17.0,26.3
NOMINAL FLUX(lm)	498.225	CIE CLASS	DIFFUSE	η UP, DN(C180-360)	24.3,32.4
LAMPS INSIDE	1	η up(%)	41.3	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	120	η down(%)	58.7	CIBSE SHR MAX	1.00



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2022-04-03

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:7.500m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\%lum, lamp$
10	20.51	24.46	25.62	17.69	18.32	18.20	28.36	23.31	0- 10	2.085	2.085	0.42,0.42
20	16.87	20.78	26.65	24.42	29.13	25.26	30.23	21.45	10- 20	6.395	8.480	1.7,1.7
30	13.73	18.96	28.50	35.40	51.30	36.38	27.01	18.89	20- 30	12.19	20.67	4.15,4.15
40	11.20	19.37	27.36	45.38	87.98	51.27	29.57	18.77	30- 40	20.47	41.14	8.26,8.26
50	10.59	17.27	27.34	68.62	122.9	77.09	27.22	17.55	40- 50	31.39	72.54	14.6,14.6
60	9.691	15.72	22.99	85.62	123.4	83.04	23.34	15.15	50- 60	43.04	115.6	23.2,23.2
70	7.793	13.99	21.13	116.7	153.2	99.57	19.05	12.31	60- 70	54.08	169.7	34.1,34.1
80	4.182	11.53	18.32	144.5	207.3	122.2	17.74	10.19	70- 80	60.36	230.0	46.2,46.2
90	2.234	9.331	14.48	103.9	145.5	98.33	13.14	8.959	80- 90	62.26	292.3	58.7,58.7
100	2.145	7.445	15.74	85.99	152.1	101.1	13.24	6.702	90-100	57.24	349.5	70.2,70.2
110	2.014	2.617	11.96	102.3	177.9	111.1	11.21	2.150	100-110	55.42	404.9	81.3,81.3
120	1.853	3.767	2.740	63.74	188.8	68.90	2.680	3.424	110-120	43.98	448.9	90.1,90.1
130	1.737	1.974	6.713	33.17	138.8	37.97	5.188	1.546	120-130	27.90	476.8	95.7,95.7
140	1.664	1.444	2.381	7.544	63.61	15.59	1.910	1.417	130-140	15.24	492.0	98.8,98.8
150	1.617	1.352	0.9243	1.067	21.89	1.205	0.9205	1.317	140-150	4.886	496.9	99.7,99.7
160	1.606	1.279	0.9166	1.094	1.756	1.213	0.9205	1.229	150-160	0.8278	497.8	99.9,99.9
170	1.629	1.252	0.9166	1.101	1.718	1.225	0.9205	1.163	160-170	0.3460	498.1	100,100
180	1.668	1.256	0.9205	1.094	1.691	1.225	0.9205	1.121	170-180	0.1157	498.2	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

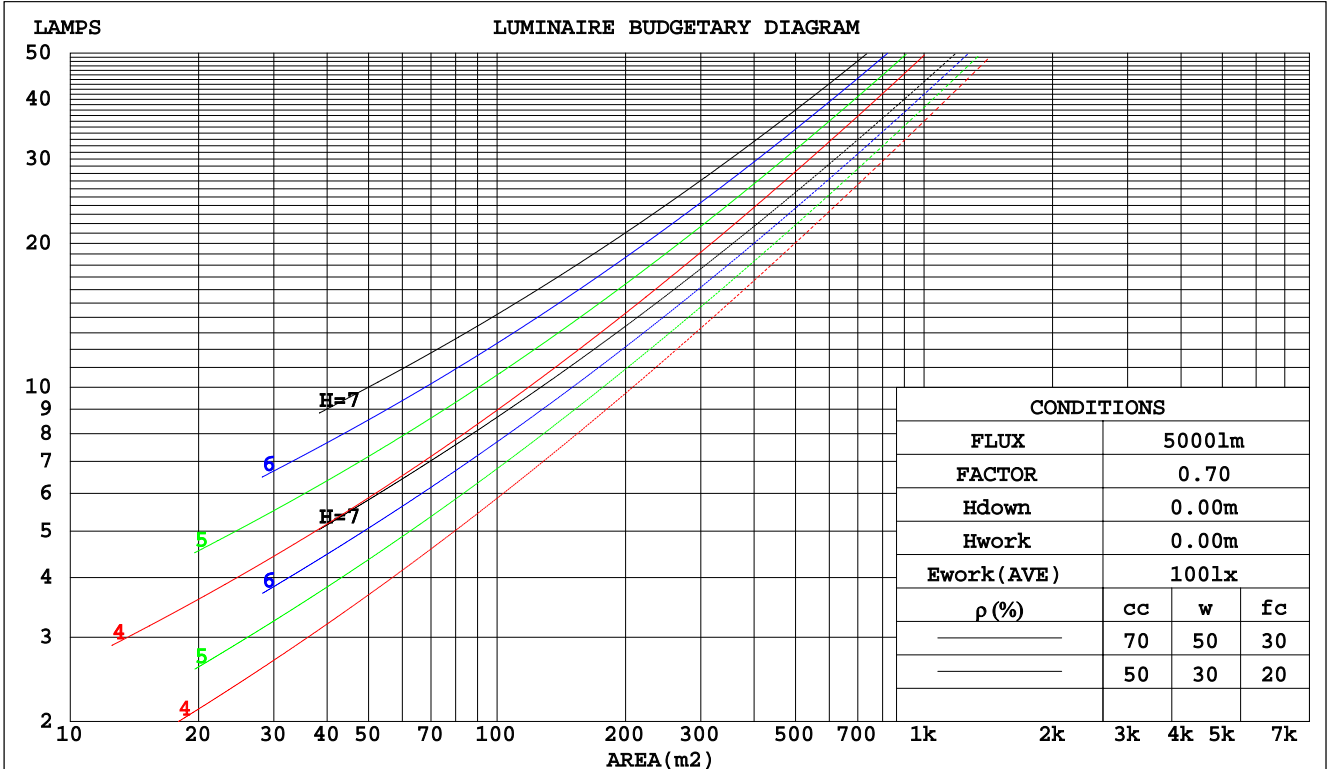
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2022-04-03

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
Humidity:65.0%  
Test Distance:7.500m [K=1.0000]  
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.0V I:0.1045A P:12.34W PF:0.9838 Lamp Flux:498.225x1 lm		
NAME: ASD-LWS26S-13D12CC-BK 3000K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc																0
RCR	RCR:Room Cavity Ratio      Coefficients of Utilization(CU)															
0.0	1.09	1.09	1.09	1.02	1.02	1.02	.88	.88	.88	.76	.76	.76	.64	.64	.64	.59
1.0	.86	.80	.74	.80	.74	.69	.68	.63	.59	.57	.53	.50	.46	.44	.41	.36
2.0	.72	.63	.55	.66	.58	.51	.56	.49	.44	.46	.41	.37	.37	.33	.30	.25
3.0	.61	.51	.43	.56	.47	.40	.47	.40	.34	.39	.33	.28	.31	.27	.23	.19
4.0	.53	.43	.35	.49	.39	.32	.41	.33	.27	.33	.27	.23	.27	.22	.18	.14
5.0	.46	.36	.29	.42	.33	.27	.36	.28	.23	.29	.23	.19	.23	.18	.15	.11
6.0	.41	.31	.24	.38	.29	.22	.32	.24	.19	.26	.20	.16	.21	.16	.12	.09
7.0	.36	.27	.21	.34	.25	.19	.28	.21	.16	.23	.18	.13	.19	.14	.10	.08
8.0	.33	.24	.18	.30	.22	.16	.26	.19	.14	.21	.15	.11	.17	.12	.09	.06
9.0	.30	.21	.15	.28	.20	.14	.23	.17	.12	.19	.14	.10	.16	.11	.08	.05
10.0	.27	.19	.14	.25	.18	.13	.21	.15	.11	.18	.12	.09	.14	.10	.07	.05



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2022-04-03

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity: 65.0%  
 Test Distance: 7.500m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:120.0V I:0.1045A P:12.34W PF:0.9838 Lamp Flux:498.225x1 lm		
NAME: ASD-LWS26S-13D12CC-BK 3000K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.460	.262	.083	.440	.251	.080	.403	.231	.074	.368	.212	.068	.336	.195	.063	
2.0	.376	.206	.063	.358	.197	.061	.324	.180	.056	.292	.164	.051	.263	.149	.047	
3.0	.324	.172	.052	.307	.165	.050	.276	.150	.045	.247	.135	.042	.220	.122	.038	
4.0	.285	.148	.044	.270	.141	.042	.242	.128	.038	.215	.115	.035	.190	.103	.032	
5.0	.255	.130	.038	.242	.124	.036	.215	.112	.033	.191	.101	.030	.168	.090	.027	
6.0	.231	.116	.033	.219	.110	.032	.194	.100	.029	.172	.089	.026	.151	.079	.024	
7.0	.211	.104	.030	.200	.099	.028	.177	.090	.026	.156	.080	.023	.137	.071	.021	
8.0	.195	.095	.027	.184	.090	.026	.163	.081	.023	.144	.073	.021	.125	.064	.019	
9.0	.180	.087	.024	.170	.083	.023	.151	.075	.021	.133	.067	.019	.116	.059	.017	
10.0	.168	.080	.022	.158	.077	.021	.141	.069	.019	.124	.061	.017	.108	.054	.016	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.505	.505	.505	.432	.432	.432	.295	.295	.295	.169	.169	.169	.054	.054	.054	
1.0	.508	.472	.440	.435	.405	.379	.297	.279	.262	.171	.161	.152	.055	.052	.049	
2.0	.503	.451	.407	.431	.388	.352	.295	.269	.246	.170	.156	.144	.055	.051	.047	
3.0	.496	.436	.388	.425	.376	.336	.292	.261	.236	.169	.153	.139	.054	.050	.046	
4.0	.489	.425	.376	.419	.367	.326	.288	.256	.230	.167	.150	.136	.054	.049	.045	
5.0	.481	.416	.367	.413	.360	.320	.284	.251	.226	.165	.147	.134	.053	.048	.044	
6.0	.473	.408	.362	.407	.353	.315	.281	.247	.223	.163	.146	.132	.053	.048	.044	
7.0	.466	.402	.357	.401	.348	.311	.277	.244	.221	.161	.144	.131	.052	.047	.043	
8.0	.459	.397	.354	.395	.344	.309	.273	.242	.219	.159	.143	.130	.051	.047	.043	
9.0	.453	.392	.351	.390	.340	.307	.270	.239	.218	.157	.141	.130	.051	.046	.043	
10.0	.447	.388	.349	.385	.337	.305	.267	.237	.217	.156	.140	.129	.051	.046	.043	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2022-04-03

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:7.500m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.0V I:0.1045A P:12.34W PF:0.9838 Lamp Flux:498.225x1 lm										
NAME: ASD-LWS26S-13D12CC-BK 3000K					TYPE:LED			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: ASD Lighting corp					SUR.:			PROTECTION 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	0.8	2.0	1.5	2.8	3.8	4.2	5.4	4.9	6.2	7.2
3H	3.0	4.2	3.9	5.0	6.1	7.0	8.1	7.8	9.0	10.0
4H	4.3	5.4	5.1	6.2	7.3	8.5	9.6	9.4	10.5	11.5
6H	5.2	6.2	6.0	7.1	8.2	10.3	11.3	11.1	12.2	13.3
8H	5.4	6.4	6.3	7.3	8.4	11.2	12.2	12.1	13.1	14.2
12H	5.6	6.6	6.5	7.4	8.6	12.3	13.3	13.2	14.2	15.3
4H 2H	2.2	3.2	3.0	4.1	5.2	4.5	5.6	5.3	6.4	7.5
3H	4.7	5.6	5.5	6.5	7.6	7.5	8.5	8.4	9.4	10.5
4H	6.1	7.0	7.0	7.9	9.0	9.2	10.1	10.1	11.0	12.1
6H	7.3	8.0	8.2	9.0	10.1	11.3	12.0	12.1	13.0	14.1
8H	7.6	8.4	8.5	9.3	10.5	12.4	13.1	13.3	14.1	15.2
12H	7.9	8.6	8.9	9.6	10.8	13.7	14.3	14.6	15.3	16.5
8H 4H	7.1	7.8	8.0	8.7	9.9	9.5	10.2	10.4	11.2	12.4
6H	8.6	9.2	9.5	10.2	11.4	11.8	12.4	12.7	13.4	14.6
8H	9.3	9.8	10.2	10.8	12.0	13.1	13.7	14.1	14.7	15.9
12H	9.9	10.4	10.8	11.3	12.6	14.7	15.2	15.6	16.1	17.4
12H 4H	7.3	8.0	8.2	9.0	10.1	9.5	10.2	10.5	11.2	12.4
6H	9.0	9.6	10.0	10.6	11.8	11.9	12.4	12.8	13.4	14.6
8H	9.8	10.3	10.8	11.3	12.5	13.3	13.8	14.3	14.8	16.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.3 / - 0.6					+ 0.2 / - 0.3				

CIE Pub.117 Corrected 498.2 lm Total Lamp Luminous Flux. (8log(F/F0) = -2.4)

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2022-04-03

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:7.500m [K=1.0000]  
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.0V I:0.1045A P:12.34W PF:0.9838 Lamp Flux:498.225x1 lm		
NAME: ASD-LWS26S-13D12CC-BK 3000K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:

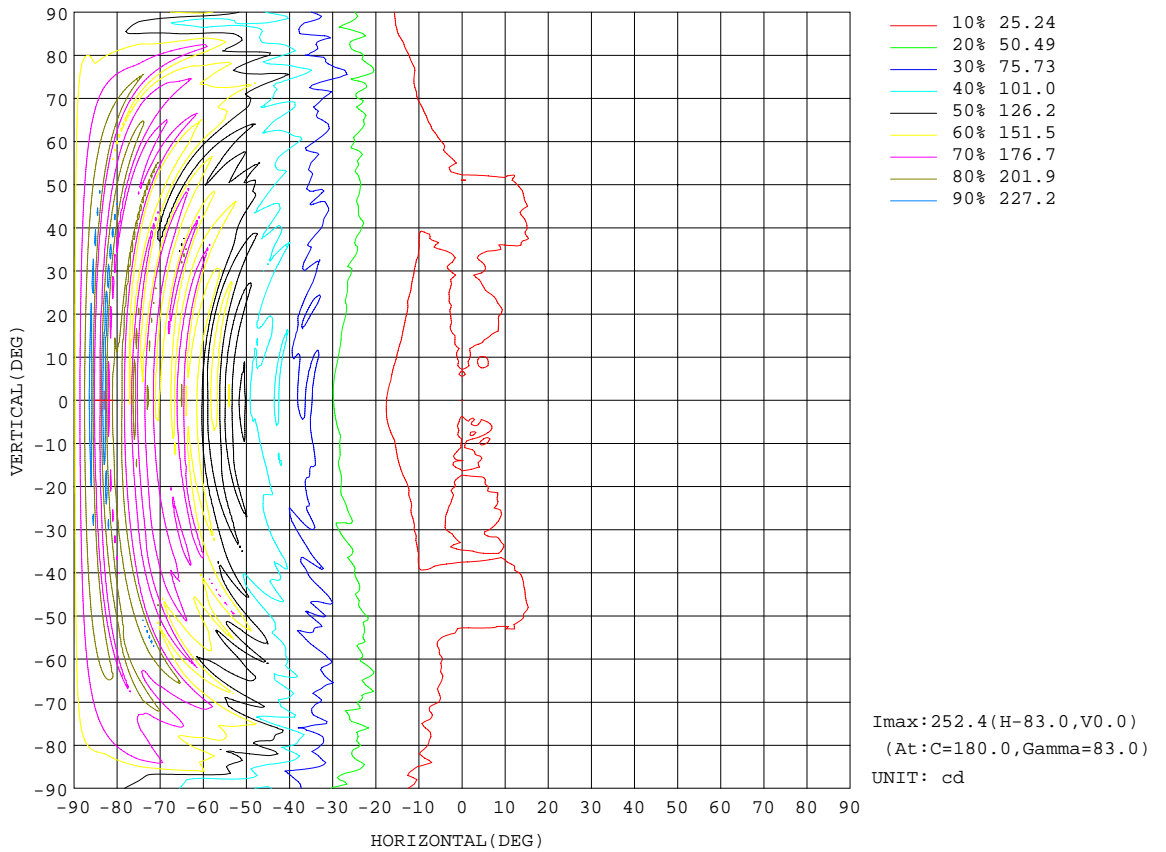
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	35	22	14	33	21	14	31	20	13	6
0.80	43	29	20	41	27	19	37	25	18	9
1.00	50	35	26	48	34	25	42	33	23	12
1.25	57	42	32	54	40	30	47	36	28	15
1.50	63	48	37	59	45	35	51	40	32	18
2.00	71	57	46	66	53	44	57	47	39	23
2.50	76	63	53	71	59	50	61	52	44	26
3.00	80	68	59	75	64	55	65	56	49	29
4.00	86	75	67	80	71	63	69	62	55	34
5.00	90	80	73	83	75	68	72	65	60	37
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2022-04-03

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:7.500m [K=1.0000]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.0V I:0.1045A P:12.34W PF:0.9838 Lamp Flux:498.225x1 lm		
NAME: ASD-LWS26S-13D12CC-BK 3000K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:

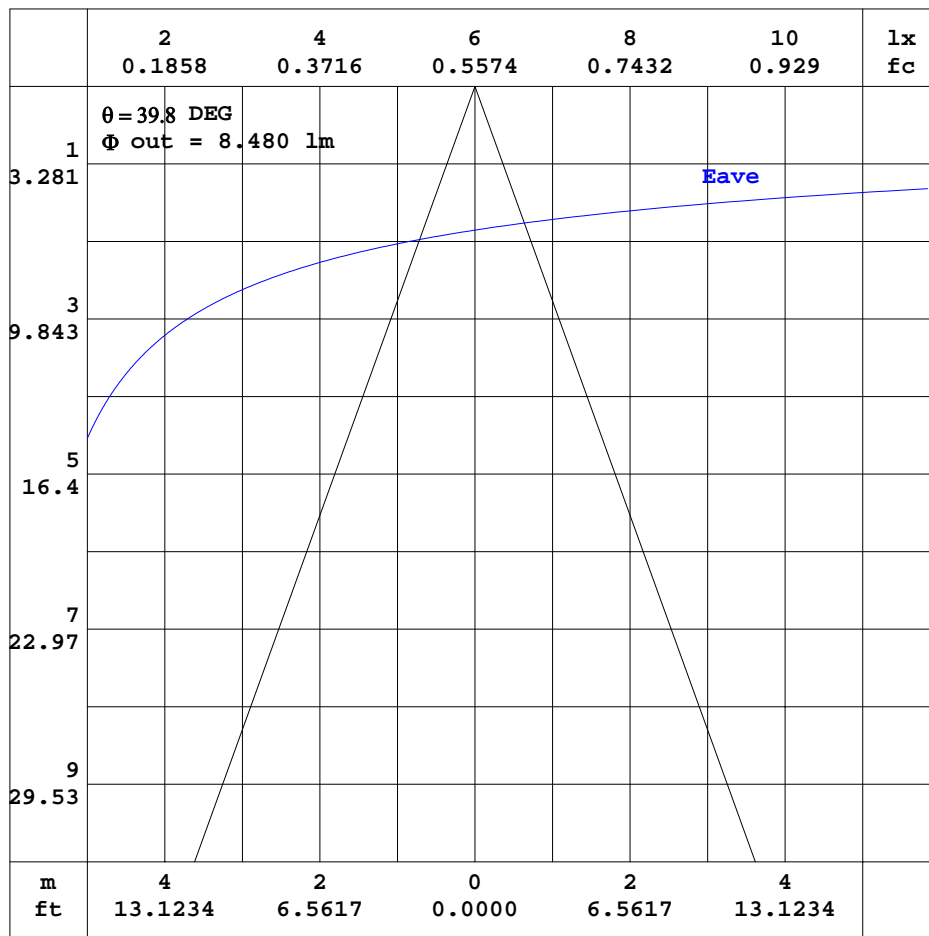


C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2022-04-03

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity: 65.0%  
 Test Distance: 7.500m [K=1.0000]  
 Remarks:

AAI CURVES

Test:U:120.0V I:0.1045A P:12.34W PF:0.9838 Lamp Flux:498.225x1 lm		
NAME: ASD-LWS26S-13D12CC-BK 3000K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:



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

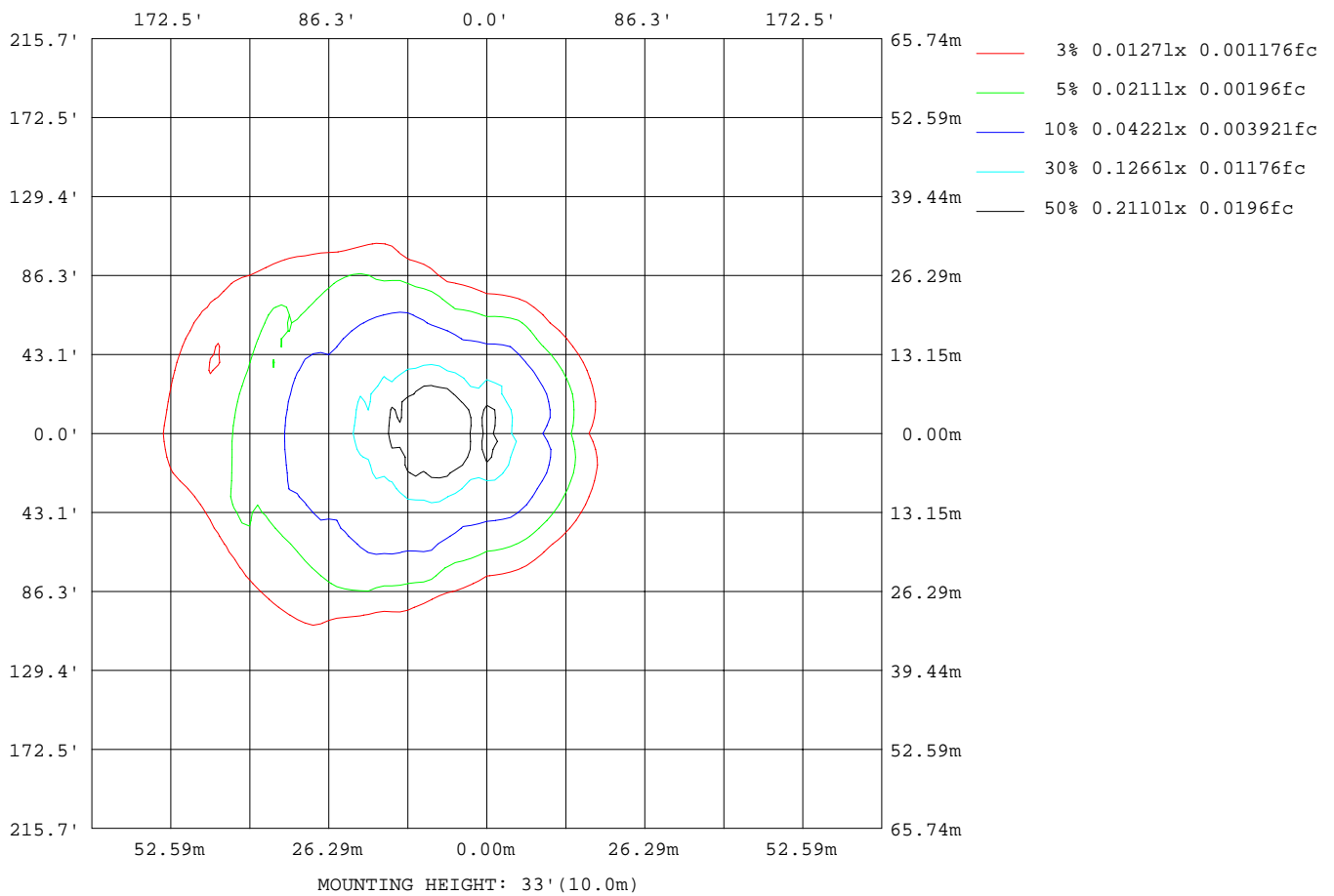
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2022-04-03

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:7.500m [K=1.0000]  
 Remarks:



ISOLUX DIAGRAM

Test:U:120.0V I:0.1045A P:12.34W PF:0.9838 Lamp Flux:498.225x1 lm		
NAME: ASD-LWS26S-13D12CC-BK 3000K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2022-04-03

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:7.500m [K=1.0000]  
 Remarks:

## LED Avg.L Report

Test:U:120.0V I:0.1045A P:12.34W PF:0.9838 Lamp Flux:498.225x1 lm		
NAME: ASD-LWS26S-13D12CC-BK 3000K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:

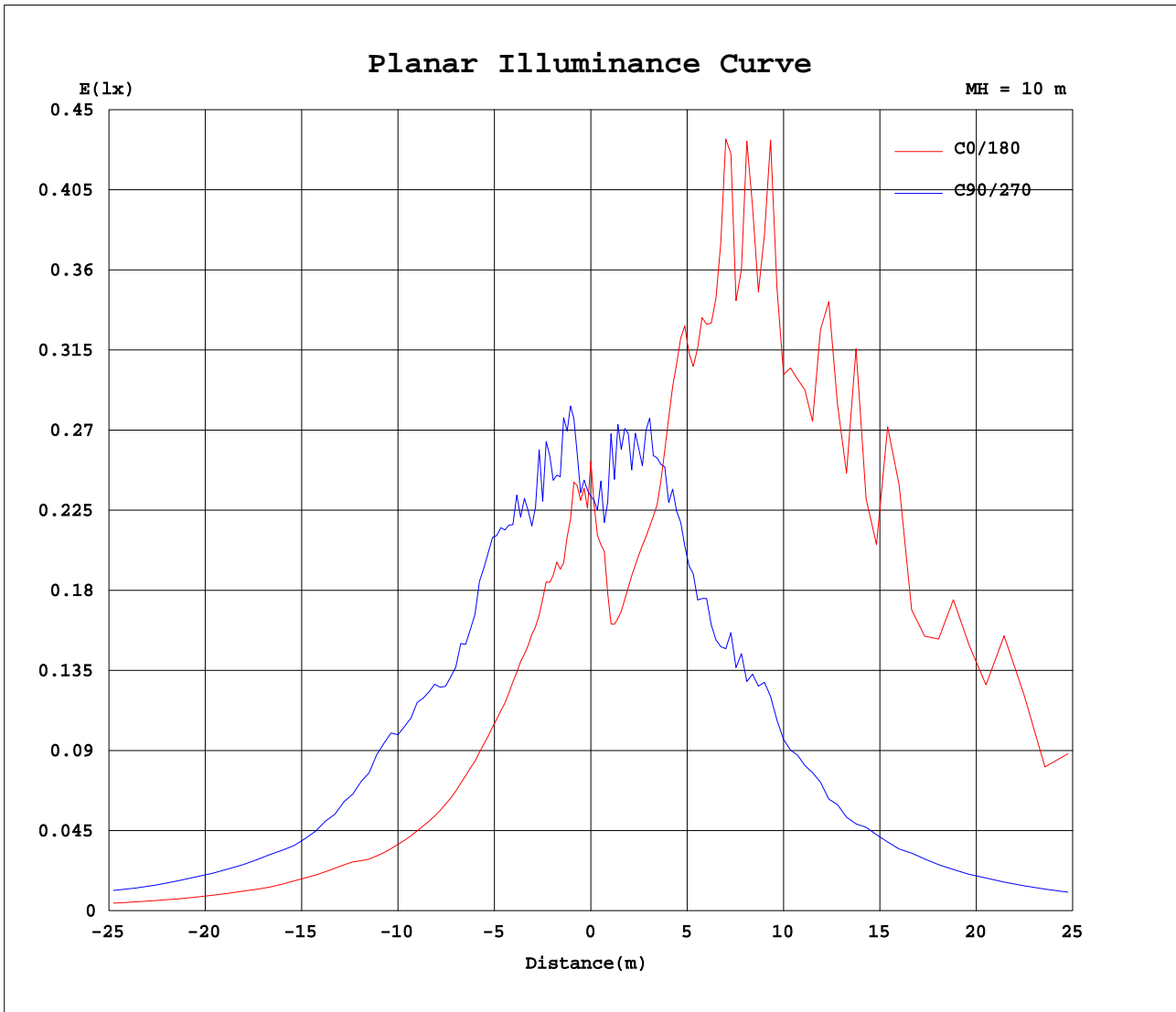
AvgL	cd/m2
L_0~180(65)av	2526
L_0~180(75)av	3231
L_0~180(85)av	9217
L_90~270(65)av	517
L_90~270(75)av	737
L_90~270(85)av	1870
L_45(65)av	1220
L_45(75)av	2136
L_45(85)av	6732

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2022-04-03

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
Humidity:65.0%  
Test Distance:7.500m [K=1.0000]  
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2022-04-03

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity: 65.0%  
 Test Distance: 7.500m [K=1.0000]  
 Remarks:



LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.0V I:0.1045A P:12.34W PF:0.9838 Lamp Flux:498.225x1 lm		
NAME: ASD-LWS26S-13D12CC-BK 3000K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:

Table--2

UNIT: cd

C( DEG) γ (DEG)	285	300	315	330	345														
0	24.0	23.8	22.3	22.6	22.4														
5	23.3	23.6	23.5	22.8	24.2														
10	24.0	27.1	23.3	20.0	19.8														
15	26.8	22.7	20.4	20.8	19.1														
20	27.9	24.1	21.4	19.0	17.1														
25	26.0	22.4	20.4	17.4	15.8														
30	24.3	21.6	18.9	17.4	14.6														
35	24.5	20.7	17.5	16.1	14.1														
40	29.4	22.9	18.8	15.4	13.4														
45	26.7	21.5	18.1	15.1	13.5														
50	26.7	20.2	17.6	15.4	13.5														
55	25.1	18.8	16.7	14.7	12.9														
60	23.7	17.1	15.2	13.0	12.4														
65	21.0	16.1	14.5	13.2	11.6														
70	18.3	15.0	12.3	12.3	10.4														
75	17.0	13.7	11.8	11.4	8.65														
80	16.4	13.1	10.2	10.2	7.43														
85	14.1	11.3	8.28	8.42	5.49														
90	12.5	10.8	8.96	9.07	5.83														
95	14.3	11.4	9.14	7.76	4.21														
100	11.4	9.28	6.70	4.99	2.65														
105	9.06	8.46	5.87	2.43	2.06														
110	6.82	5.86	2.15	2.93	1.99														
115	3.27	2.08	1.99	2.41	1.89														
120	1.22	1.53	3.42	1.77	1.80														
125	2.07	3.43	2.33	1.66	1.71														
130	3.62	2.65	1.55	1.61	1.65														
135	2.62	1.77	1.46	1.54	1.60														
140	1.47	1.25	1.42	1.49	1.53														
145	1.08	1.21	1.36	1.41	1.48														
150	1.06	1.17	1.32	1.36	1.44														
155	1.04	1.14	1.27	1.34	1.40														
160	1.02	1.09	1.23	1.28	1.37														
165	1.00	1.06	1.19	1.26	1.36														
170	0.99	1.03	1.16	1.24	1.34														
175	0.97	1.02	1.14	1.22	1.34														
180	0.96	1.00	1.12	1.22	1.34														

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2022-04-03

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:7.500m [K=1.0000]  
 Remarks: