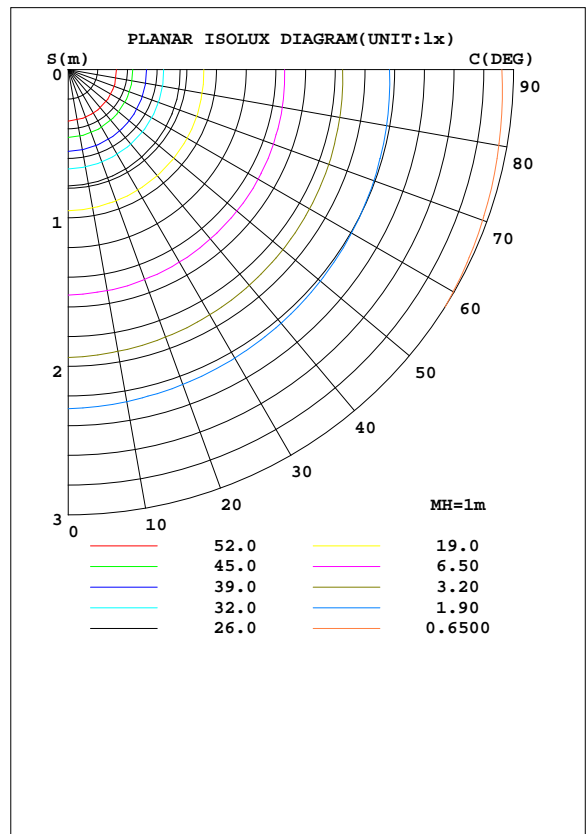
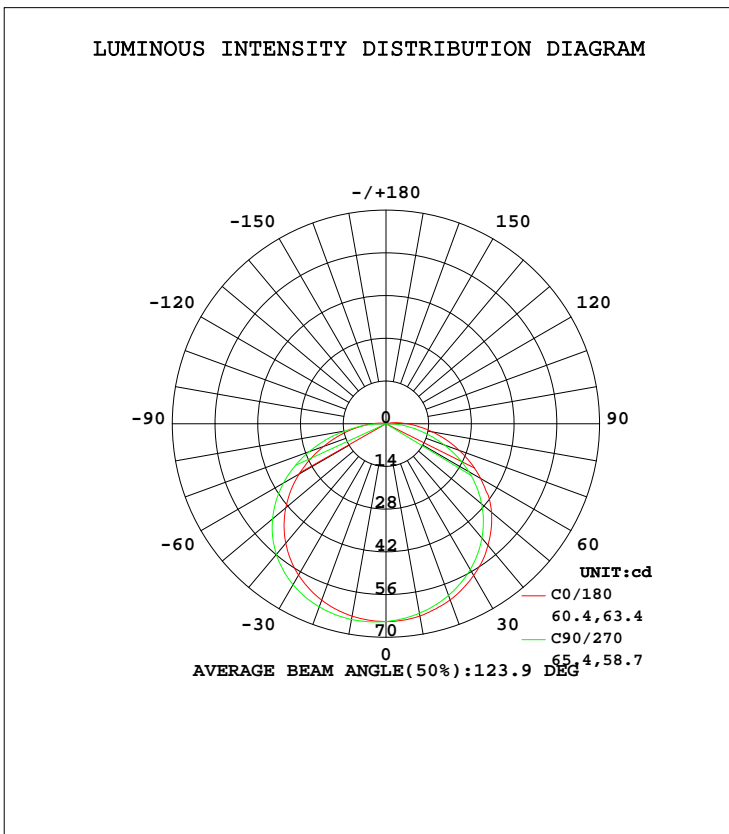


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.000V I:0.3100A P:7.4400W PF:1.0000 Freq:0Hz Lamp Flux:219.74lx1 lm		
NAME: CB-RGB150	TYPE: LED Strip	WEIGHT:
SPEC.: 7.2 W	DIM.: 1000*10*2(MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.02*1	Shielding Angle: 120

DATA OF LAMP		PHOTOMETRIC DATA Eff: 29.54 lm/W			
MODEL		I <sub>max</sub> (cd)	65.17	S/MH(C0/180)	1.31
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.40
RATED VOLTAGE(V)		TOTAL FLUX(lm)	219.74	η UP, DN(C0-180)	1.0,47.9
NOMINAL FLUX(lm)	219.741	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.9,50.2
LAMPS INSIDE	1	η up(%)	1.9	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)		η down(%)	98.1	CIBSE SHR MAX	1.50



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Test Date:2021-11-17

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:

## ZONAL FLUX DIAGRAM

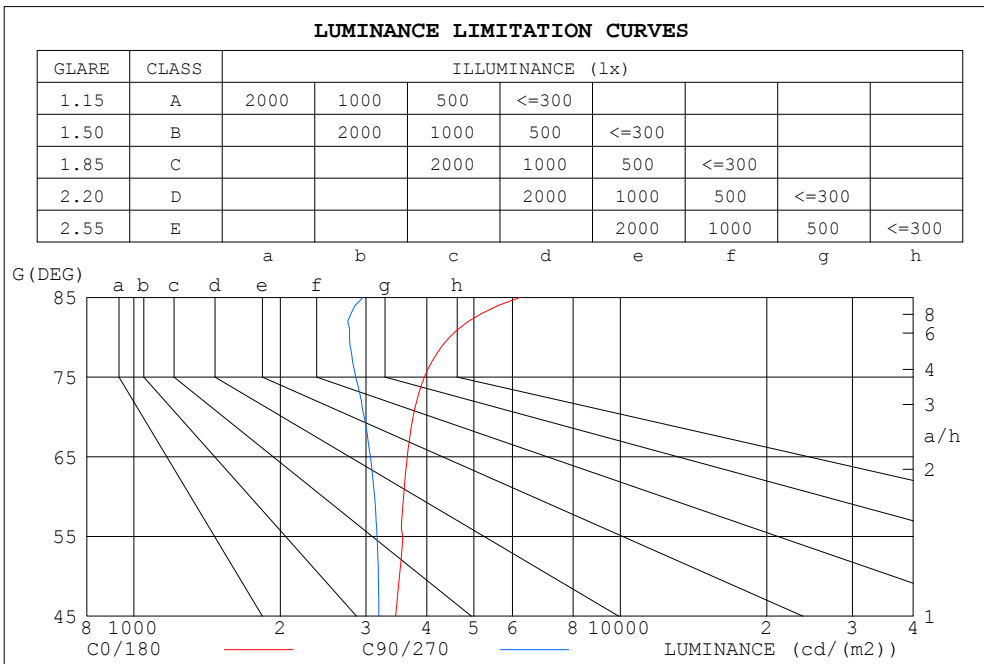
## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C90	C180	C270				$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	63.97	63.06	64.02	65.13				0- 10	6.150	6.150	2.8,2.8
20	61.46	59.88	61.54	63.89				10- 20	17.82	23.97	10.9,10.9
30	57.45	55.23	57.28	60.91				20- 30	27.64	51.60	23.5,23.5
40	52.03	48.91	51.11	55.90				30- 40	34.49	86.09	39.2,39.2
50	45.14	40.95	42.88	48.54				40- 50	37.35	123.4	56.2,56.2
60	35.81	31.29	32.82	38.78				50- 60	35.51	159.0	72.3,72.3
70	25.61	20.37	21.80	26.87				60- 70	28.94	187.9	85.5,85.5
80	15.45	9.652	11.73	13.54				70- 80	19.08	207.0	94.2,94.2
90	6.994	1.295	4.653	2.114				80- 90	8.607	215.6	98.1,98.1
100	1.851	0.2286	1.404	0.1359				90-100	2.106	217.7	99.1,99.1
110	0.2773	0.2994	0.4231	0.1851				100-110	0.5353	218.2	99.3,99.3
120	0.2823	0.3647	0.3528	0.2503				110-120	0.2932	218.5	99.4,99.4
130	0.3148	0.4082	0.3530	0.3047				120-130	0.2930	218.8	99.6,99.6
140	0.3636	0.4354	0.3964	0.3592				130-140	0.2854	219.1	99.7,99.7
150	0.4126	0.4627	0.4343	0.3918				140-150	0.2542	219.4	99.8,99.8
160	0.4451	0.4899	0.4724	0.4354				150-160	0.2059	219.6	99.9,99.9
170	0.4939	0.5170	0.5157	0.4789				160-170	0.1358	219.7	100,100
180	0.5320	0.5279	0.5320	0.5225				170-180	0.0490	219.7	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Test Date:2021-11-17

$\gamma$  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



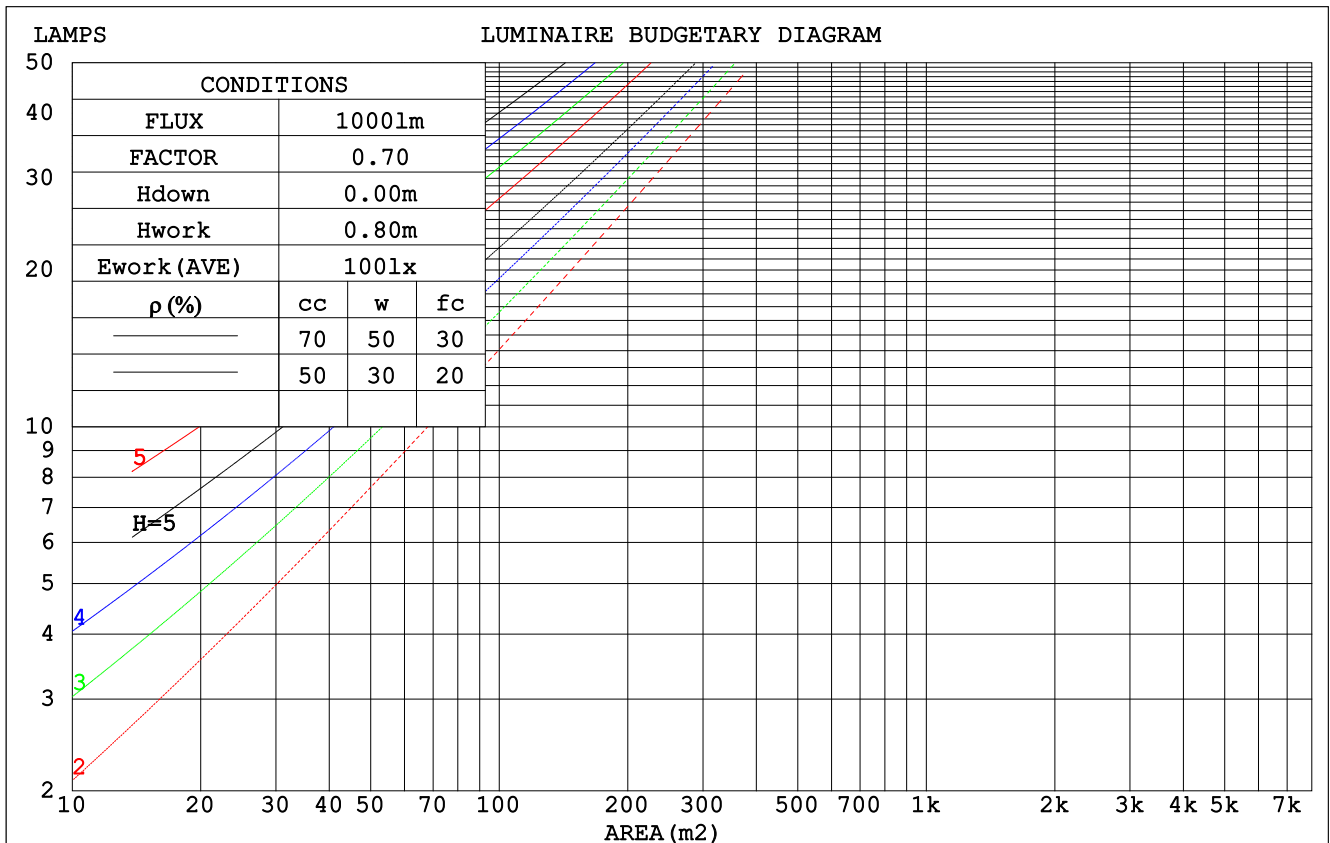
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	6224	2960
80	4454	2776
75	3955	2858
70	3749	2974
65	3648	3064
60	3586	3125
55	3572	3162
50	3515	3181
45	3452	3188

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Test Date: 2021-11-17

$\gamma$  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:

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	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.00	1.00	1.00	.98
1.0	1.02	.97	.93	.99	.95	.91	.94	.91	.88	.90	.87	.85	.86	.84	.82	.79
2.0	.88	.80	.74	.86	.79	.73	.82	.76	.71	.78	.73	.69	.75	.71	.67	.65
3.0	.76	.68	.61	.75	.67	.60	.71	.64	.59	.68	.62	.57	.65	.60	.56	.54
4.0	.67	.58	.51	.66	.57	.50	.63	.55	.50	.60	.54	.49	.58	.52	.48	.45
5.0	.60	.50	.43	.59	.50	.43	.56	.48	.42	.54	.47	.42	.52	.46	.41	.39
6.0	.54	.44	.38	.53	.44	.37	.51	.43	.37	.49	.42	.36	.47	.41	.36	.34
7.0	.49	.39	.33	.48	.39	.33	.46	.38	.32	.44	.37	.32	.43	.36	.32	.30
8.0	.44	.35	.29	.43	.35	.29	.42	.34	.29	.40	.34	.29	.39	.33	.28	.26
9.0	.40	.32	.26	.40	.32	.26	.38	.31	.26	.37	.30	.26	.36	.30	.25	.24
10.0	.37	.29	.24	.37	.29	.24	.35	.28	.23	.34	.28	.23	.33	.27	.23	.21



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Test Date:2021-11-17

$\gamma$  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

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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.344	.196	.062	.336	.192	.061	.322	.185	.059	.308	.178	.057	.296	.172	.055	
2.0	.314	.172	.053	.307	.169	.052	.294	.164	.051	.282	.158	.050	.271	.153	.048	
3.0	.286	.152	.046	.280	.150	.045	.268	.145	.044	.258	.141	.043	.248	.137	.042	
4.0	.261	.136	.040	.256	.134	.040	.246	.130	.039	.236	.127	.038	.227	.124	.038	
5.0	.240	.122	.035	.235	.121	.035	.226	.118	.035	.217	.115	.034	.209	.112	.034	
6.0	.221	.111	.032	.217	.110	.032	.209	.107	.031	.201	.104	.031	.194	.102	.030	
7.0	.205	.101	.029	.201	.100	.029	.194	.098	.028	.187	.096	.028	.181	.094	.028	
8.0	.191	.093	.026	.187	.092	.026	.181	.090	.026	.175	.088	.026	.169	.087	.025	
9.0	.178	.086	.024	.175	.085	.024	.169	.084	.024	.164	.082	.023	.158	.080	.023	
10.0	.167	.080	.022	.164	.079	.022	.159	.078	.022	.154	.076	.022	.149	.075	.022	

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.205	.205	.205	.175	.175	.175	.120	.120	.120	.069	.069	.069	.022	.022	.022	
1.0	.197	.170	.146	.169	.146	.126	.115	.101	.087	.066	.058	.051	.021	.019	.016	
2.0	.190	.146	.110	.163	.126	.095	.111	.087	.066	.064	.051	.039	.021	.016	.013	
3.0	.182	.129	.087	.156	.111	.075	.107	.077	.053	.062	.045	.031	.020	.015	.010	
4.0	.175	.116	.071	.150	.100	.062	.103	.070	.044	.060	.041	.026	.019	.013	.008	
5.0	.167	.106	.061	.143	.092	.053	.099	.064	.037	.057	.038	.022	.018	.012	.007	
6.0	.160	.098	.053	.137	.084	.046	.095	.059	.033	.055	.035	.019	.018	.011	.006	
7.0	.153	.091	.047	.131	.079	.041	.091	.055	.029	.053	.032	.017	.017	.011	.006	
8.0	.146	.085	.043	.126	.074	.037	.087	.052	.027	.051	.031	.016	.016	.010	.005	
9.0	.140	.080	.040	.120	.069	.035	.083	.049	.025	.049	.029	.015	.016	.009	.005	
10.0	.134	.076	.037	.115	.066	.032	.080	.046	.023	.047	.027	.014	.015	.009	.005	

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Test Date:2021-11-17

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:

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	16.4	18.0	16.7	18.4	18.7	15.7	17.4	16.1	17.8	18.1
3H	18.6	20.1	19.0	20.5	20.9	17.7	19.2	18.1	19.6	20.0
4H	19.6	21.0	20.0	21.4	21.8	18.4	19.9	18.9	20.3	20.7
6H	20.5	21.9	21.0	22.3	22.7	19.1	20.4	19.5	20.8	21.2
8H	21.0	22.2	21.4	22.7	23.1	19.3	20.6	19.7	21.0	21.4
12H	21.4	22.7	21.9	23.1	23.6	19.5	20.7	19.9	21.1	21.6
4H 2H	17.0	18.4	17.4	18.8	19.2	16.4	17.8	16.8	18.2	18.7
3H	19.4	20.7	19.9	21.1	21.5	18.6	19.8	19.0	20.2	20.7
4H	20.6	21.7	21.0	22.1	22.6	19.5	20.6	19.9	21.0	21.5
6H	21.7	22.7	22.2	23.1	23.6	20.2	21.2	20.7	21.7	22.2
8H	22.2	23.1	22.7	23.6	24.1	20.5	21.4	21.0	21.9	22.4
12H	22.8	23.6	23.3	24.1	24.6	20.8	21.6	21.3	22.1	22.6
8H 4H	20.9	21.8	21.4	22.3	22.8	19.9	20.8	20.4	21.3	21.8
6H	22.2	23.0	22.7	23.5	24.0	20.8	21.6	21.3	22.1	22.6
8H	22.8	23.5	23.4	24.1	24.6	21.2	21.9	21.7	22.4	22.9
12H	23.6	24.2	24.1	24.7	25.3	21.6	22.2	22.1	22.7	23.3
12H 4H	21.0	21.8	21.5	22.3	22.8	19.9	20.8	20.4	21.3	21.8
6H	22.3	23.0	22.8	23.5	24.1	20.9	21.6	21.5	22.1	22.7
8H	23.0	23.6	23.5	24.1	24.7	21.4	22.0	21.9	22.5	23.1
CIE190: 2010										

CIE190: 2010  
 Area: 0.02 m2

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Test Date:2021-11-17

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:

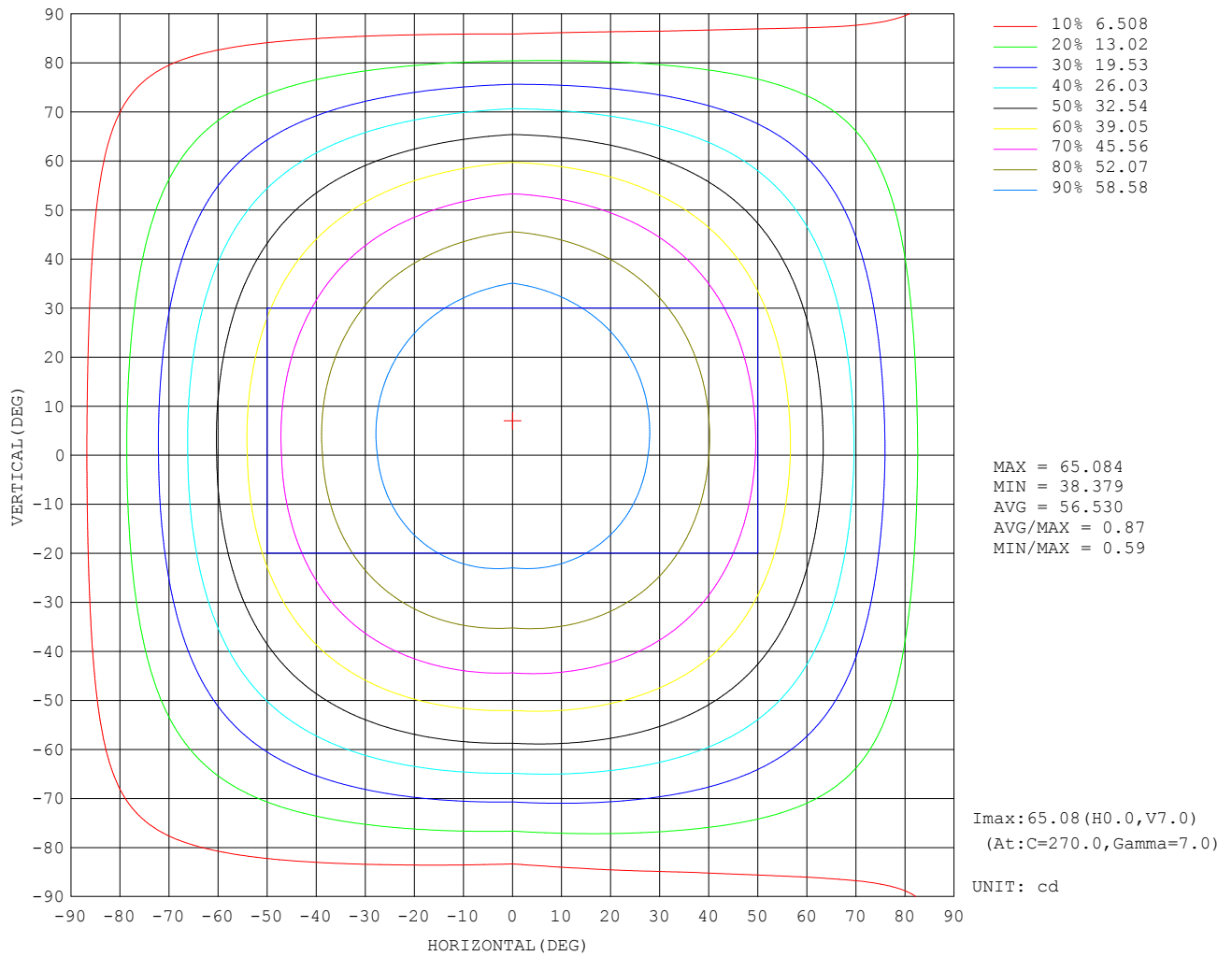
## UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	54	42	35	54	42	35	52	42	35	28
0.80	64	52	44	63	52	44	61	51	44	36
1.00	73	61	53	71	60	53	69	62	52	44
1.25	80	68	61	78	68	60	75	66	59	52
1.50	85	74	66	83	73	66	80	71	65	57
2.00	92	83	75	90	81	75	86	79	73	64
2.50	96	88	81	94	86	80	90	83	78	69
3.00	100	92	86	97	90	85	93	87	82	73
4.00	104	98	92	101	96	91	97	92	88	78
5.00	107	101	96	104	99	95	99	95	92	82
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: 2021-11-17

$\gamma$  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

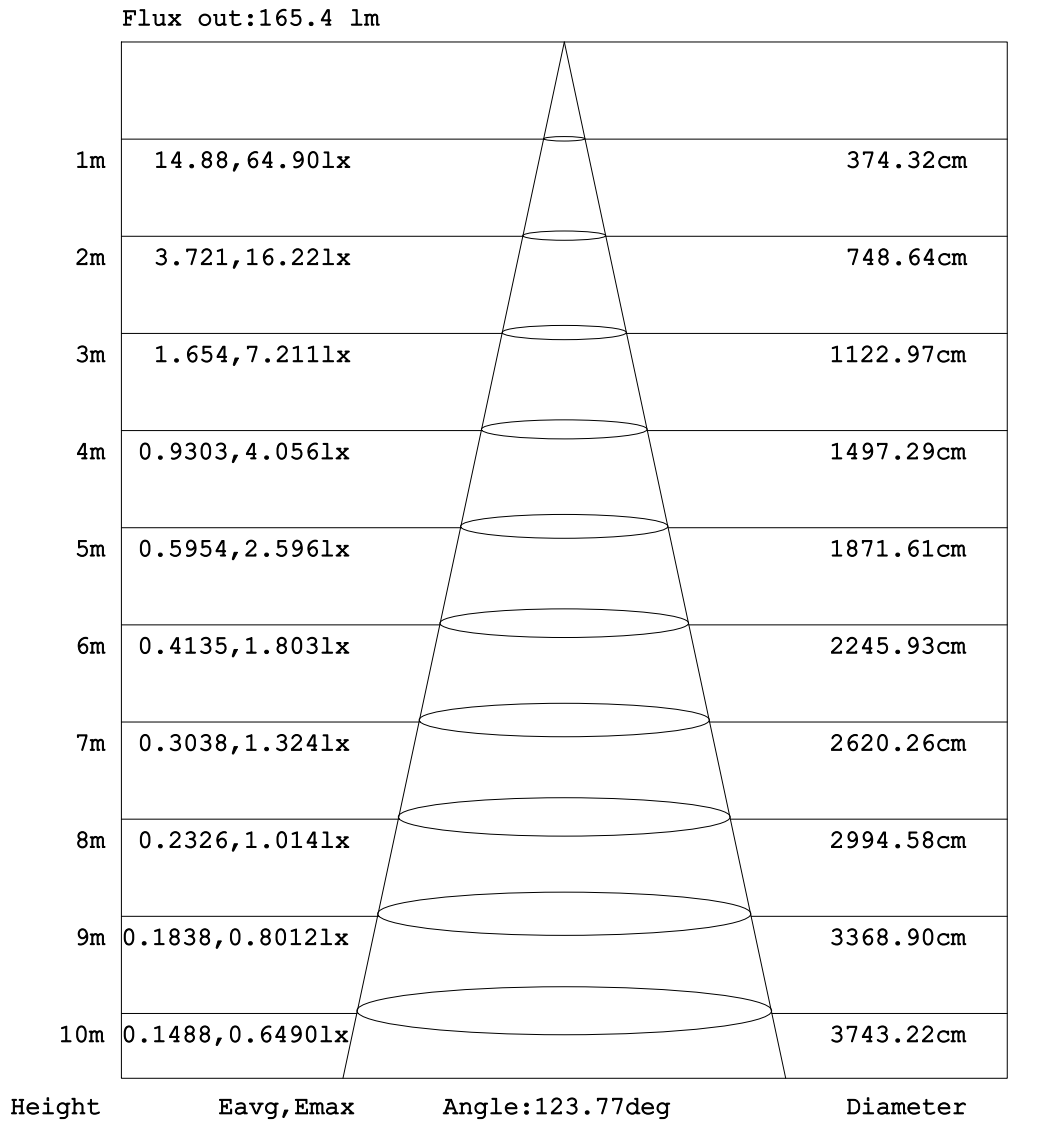


C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Test Date: 2021-11-17

$\gamma$  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:



AAI Figure

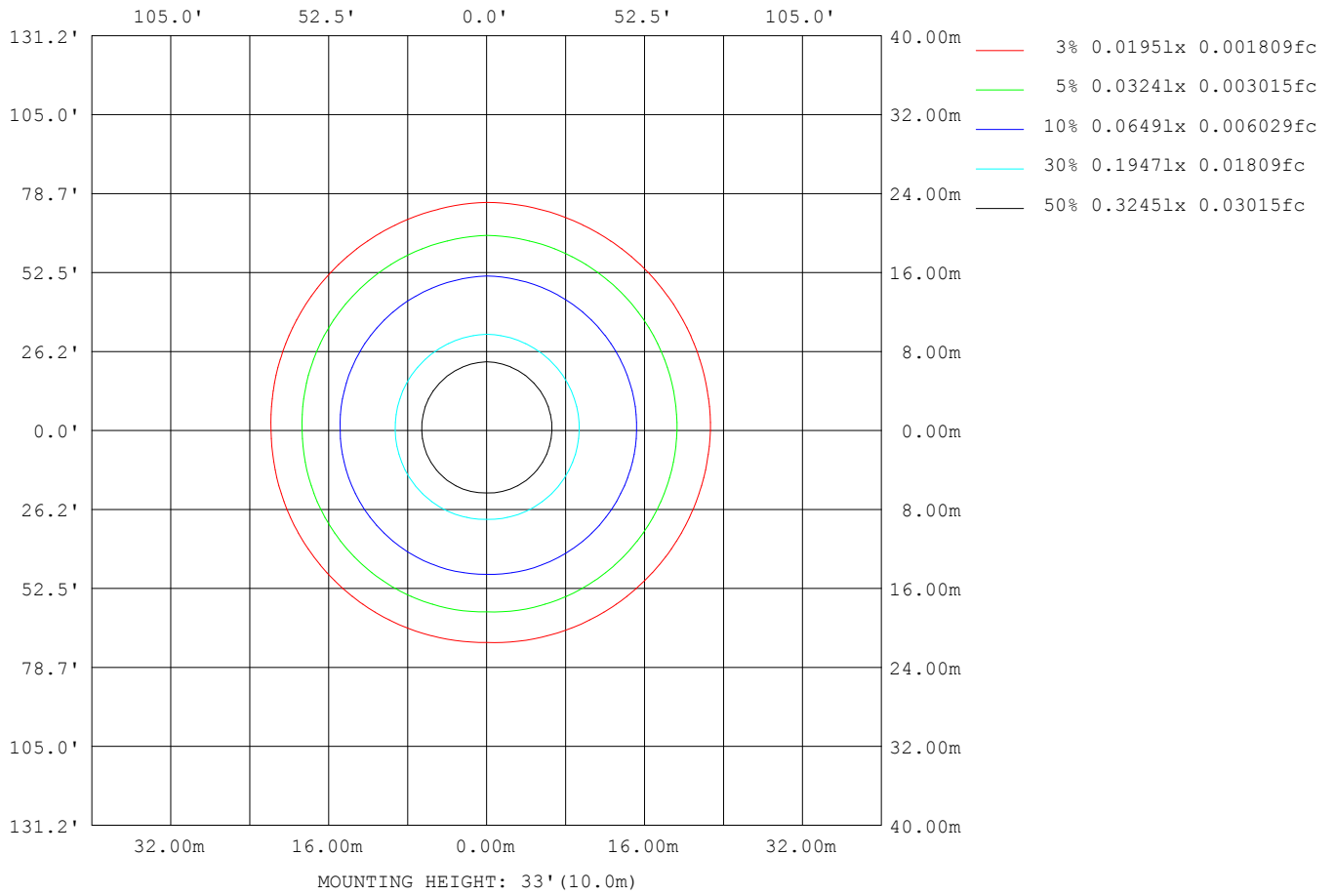


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Test Date:2021-11-17

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: 2021-11-17

$\gamma$  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:0.3100A P:7.4400W PF:1.0000 Freq:0Hz Lamp Flux:219.741x1 lm		
NAME: CB-RGB150	TYPE: LED Strip	WEIGHT:
SPEC.: 7.2W	DIM.: 1000*10*2 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.02*1	Shielding Angle: 120

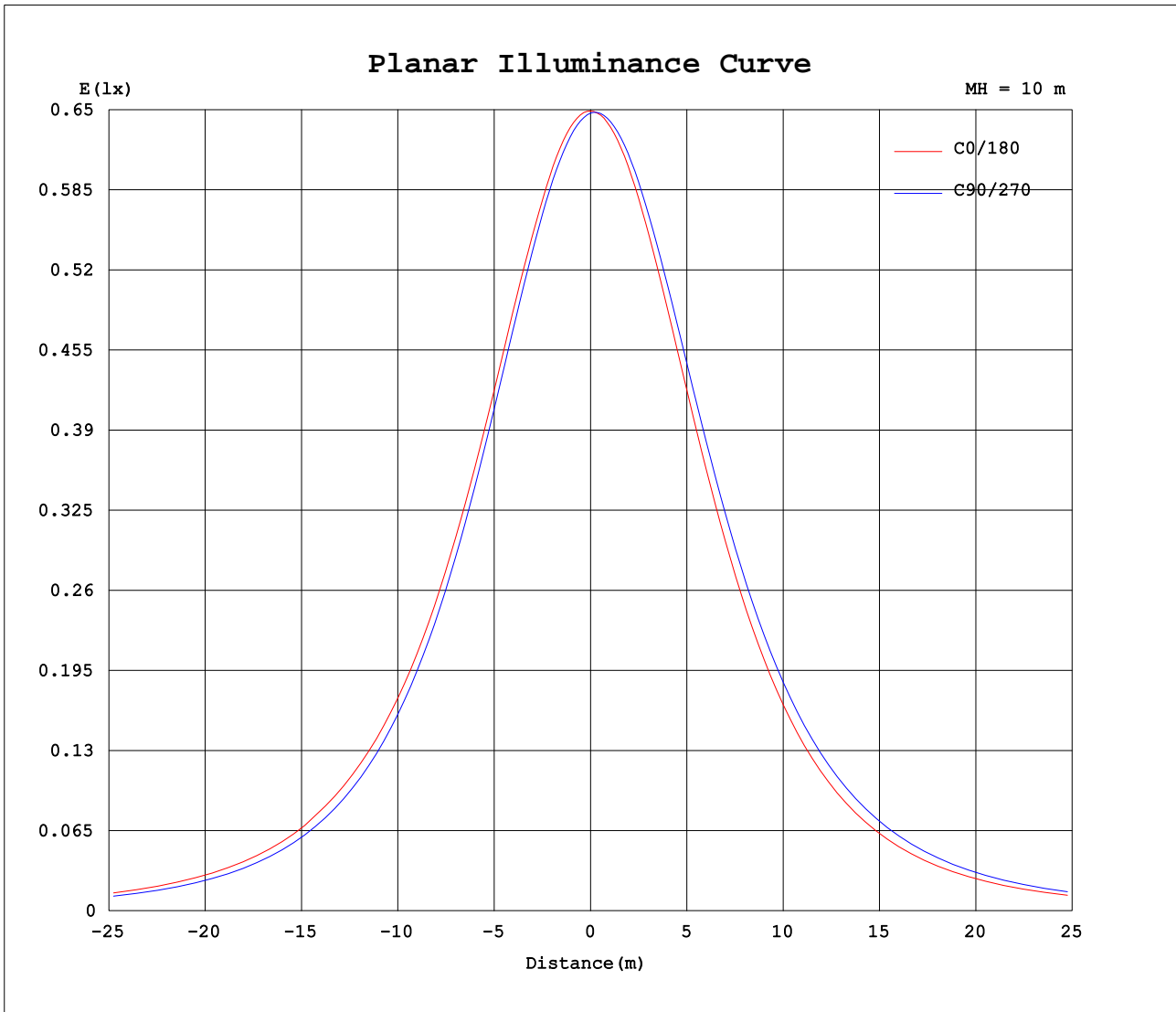
AvgL	cd/m2
L_0~180(65)av	3438
L_0~180(75)av	3573
L_0~180(85)av	5292
L_90~270(65)av	3488
L_90~270(75)av	3397
L_90~270(85)av	3628
L_45(65)av	3456
L_45(75)av	3440
L_45(85)av	4195

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 90.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Test Date:2021-11-17

$\gamma$  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:2021-11-17

$\gamma$  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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	90	180	270															
0	64.8	64.8	64.8	64.8															
5	64.6	64.1	64.6	65.1															
10	64.0	63.1	64.0	65.1															
15	62.8	61.6	63.0	64.7															
20	61.5	59.9	61.5	63.9															
25	59.6	57.7	59.6	62.6															
30	57.4	55.2	57.3	60.9															
35	55.0	52.3	54.5	58.7															
40	52.0	48.9	51.1	55.9															
45	48.7	45.2	47.2	52.5															
50	45.1	40.9	42.9	48.5															
55	40.9	36.3	38.0	44.0															
60	35.8	31.3	32.8	38.8															
65	30.8	25.9	27.3	33.0															
70	25.6	20.4	21.8	26.9															
75	20.4	14.8	16.5	20.4															
80	15.4	9.65	11.7	13.5															
85	10.8	5.17	7.61	7.48															
90	6.99	1.30	4.65	2.11															
95	4.02	0.19	2.65	0.12															
100	1.85	0.23	1.40	0.14															
105	0.58	0.26	0.77	0.17															
110	0.28	0.30	0.42	0.19															
115	0.26	0.33	0.36	0.22															
120	0.28	0.36	0.35	0.25															
125	0.30	0.39	0.34	0.28															
130	0.31	0.41	0.35	0.30															
135	0.35	0.41	0.37	0.33															
140	0.36	0.44	0.40	0.36															
145	0.40	0.45	0.41	0.36															
150	0.41	0.46	0.43	0.39															
155	0.43	0.48	0.46	0.41															
160	0.45	0.49	0.47	0.44															
165	0.47	0.50	0.50	0.46															
170	0.49	0.52	0.52	0.48															
175	0.53	0.52	0.53	0.50															
180	0.53	0.53	0.53	0.52															

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Test Date:2021-11-17

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: