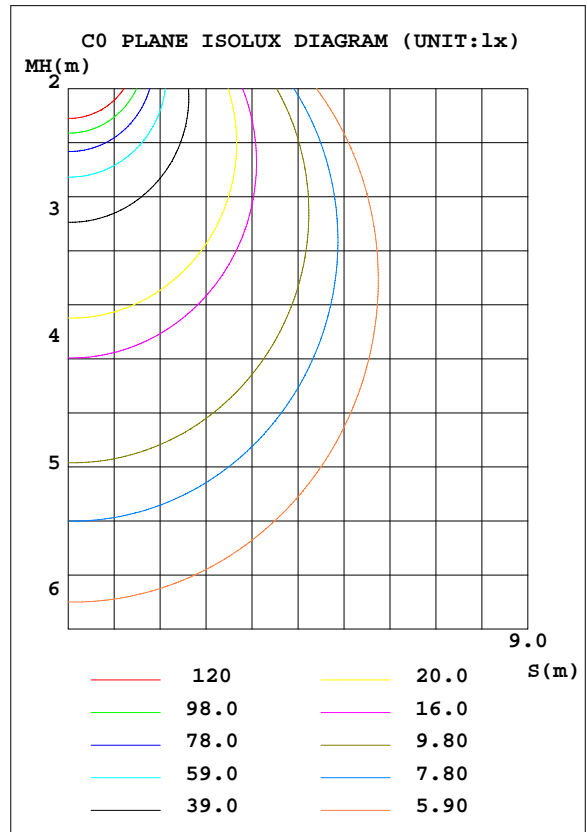
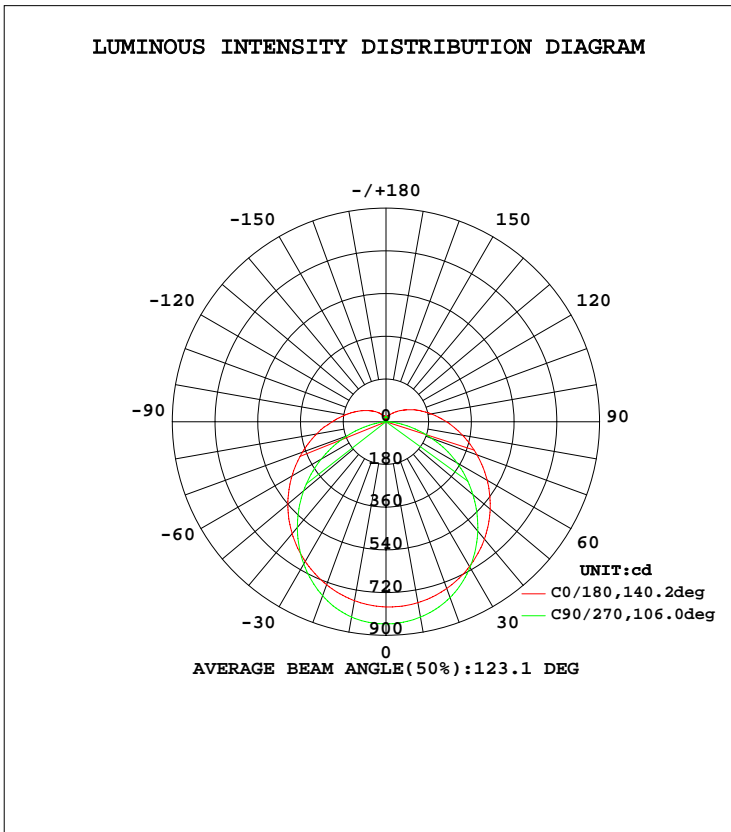


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.9V I:0.1080A P:23.10W PF:0.9630 Lamp Flux:3012.9x1 lm		
NAME: led strip light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 130.43 lm/W			
MODEL ASD-LSF2-4D2440-EM-PRM		Imax(cd)	851.8	S/MH(C0/180)	1.30
NOMINAL POWER(W)	24	LOR(%)	100.0	S/MH(C90/270)	1.21
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	3012.9	η UP, DN(C0-180)	6.3,45.3
NOMINAL FLUX(lm)	3012.9	CIE CLASS	SEMI-D.	η UP, DN(C180-360)	5.8,42.6
LAMPS INSIDE	1	η up(%)	12.1	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220	η down(%)	87.9	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2017-05-18

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:8.900m [K=1.0000]  
 Remarks: led strip light

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C90	C180	C270				$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum, lamp
10	773.9	835.8	765.7	835.6				0- 10	77.26	77.26	2.56,2.56
20	747.8	788.9	731.0	780.5				10- 20	221.8	299.1	9.93,9.93
30	704.1	708.1	679.7	692.6				20- 30	337.4	636.4	21.1,21.1
40	645.3	601.7	615.2	581.1				30- 40	410.3	1047	34.7,34.7
50	573.4	478.5	539.8	453.2				40- 50	434.1	1481	49.1,49.1
60	492.1	345.4	457.5	315.9				50- 60	409.4	1890	62.7,62.7
70	408.2	205.2	374.3	175.9				60- 70	343.5	2234	74.1,74.1
80	327.7	78.81	297.0	51.33				70- 80	251.7	2485	82.5,82.5
90	255.0	1.418	226.9	0				80- 90	163.8	2649	87.9,87.9
100	192.9	0.5724	172.4	1.408				90-100	115.3	2765	91.8,91.8
110	142.5	2.834	129.0	3.669				100-110	84.97	2849	94.6,94.6
120	101.2	5.330	95.26	6.154				110-120	60.01	2909	96.6,96.6
130	71.53	7.587	69.67	8.457				120-130	40.78	2950	97.9,97.9
140	50.21	9.575	50.69	10.69				130-140	26.82	2977	98.8,98.8
150	36.32	13.45	34.41	14.75				140-150	17.24	2994	99.4,99.4
160	27.09	17.07	26.68	18.30				150-160	10.81	3005	99.7,99.7
170	20.35	19.79	19.69	20.53				160-170	6.065	3011	99.9,99.9
180	9.670	21.44	9.665	21.44				170-180	1.691	3013	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

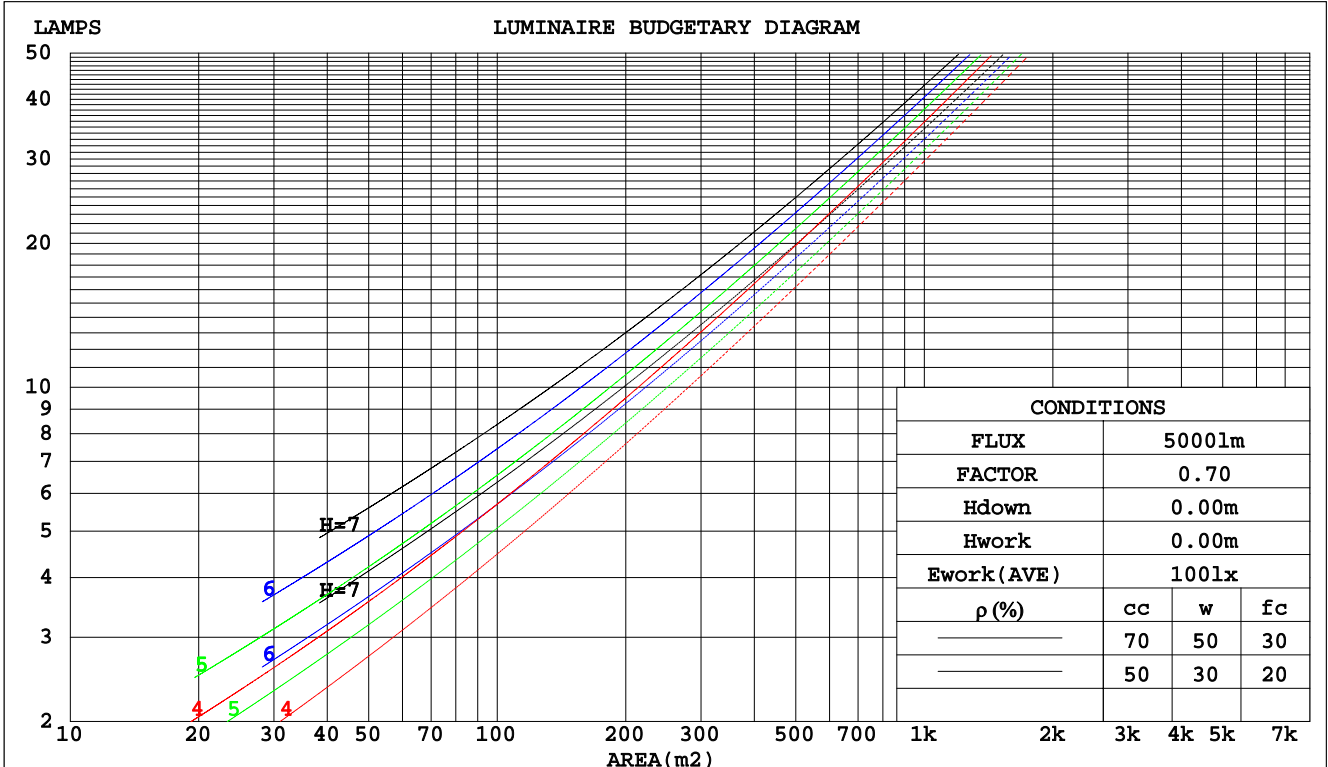
C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2017-05-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:8.900m [K=1.0000]  
 Remarks: led strip light

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.9V I:0.1080A P:23.10W PF:0.9630 Lamp Flux:3012.9x1 lm		
NAME: led strip light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.16	1.16	1.16	1.12	1.12	1.12	1.04	1.04	1.04	.97	.97	.97	.91	.91	.91	.88
1.0	.99	.94	.89	.95	.91	.87	.89	.85	.82	.83	.80	.77	.77	.75	.73	.70
2.0	.85	.78	.71	.82	.75	.69	.76	.71	.66	.71	.67	.63	.67	.63	.60	.57
3.0	.74	.65	.59	.72	.64	.57	.67	.60	.55	.62	.57	.52	.58	.54	.50	.47
4.0	.65	.56	.49	.63	.55	.48	.59	.52	.46	.55	.49	.44	.52	.47	.42	.40
5.0	.58	.49	.42	.56	.48	.41	.53	.45	.40	.50	.43	.38	.46	.41	.37	.34
6.0	.52	.43	.36	.51	.42	.36	.48	.40	.35	.45	.38	.33	.42	.36	.32	.30
7.0	.47	.38	.32	.46	.37	.31	.43	.36	.30	.41	.34	.29	.38	.33	.28	.26
8.0	.43	.34	.28	.42	.34	.28	.39	.32	.27	.37	.31	.26	.35	.30	.25	.23
9.0	.39	.31	.25	.38	.30	.25	.36	.29	.24	.34	.28	.24	.32	.27	.23	.21
10.0	.36	.28	.23	.35	.28	.23	.33	.27	.22	.32	.26	.21	.30	.25	.21	.19



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2017-05-18

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity: 65.0%  
 Test Distance: 8.900m [K=1.0000]  
 Remarks: led strip light

WEC AND CCEC

Test:U:220.9V I:0.1080A P:23.10W PF:0.9630 Lamp Flux:3012.9x1 lm		
NAME: led strip light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding 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	.356	.202	.064	.345	.197	.062	.324	.186	.059	.306	.176	.057	.289	.167	.054	
2.0	.316	.173	.053	.306	.169	.052	.288	.160	.050	.271	.152	.048	.256	.145	.046	
3.0	.285	.152	.045	.276	.148	.045	.260	.141	.043	.244	.134	.041	.230	.128	.039	
4.0	.259	.134	.040	.251	.131	.039	.236	.125	.037	.222	.119	.036	.209	.114	.035	
5.0	.237	.121	.035	.230	.118	.034	.216	.113	.033	.204	.107	.032	.192	.103	.031	
6.0	.218	.109	.031	.211	.107	.031	.199	.102	.030	.188	.098	.029	.177	.093	.028	
7.0	.202	.100	.028	.196	.098	.028	.185	.093	.027	.174	.089	.026	.165	.086	.025	
8.0	.188	.092	.026	.182	.090	.025	.172	.086	.025	.163	.082	.024	.154	.079	.023	
9.0	.175	.085	.024	.170	.083	.023	.161	.080	.023	.152	.076	.022	.144	.073	.021	
10.0	.164	.079	.022	.160	.077	.022	.151	.074	.021	.143	.071	.020	.136	.068	.020	

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	.282	.282	.282	.241	.241	.241	.165	.165	.165	.095	.095	.095	.030	.030	.030	
1.0	.276	.248	.223	.236	.213	.192	.162	.147	.133	.093	.085	.077	.030	.027	.025	
2.0	.269	.225	.188	.230	.194	.163	.158	.134	.114	.091	.078	.067	.029	.025	.022	
3.0	.261	.208	.166	.224	.180	.144	.154	.125	.101	.089	.073	.060	.029	.024	.019	
4.0	.253	.195	.151	.217	.169	.131	.150	.118	.092	.087	.069	.055	.028	.022	.018	
5.0	.246	.185	.141	.211	.160	.123	.145	.112	.087	.084	.066	.051	.027	.021	.017	
6.0	.239	.177	.133	.205	.154	.116	.141	.108	.082	.082	.063	.049	.026	.021	.016	
7.0	.232	.171	.128	.199	.148	.111	.138	.104	.079	.080	.061	.047	.026	.020	.016	
8.0	.225	.165	.124	.194	.143	.108	.134	.100	.077	.078	.059	.046	.025	.019	.015	
9.0	.219	.160	.121	.189	.139	.105	.131	.098	.075	.076	.058	.045	.025	.019	.015	
10.0	.213	.156	.118	.184	.135	.103	.127	.095	.073	.074	.056	.044	.024	.019	.014	

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2017-05-18

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:8.900m [K=1.0000]  
 Remarks: led strip light

## UGR(Unified Glare Rating) Table

Test:U:220.9V I:0.1080A P:23.10W PF:0.9630 Lamp Flux:3012.9x1 lm										
NAME: led strip light					TYPE:LED			WEIGHT:		
SPEC.:					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	20.1	21.6	20.6	22.0	22.4	19.0	20.4	19.4	20.8	21.2
3H	22.5	23.8	23.0	24.3	24.8	20.4	21.7	20.9	22.2	22.6
4H	23.8	25.1	24.3	25.5	26.0	21.0	22.2	21.5	22.7	23.2
6H	25.3	26.4	25.8	26.9	27.5	21.3	22.5	21.8	23.0	23.5
8H	26.1	27.2	26.6	27.7	28.3	21.4	22.6	22.0	23.1	23.6
12H	27.0	28.1	27.6	28.6	29.2	21.5	22.6	22.0	23.1	23.6
4H 2H	20.7	21.9	21.2	22.4	22.9	19.8	21.0	20.3	21.5	22.0
3H	23.3	24.3	23.8	24.9	25.4	21.5	22.6	22.0	23.1	23.7
4H	24.7	25.7	25.3	26.2	26.8	22.2	23.2	22.8	23.8	24.4
6H	26.4	27.3	26.9	27.8	28.4	22.8	23.7	23.4	24.2	24.9
8H	27.3	28.1	27.9	28.7	29.3	23.0	23.8	23.6	24.4	25.0
12H	28.4	29.1	29.0	29.7	30.4	23.1	23.9	23.7	24.4	25.1
8H 4H	25.0	25.8	25.6	26.4	27.0	22.9	23.8	23.5	24.3	25.0
6H	26.9	27.6	27.5	28.2	28.9	23.8	24.5	24.4	25.1	25.8
8H	28.0	28.6	28.6	29.2	29.9	24.1	24.8	24.8	25.4	26.1
12H	29.3	29.9	30.0	30.5	31.2	24.4	24.9	25.1	25.6	26.3
12H 4H	25.0	25.8	25.6	26.4	27.0	23.1	23.9	23.7	24.5	25.1
6H	27.0	27.6	27.6	28.2	28.9	24.1	24.8	24.8	25.4	26.1
8H	28.2	28.7	28.8	29.3	30.1	24.6	25.2	25.3	25.8	26.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4				

CIE Pub.117 Corrected 3013 lm Total Lamp Luminous Flux.(8log(F/F0) = 3.8)

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2017-05-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:8.900m [K=1.0000]  
Remarks: led strip light

## UTILIZATION FACTORS TABLE

Test:U:220.9V I:0.1080A P:23.10W PF:0.9630 Lamp Flux:3012.9x1 lm		
NAME: led strip light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

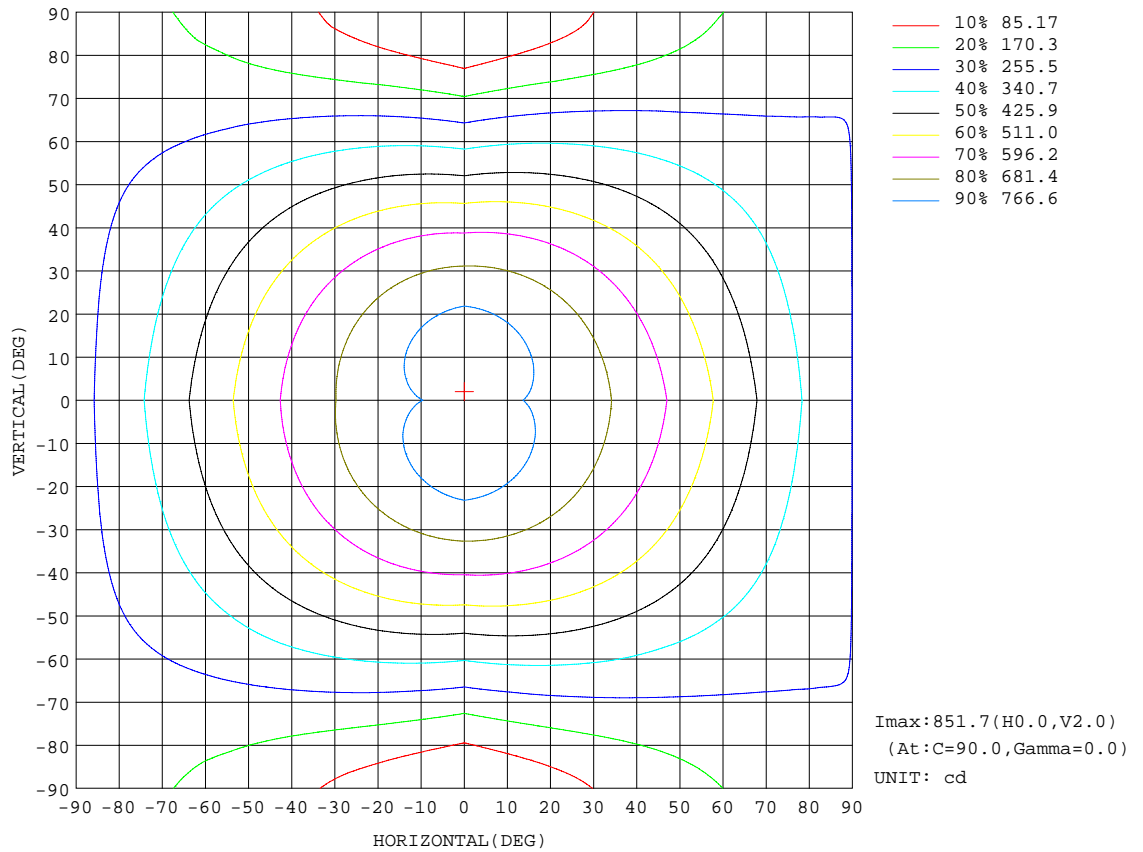
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	51	39	32	50	39	32	49	38	32	25
0.80	61	48	41	59	48	40	57	47	40	32
1.00	69	57	49	67	56	48	64	56	47	39
1.25	76	64	56	74	63	55	70	61	54	45
1.50	81	70	62	79	68	61	74	65	59	50
2.00	88	78	70	85	76	69	80	73	67	56
2.50	92	83	76	89	81	74	84	77	71	60
3.00	96	87	81	93	85	79	87	81	76	64
4.00	100	93	87	97	90	85	91	85	81	69
5.00	103	97	92	99	94	89	93	89	85	72
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2017-05-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:8.900m [K=1.0000]  
 Remarks: led strip light

ISOCANDELA DIAGRAM

Test:U:220.9V I:0.1080A P:23.10W PF:0.9630 Lamp Flux:3012.9x1 lm		
NAME: led strip light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

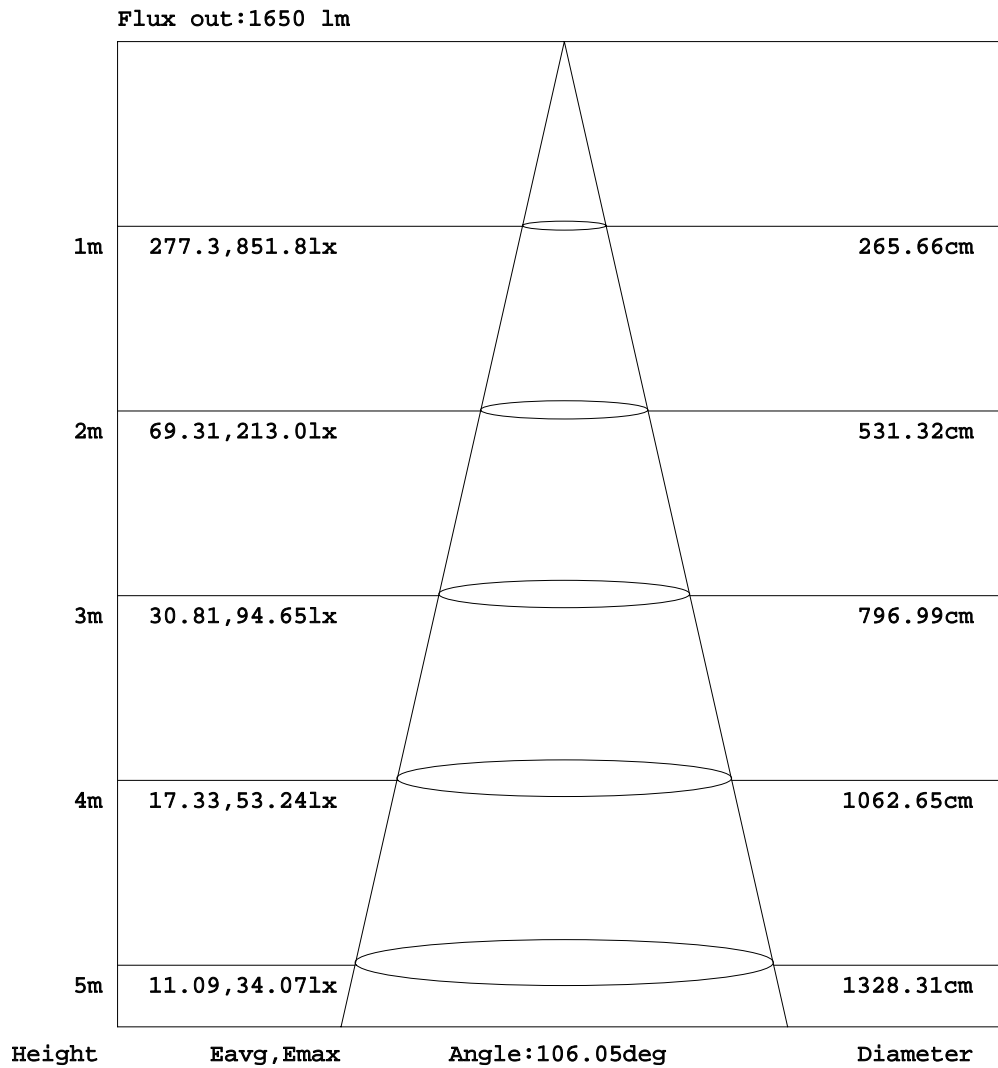


C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2017-05-18

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity: 65.0%  
 Test Distance: 8.900m [K=1.0000]  
 Remarks: led strip light

AAI Figure

Test:U:220.9V I:0.1080A P:23.10W PF:0.9630 Lamp Flux:3012.9x1 lm		
NAME: led strip light	TYPE:LED	WEIGHT:
SPEC.:	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.

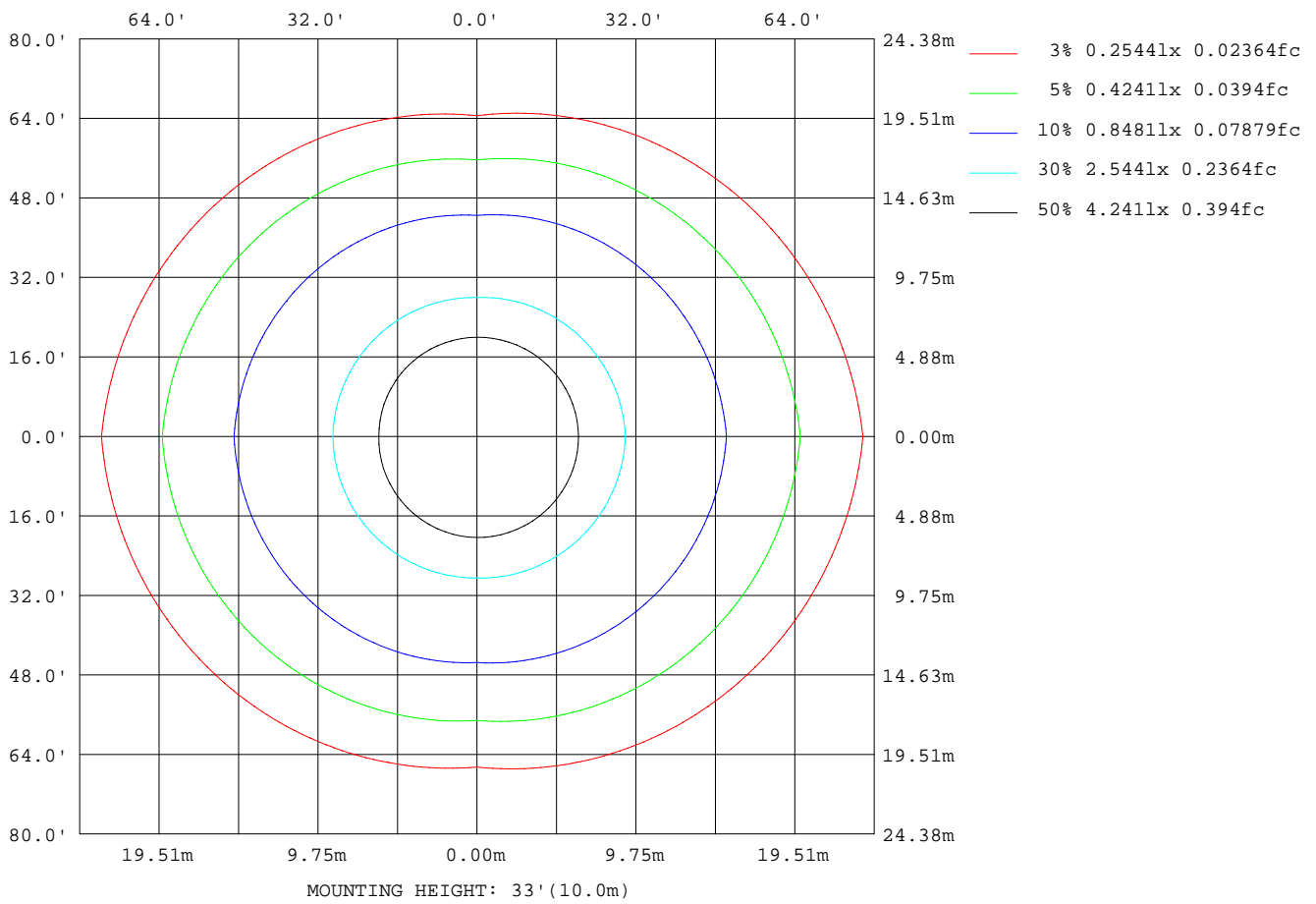
C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2017-05-18

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:8.900m [K=1.0000]  
 Remarks: led strip light



ISOLUX DIAGRAM

Test:U:220.9V I:0.1080A P:23.10W PF:0.9630 Lamp Flux:3012.9x1 lm		
NAME: led strip light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2017-05-18

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:8.900m [K=1.0000]  
 Remarks: led strip light

## LED Avg.L Report

Test:U:220.9V I:0.1080A P:23.10W PF:0.9630 Lamp Flux:3012.9x1 lm		
NAME: led strip light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

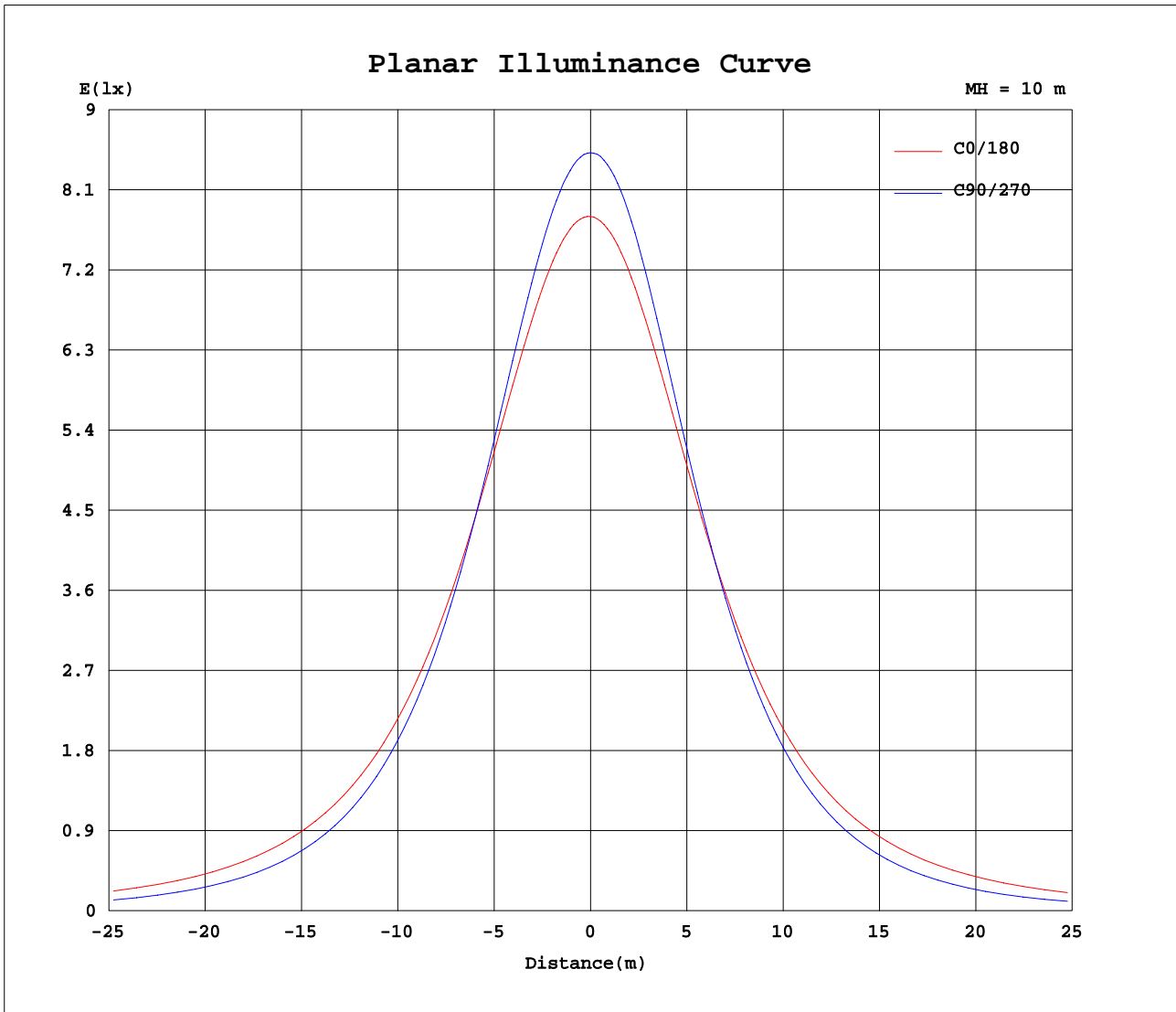
AvgL	cd/m2
L_0~180(65)av	10242
L_0~180(75)av	13554
L_0~180(85)av	31698
L_90~270(65)av	6178
L_90~270(75)av	4784
L_90~270(85)av	2295
L_45(65)av	7677
L_45(75)av	8034
L_45(85)av	13222

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2017-05-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:8.900m [K=1.0000]  
Remarks: led strip light

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2017-05-18

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity: 65.0%  
 Test Distance: 8.900m [K=1.0000]  
 Remarks: led strip light

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.9V I:0.1080A P:23.10W PF:0.9630 Lamp Flux:3012.9x1 lm		
NAME: led strip light	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	90	180	270															
0	780	852	780	852															
5	780	848	775	848															
10	774	836	766	836															
15	763	816	750	813															
20	748	789	731	781															
25	728	753	707	740															
30	704	708	680	693															
35	676	657	649	639															
40	645	602	615	581															
45	611	542	579	519															
50	573	479	540	453															
55	533	413	499	385															
60	492	345	457	316															
65	450	277	416	245															
70	408	205	374	176															
75	367	139	335	108															
80	328	78.8	297	51.3															
85	290	29.2	262	10.8															
90	255	1.42	227	0.00															
95	223	0.00	198	0.33															
100	193	0.57	172	1.41															
105	166	1.61	149	2.63															
110	143	2.83	129	3.67															
115	121	4.08	111	4.87															
120	101	5.33	95.3	6.15															
125	85.2	6.52	81.6	7.35															
130	71.5	7.59	69.7	8.46															
135	59.9	8.56	59.4	9.51															
140	50.2	9.58	50.7	10.7															
145	42.5	11.5	42.3	12.7															
150	36.3	13.4	34.4	14.8															
155	31.4	15.3	29.2	16.7															
160	27.1	17.1	26.7	18.3															
165	23.4	18.5	23.7	19.5															
170	20.3	19.8	19.7	20.5															
175	16.4	20.7	8.96	21.4															
180	9.67	21.4	9.67	21.4															

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2017-05-18

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:8.900m [K=1.0000]  
 Remarks: led strip light