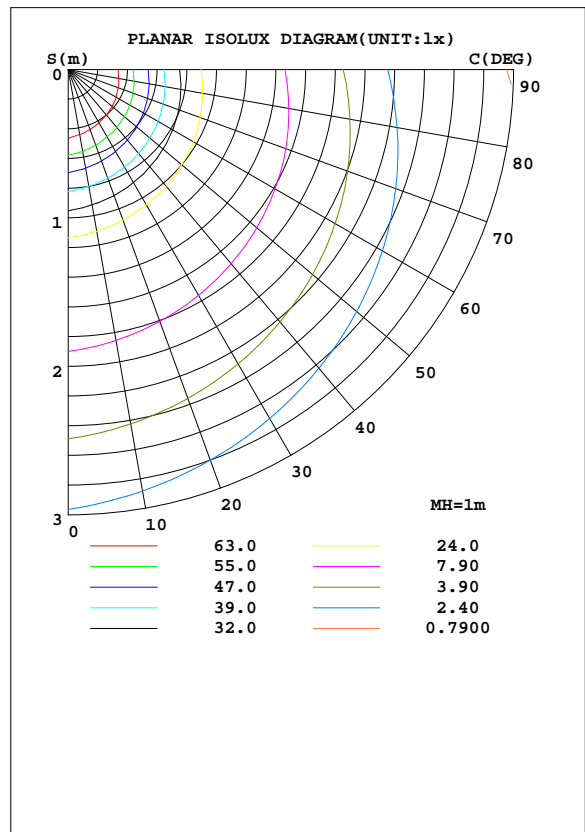
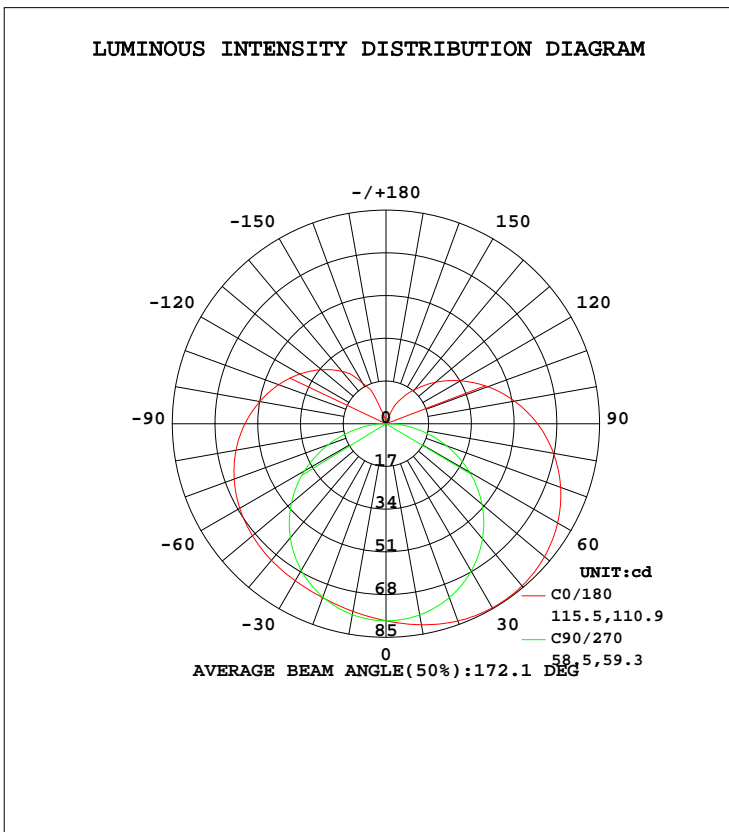


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:24.000V I:0.3900A P:9.3600W PF:1.0000 Freq:0Hz Lamp Flux:457.083x1 lm		
NAME: LUC-S-30K	TYPE:LED Strip	WEIGHT:
SPEC.: 9W	DIM.: 1000*10*9(MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.02*1	Shielding Angle:120

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax(cd)	84.65	S/MH(C0/180)	1.41
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.28
RATED VOLTAGE(V)		TOTAL FLUX(lm)	457.08	$\eta$ UP, DN(C0-180)	11.6, 39.6
NOMINAL FLUX(lm)	457.083	CIE CLASS	SEMI-D.	$\eta$ UP, DN(C180-360)	12.9, 35.9
LAMPS INSIDE	1	$\eta$ up(%)	24.5	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)		$\eta$ down(%)	75.5	CIBSE SHR MAX	1.55



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Test Date:2021-10-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.429  
 Humidity:65.0%  
 Test Distance:8.270m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

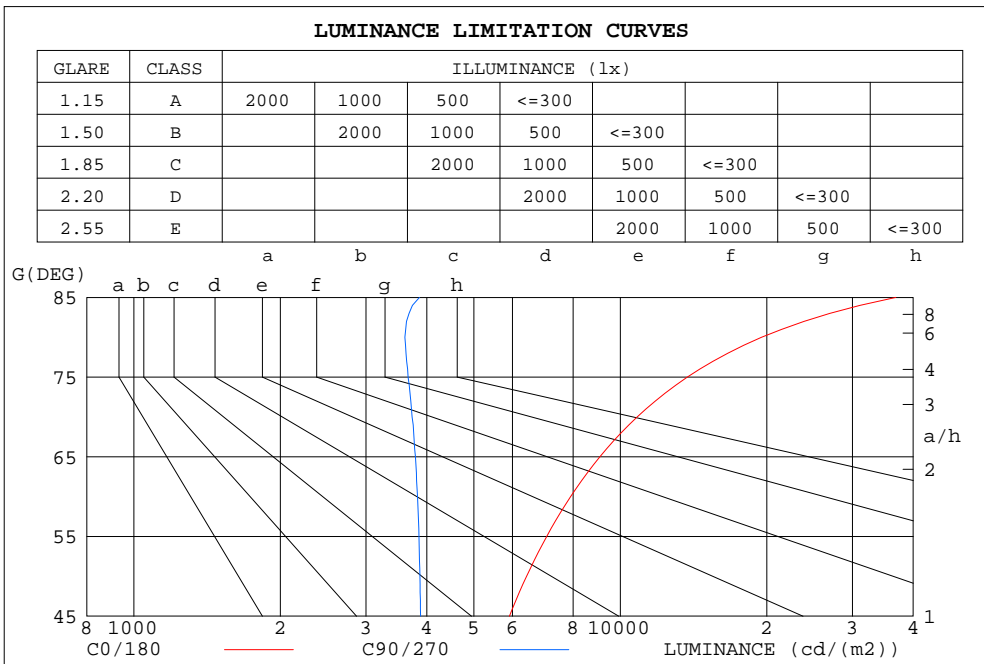
## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C90	C180	C270				$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum,lamp
10	81.22	77.22	75.83	77.14				0- 10	7.458	7.458	1.63,1.63
20	83.51	73.64	73.69	73.40				10- 20	21.81	29.27	6.4,6.4
30	84.60	67.74	72.16	67.42				20- 30	34.50	63.77	14,14
40	84.25	59.76	70.93	59.25				30- 40	44.48	108.3	23.7,23.7
50	82.33	49.88	69.36	49.16				40- 50	50.85	159.1	34.8,34.8
60	78.88	38.37	67.20	37.42				50- 60	53.05	212.2	46.4,46.4
70	73.93	25.58	64.29	24.48				60- 70	50.95	263.1	57.6,57.6
80	67.66	12.55	60.59	11.51				70- 80	45.07	308.2	67.4,67.4
90	60.27	2.451	56.14	2.096				80- 90	37.07	345.2	75.5,75.5
100	51.97	0.4357	51.01	0.9806				90-100	30.62	375.9	82.2,82.2
110	43.15	0.5010	45.49	0.5392				100-110	25.72	401.6	87.9,87.9
120	34.22	0.5609	39.63	0.5499				110-120	20.49	422.1	92.3,92.3
130	25.72	0.6089	33.51	0.6003				120-130	15.23	437.3	95.7,95.7
140	17.82	0.6590	27.26	0.6371				130-140	10.38	447.7	97.9,97.9
150	10.68	0.6992	18.74	0.6796				140-150	6.194	453.9	99.3,99.3
160	2.049	0.7514	6.577	0.7188				150-160	2.678	456.6	99.9,99.9
170	0.7000	0.7950	1.261	0.7786				160-170	0.4561	457.0	100,100
180	0.7324	0.8059	0.7487	0.8059				170-180	0.0756	457.1	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Test Date:2021-10-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.429  
Humidity:65.0%  
Test Distance:8.270m [K=1.0000]  
Remarks:

LUMINANCE LIMITATION CURVES



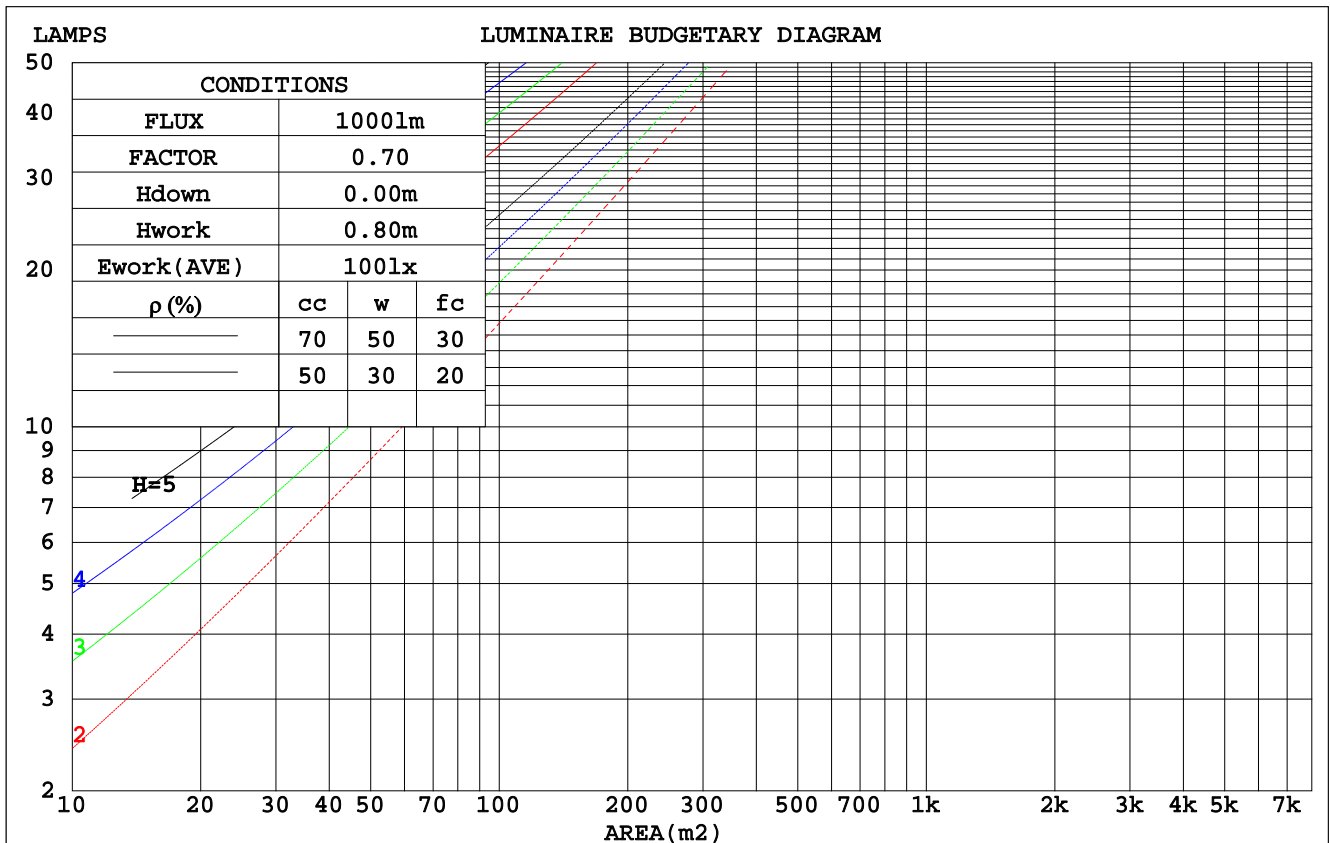
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	36835	3864
80	19517	3606
75	13731	3662
70	10828	3733
65	9078	3792
60	7902	3830
55	7056	3855
50	6416	3873
45	5914	3884

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Test Date: 2021-10-18

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.429  
 Humidity: 65.0%  
 Test Distance: 8.270m [K=1.0000]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.13	1.13	1.13	1.08	1.08	1.08	.98	.98	.98	.88	.88	.88	.80	.80	.80	.76
1.0	.93	.88	.83	.89	.84	.79	.80	.76	.72	.72	.69	.66	.64	.62	.60	.56
2.0	.80	.72	.65	.75	.68	.62	.68	.62	.57	.61	.56	.52	.54	.51	.47	.44
3.0	.69	.60	.52	.65	.57	.50	.59	.52	.46	.53	.47	.42	.47	.42	.39	.35
4.0	.60	.51	.43	.57	.48	.42	.51	.44	.38	.46	.40	.35	.41	.36	.32	.29
5.0	.53	.44	.37	.51	.42	.35	.46	.38	.33	.41	.35	.30	.37	.32	.27	.25
6.0	.47	.38	.31	.45	.37	.30	.41	.34	.28	.37	.31	.26	.33	.28	.24	.21
7.0	.43	.34	.27	.41	.32	.26	.37	.30	.24	.33	.27	.23	.30	.25	.21	.18
8.0	.39	.30	.24	.37	.29	.23	.34	.27	.22	.30	.24	.20	.28	.22	.18	.16
9.0	.35	.27	.21	.34	.26	.21	.31	.24	.19	.28	.22	.18	.25	.20	.16	.14
10.0	.32	.24	.19	.31	.24	.18	.28	.22	.17	.26	.20	.16	.23	.18	.15	.13



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Test Date: 2021-10-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.429  
 Humidity: 65.0%  
 Test Distance: 8.270m [K=1.0000]  
 Remarks:

WEC AND CCEC

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.396	.225	.071	.381	.218	.069	.354	.203	.065	.329	.190	.061	.305	.177	.057	
2.0	.340	.186	.057	.326	.180	.055	.301	.168	.052	.278	.156	.049	.257	.145	.046	
3.0	.300	.160	.048	.288	.154	.046	.265	.144	.044	.244	.134	.041	.225	.125	.039	
4.0	.269	.140	.041	.258	.135	.040	.238	.126	.038	.218	.117	.035	.201	.109	.033	
5.0	.244	.124	.036	.234	.120	.035	.215	.112	.033	.198	.104	.031	.181	.097	.029	
6.0	.223	.112	.032	.214	.108	.031	.197	.101	.029	.181	.094	.028	.166	.087	.026	
7.0	.205	.102	.029	.197	.098	.028	.181	.092	.026	.167	.085	.025	.153	.079	.023	
8.0	.190	.093	.026	.183	.090	.025	.168	.084	.024	.154	.078	.023	.142	.073	.021	
9.0	.177	.086	.024	.170	.083	.023	.157	.077	.022	.144	.072	.021	.132	.067	.019	
10.0	.166	.079	.022	.159	.077	.021	.147	.072	.020	.135	.067	.019	.124	.062	.018	

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.377	.377	.377	.322	.322	.322	.220	.220	.220	.126	.126	.126	.040	.040	.040	
1.0	.374	.343	.316	.320	.295	.272	.219	.203	.188	.126	.117	.109	.040	.038	.035	
2.0	.368	.321	.281	.315	.276	.243	.216	.191	.170	.125	.111	.099	.040	.036	.032	
3.0	.361	.305	.260	.309	.263	.226	.212	.183	.158	.123	.107	.093	.039	.035	.031	
4.0	.353	.293	.246	.303	.253	.214	.208	.176	.151	.120	.103	.089	.039	.034	.029	
5.0	.345	.283	.237	.296	.245	.206	.204	.171	.146	.118	.100	.086	.038	.033	.028	
6.0	.338	.275	.230	.290	.238	.200	.200	.167	.142	.116	.098	.084	.038	.032	.028	
7.0	.331	.269	.225	.285	.233	.196	.197	.163	.139	.114	.096	.083	.037	.031	.027	
8.0	.324	.263	.221	.279	.228	.193	.193	.160	.137	.112	.095	.082	.036	.031	.027	
9.0	.318	.258	.218	.274	.224	.190	.190	.158	.135	.110	.093	.081	.036	.031	.027	
10.0	.312	.254	.216	.269	.221	.188	.187	.155	.134	.109	.092	.080	.035	.030	.026	

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Test Date:2021-10-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.429  
 Humidity:65.0%  
 Test Distance:8.270m [K=1.0000]  
 Remarks:

## UGR(Unified Glare Rating) Table

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	17.2	18.5	17.9	19.2	20.1	14.5	15.8	15.2	16.5	17.4
3H	20.6	21.8	21.3	22.5	23.4	16.6	17.7	17.3	18.5	19.3
4H	22.4	23.5	23.1	24.3	25.2	17.4	18.5	18.1	19.3	20.1
6H	24.4	25.5	25.1	26.2	27.1	18.1	19.1	18.8	19.9	20.8
8H	25.5	26.5	26.3	27.3	28.2	18.3	19.3	19.1	20.1	21.0
12H	26.8	27.8	27.5	28.5	29.5	18.5	19.5	19.3	20.3	21.2
4H 2H	17.6	18.8	18.3	19.5	20.4	15.8	16.9	16.5	17.6	18.5
3H	21.2	22.2	21.9	23.0	23.9	18.1	19.1	18.9	19.9	20.8
4H	23.2	24.1	23.9	24.9	25.8	19.2	20.1	19.9	20.8	21.8
6H	25.4	26.2	26.2	27.0	28.0	20.0	20.8	20.8	21.6	22.6
8H	26.7	27.4	27.4	28.2	29.2	20.4	21.1	21.2	21.9	22.9
12H	28.1	28.8	28.9	29.6	30.6	20.7	21.4	21.5	22.2	23.1
8H 4H	23.4	24.2	24.2	25.0	25.9	20.4	21.1	21.2	21.9	22.9
6H	25.8	26.5	26.6	27.3	28.3	21.6	22.3	22.4	23.1	24.0
8H	27.3	27.8	28.1	28.7	29.6	22.2	22.7	23.0	23.6	24.5
12H	29.0	29.5	29.8	30.3	31.3	22.6	23.2	23.4	24.0	25.0
12H 4H	23.4	24.1	24.2	24.9	25.9	20.8	21.5	21.6	22.3	23.3
6H	25.9	26.5	26.7	27.3	28.3	22.3	22.9	23.1	23.7	24.7
8H	27.4	27.9	28.2	28.7	29.7	23.0	23.5	23.8	24.3	25.3
CIE190: 2010										

CIE190: 2010  
Area: 0.02 m2

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Test Date: 2021-10-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.429  
Humidity: 65.0%  
Test Distance: 8.270m [K=1.0000]  
Remarks:

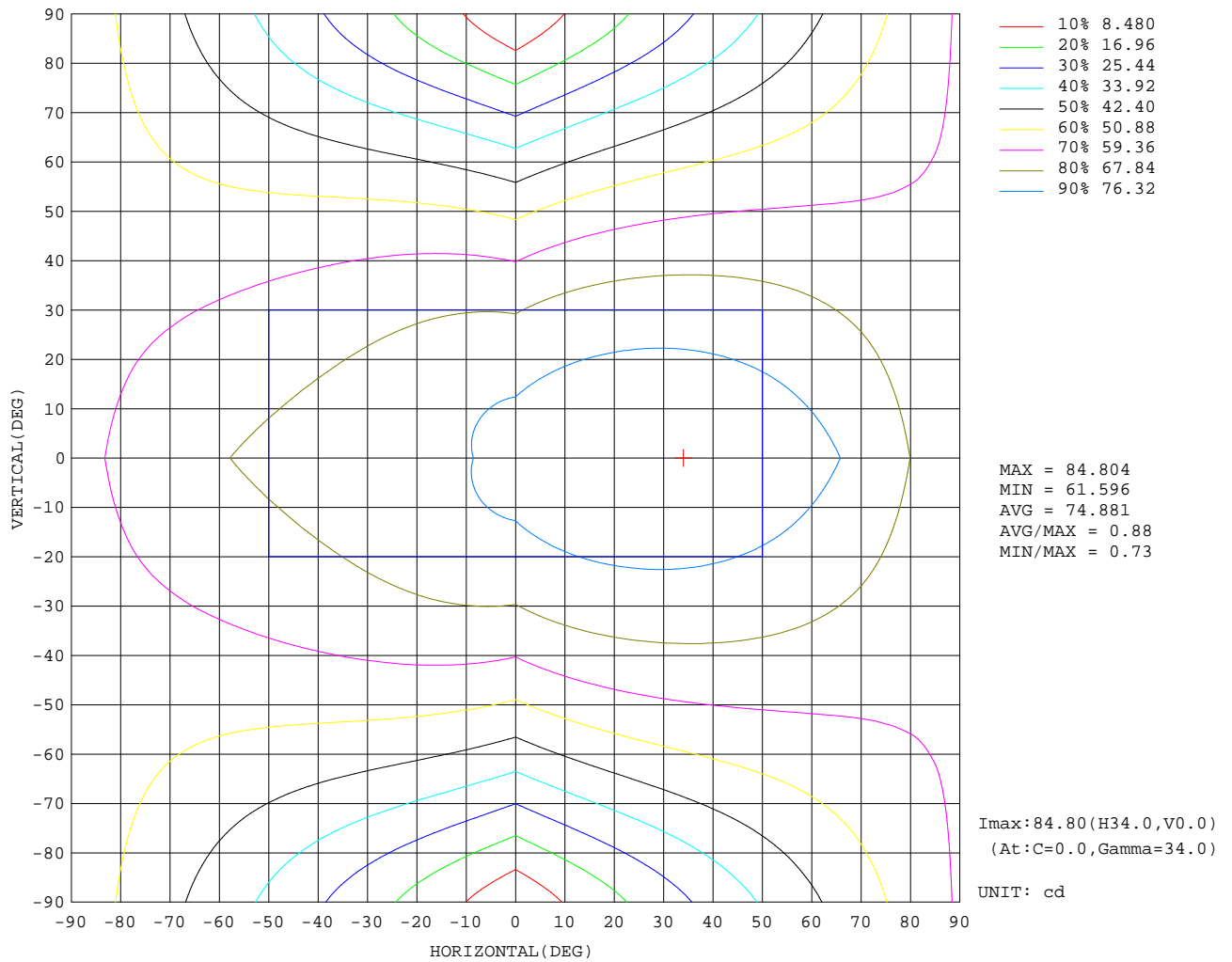
## UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	45	32	25	43	32	24	41	30	24	17
0.80	54	40	32	52	39	32	49	38	31	22
1.00	61	48	39	59	47	39	55	47	37	28
1.25	68	55	46	66	53	45	61	50	43	33
1.50	73	61	52	70	59	50	65	55	48	36
2.00	81	69	61	77	67	59	71	62	55	42
2.50	86	75	66	82	72	64	75	67	60	46
3.00	89	80	72	85	76	69	78	71	65	50
4.00	94	86	79	90	82	76	82	76	70	54
5.00	97	90	84	93	86	81	84	79	74	57
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  
 Test Date: 2021-10-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.429  
 Humidity: 65.0%  
 Test Distance: 8.270m [K=1.0000]  
 Remarks:

ISOCANDELA DIAGRAM

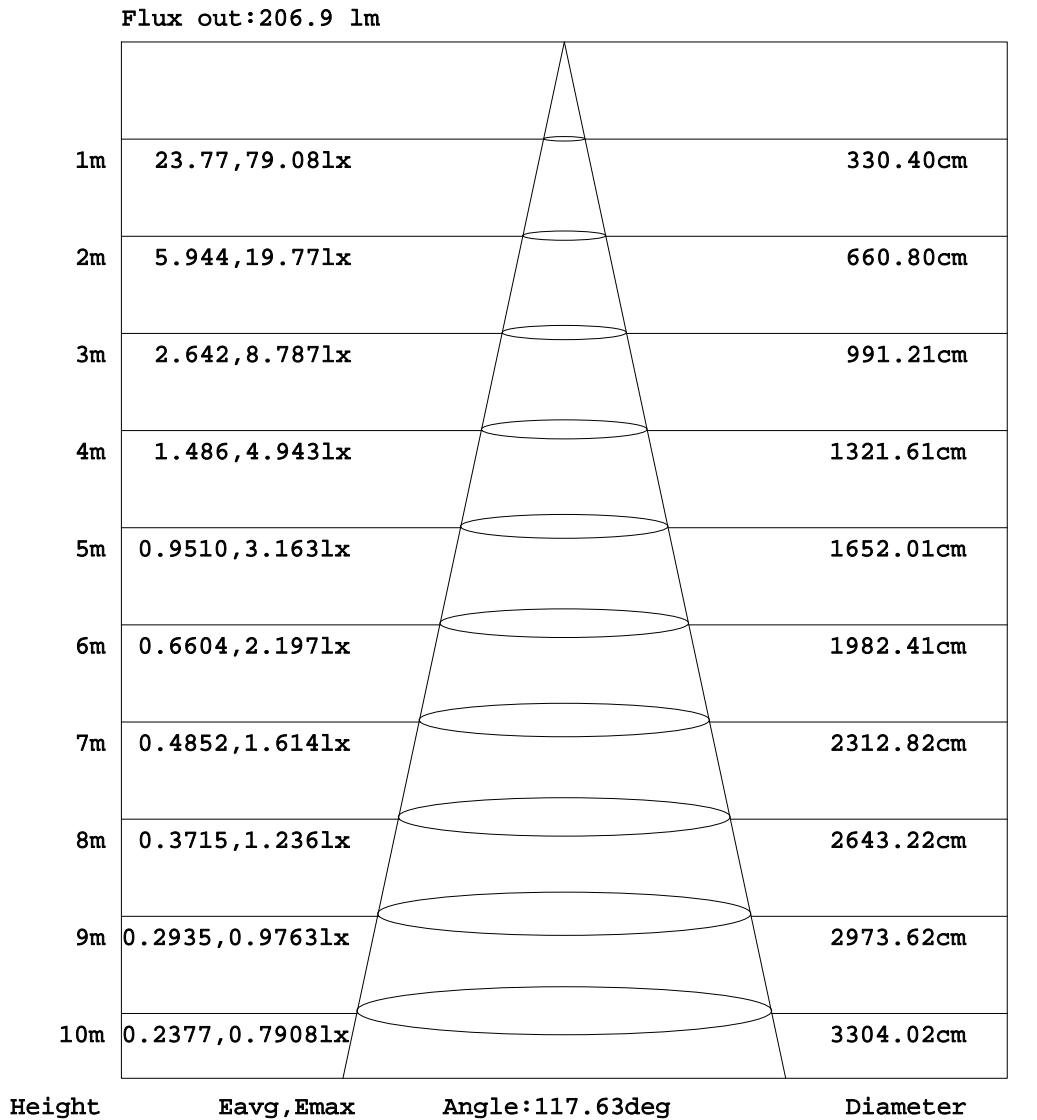


C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Test Date: 2021-10-18

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.429  
 Humidity: 65.0%  
 Test Distance: 8.270m [K=1.0000]  
 Remarks:



AAI Figure

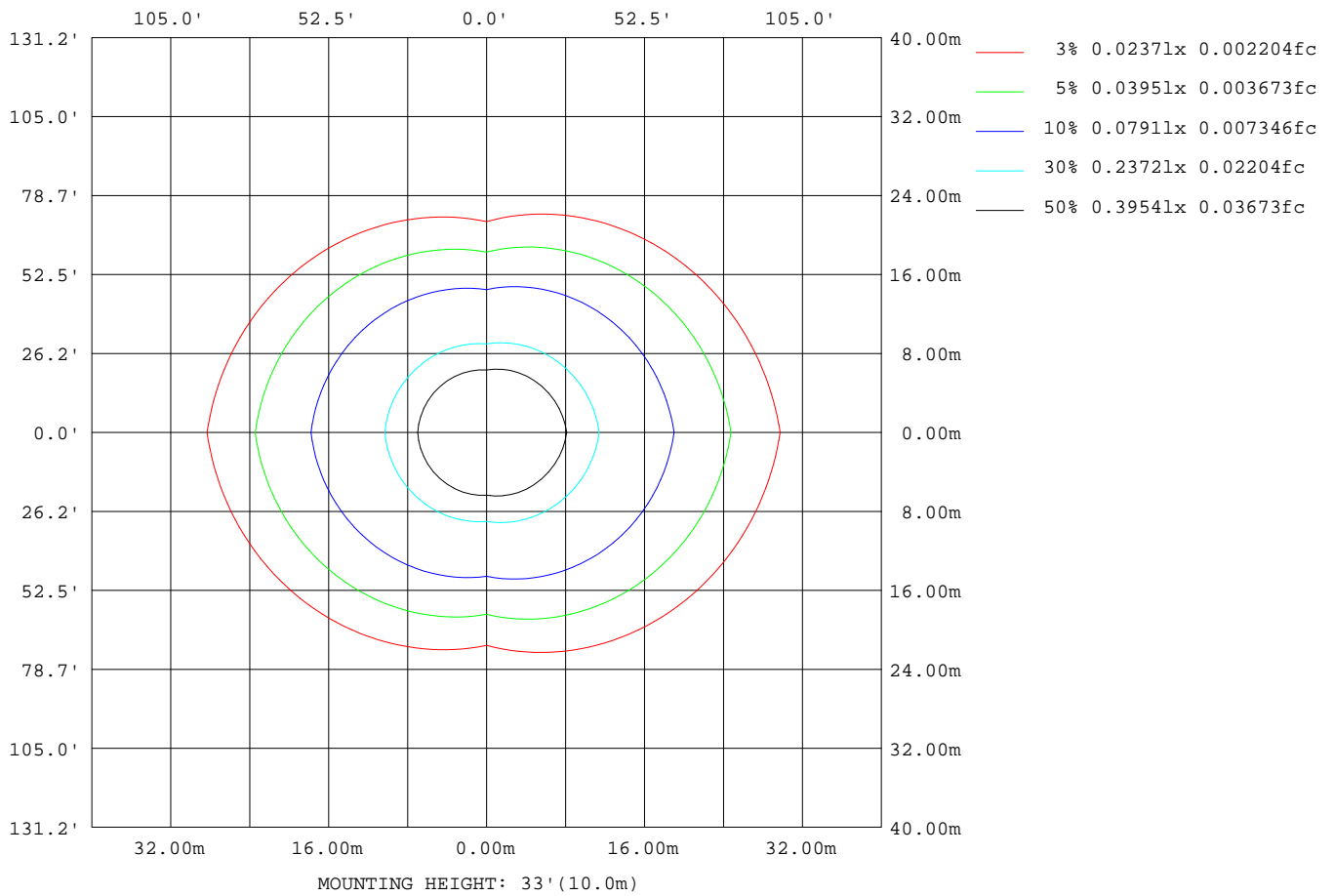


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Test Date:2021-10-18

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.429  
 Humidity:65.0%  
 Test Distance:8.270m [K=1.0000]  
 Remarks:

ISOLUX DIAGRAM



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Test Date: 2021-10-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.429  
 Humidity: 65.0%  
 Test Distance: 8.270m [K=1.0000]  
 Remarks:

## LED Avg.L Report

Test:U:24.000V I:0.3900A P:9.3600W PF:1.0000 Freq:0Hz Lamp Flux:457.083x1 lm		
NAME: GD11718 NS-200	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.: 0.02*1	Shielding Angle:

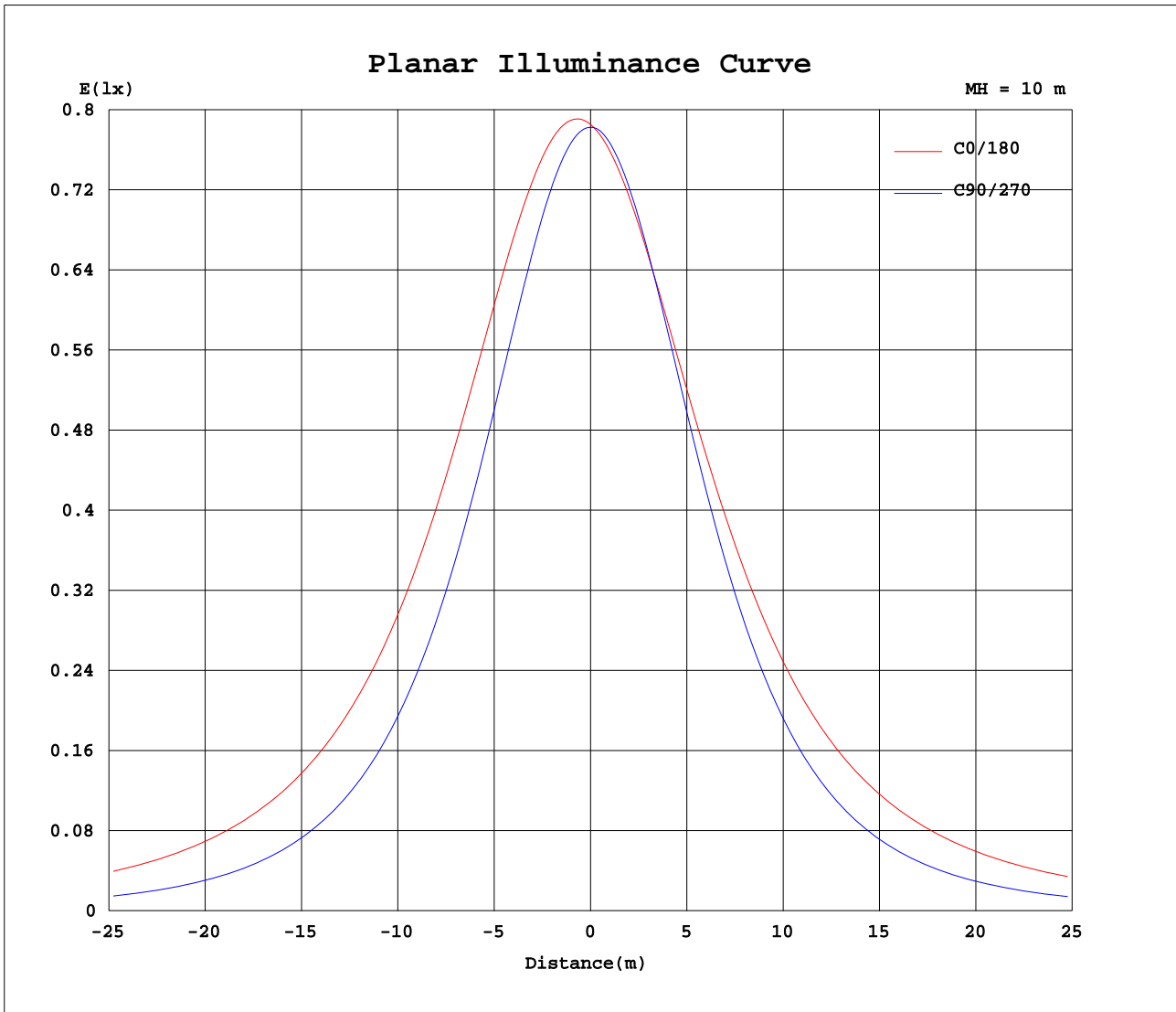
AvgL	cd/m2
L_0~180(65)av	8425
L_0~180(75)av	12894
L_0~180(85)av	35153
L_90~270(65)av	3736
L_90~270(75)av	3561
L_90~270(85)av	3636
L_45(65)av	5458
L_45(75)av	7018
L_45(85)av	15380

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Test Date:2021-10-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.00.429  
 Humidity:65.0%  
 Test Distance:8.270m [K=1.0000]  
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Test Date: 2021-10-18

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.429  
 Humidity: 65.0%  
 Test Distance: 8.270m [K=1.0000]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	90	180	270															
0	78.4	78.4	78.4	78.4															
5	79.8	78.1	77.1	78.1															
10	81.2	77.2	75.8	77.1															
15	82.5	75.7	74.7	75.6															
20	83.5	73.6	73.7	73.4															
25	84.2	71.0	72.8	70.7															
30	84.6	67.7	72.2	67.4															
35	84.6	64.0	71.5	63.6															
40	84.3	59.8	70.9	59.3															
45	83.5	55.0	70.2	54.4															
50	82.3	49.9	69.4	49.2															
55	80.8	44.3	68.4	43.5															
60	78.9	38.4	67.2	37.4															
65	76.6	32.1	65.8	31.0															
70	73.9	25.6	64.3	24.5															
75	70.9	19.0	62.5	17.9															
80	67.7	12.5	60.6	11.5															
85	64.1	6.75	58.5	5.93															
90	60.3	2.45	56.1	2.10															
95	56.2	0.79	53.6	1.11															
100	52.0	0.44	51.0	0.98															
105	47.6	0.47	48.3	0.68															
110	43.1	0.50	45.5	0.54															
115	38.7	0.53	42.6	0.54															
120	34.2	0.56	39.6	0.55															
125	29.9	0.58	36.6	0.57															
130	25.7	0.61	33.5	0.60															
135	21.6	0.64	30.4	0.62															
140	17.8	0.66	27.3	0.64															
145	14.3	0.68	23.8	0.65															
150	10.7	0.70	18.7	0.68															
155	7.39	0.73	15.2	0.70															
160	2.05	0.75	6.58	0.72															
165	0.72	0.77	3.66	0.75															
170	0.70	0.80	1.26	0.78															
175	0.71	0.80	0.78	0.79															
180	0.73	0.81	0.75	0.81															

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Test Date: 2021-10-18

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.00.429  
 Humidity: 65.0%  
 Test Distance: 8.270m [K=1.0000]