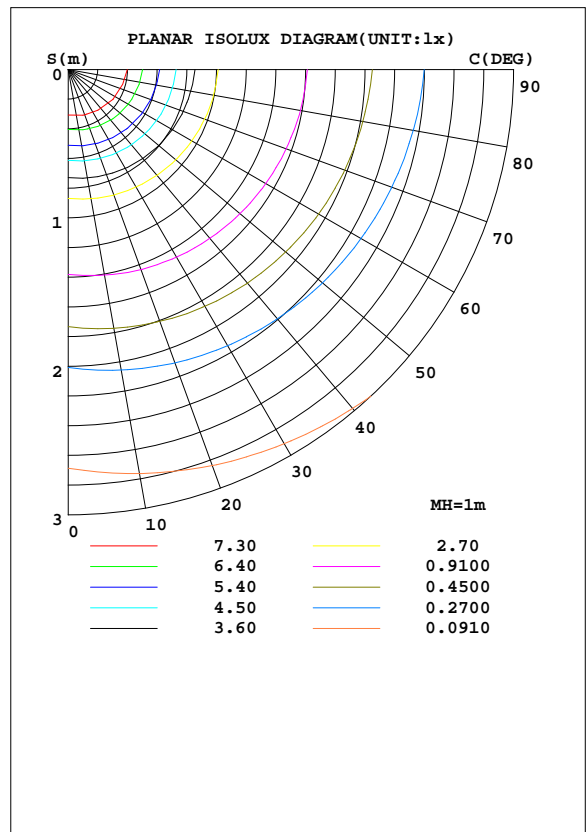
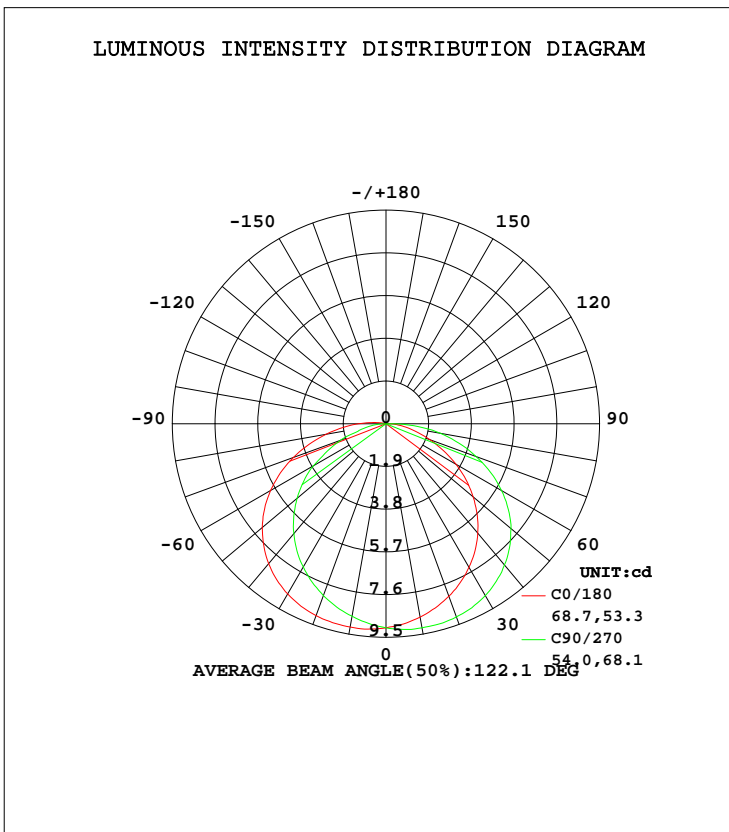


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.000V I:0.1000A P:2.4000W PF:1.0000 Freq:0Hz Lamp Flux:30.1246x1 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

DATA OF LAMP		PHOTOMETRIC DATA Eff: 12.55 lm/W			
MODEL		I <sub>max</sub> (cd)	9.213	S/MH(C0/180)	1.43
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.22
RATED VOLTAGE(V)		TOTAL FLUX(lm)	30.124	η UP, DN(C0-180)	0.1,49.3
NOMINAL FLUX(lm)	30.1246	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.7,49.9
LAMPS INSIDE	1	η up(%)	0.8	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)		η down(%)	99.2	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]

## ZONAL FLUX DIAGRAM

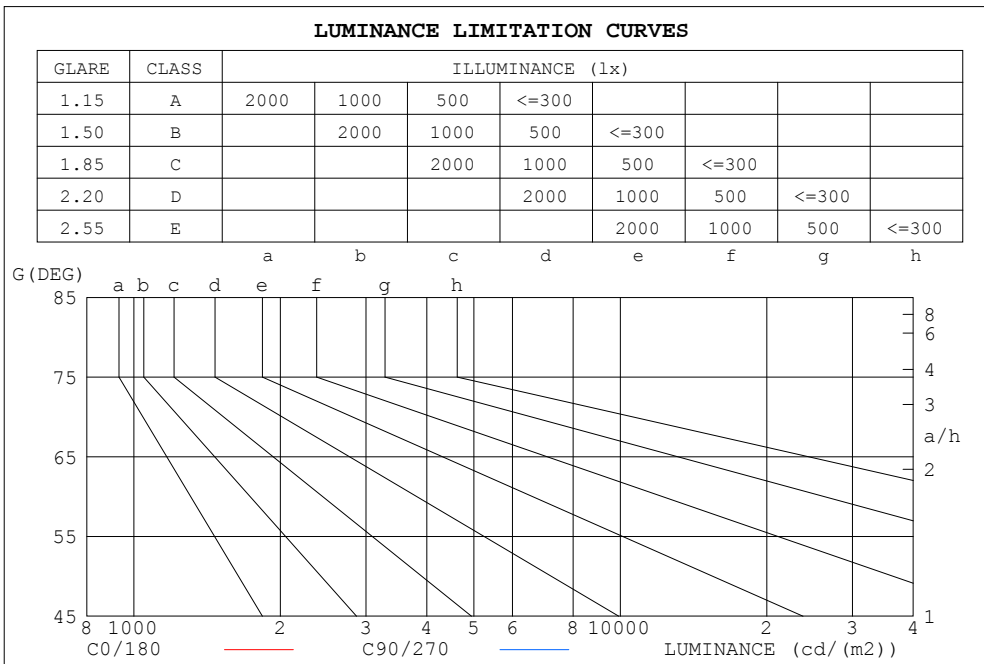
## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C90	C180	C270				$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum,lamp
10	8.735	9.213	9.182	8.692				0- 10	0.8609	0.8609	2.86,2.86
20	8.170	9.142	9.082	8.137				10- 20	2.493	3.354	11.1,11.1
30	7.377	8.827	8.740	7.355				20- 30	3.869	7.223	24,24
40	6.350	8.201	8.120	6.371				30- 40	4.823	12.05	40,40
50	5.057	7.255	7.190	5.170				40- 50	5.204	17.25	57.3,57.3
60	3.584	5.929	5.928	3.698				50- 60	4.925	22.18	73.6,73.6
70	2.078	4.271	4.384	2.153				60- 70	3.961	26.14	86.8,86.8
80	0.8979	2.450	2.700	0.8431				70- 80	2.576	28.71	95.3,95.3
90	0.2180	0.2751	1.227	0.1142				80- 90	1.171	29.88	99.2,99.2
100	0	0	0.2767	0				90-100	0.2191	30.10	99.9,99.9
110	0	0	0	0				100-110	0.0220	30.12	100,100
120	0	0	0	0				110-120	0	30.12	100,100
130	0	0	0	0				120-130	0	30.12	100,100
140	0	0	0	0				130-140	0	30.12	100,100
150	0	0	0	0				140-150	0	30.12	100,100
160	0	0	0	0				150-160	0	30.12	100,100
170	0	0	0	0				160-170	0	30.12	100,100
180	0	0	0	0				170-180	0	30.12	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



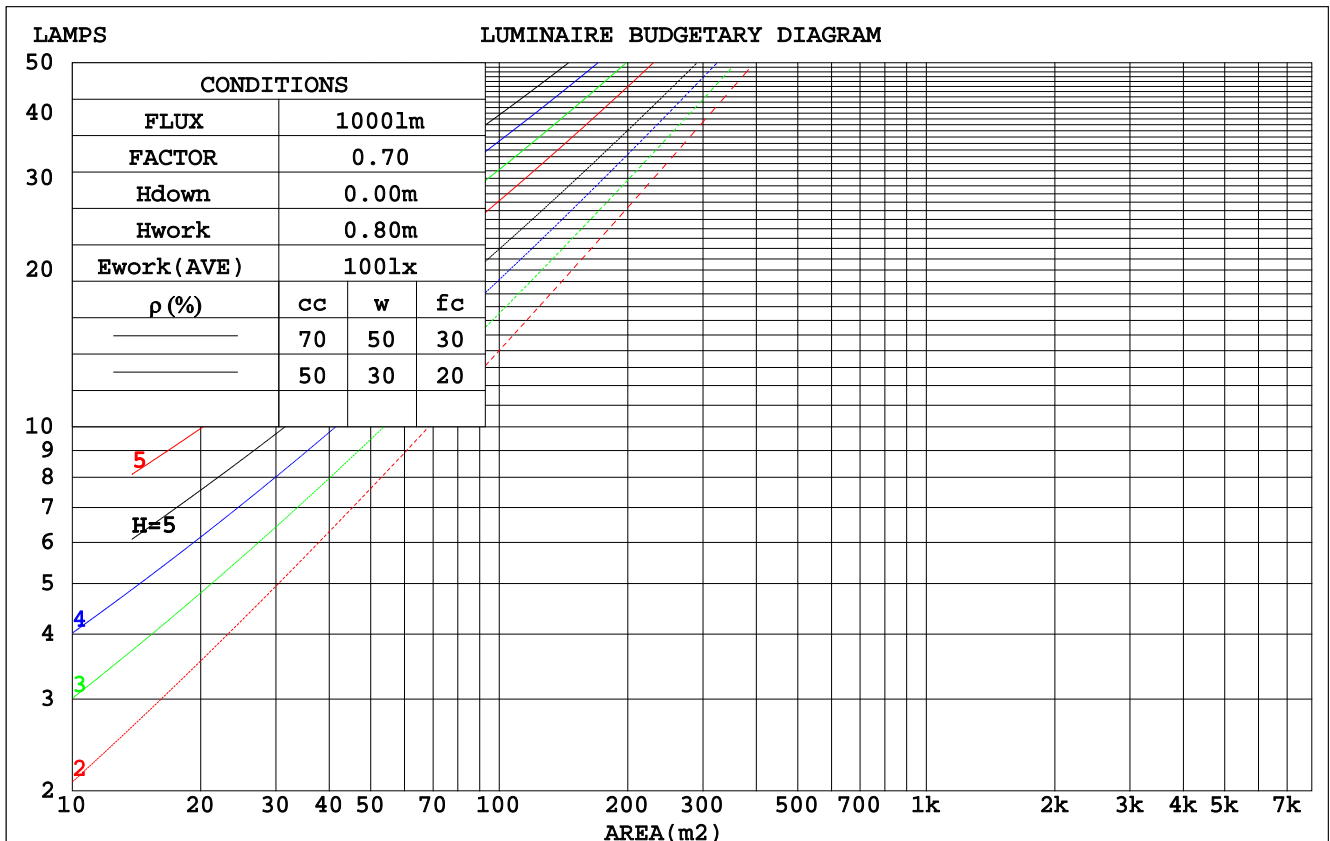
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	278	813
80	259	705
75	276	651
70	304	624
65	333	608
60	358	593
55	379	579
50	393	564
45	406	550

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	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	.99
1.0	1.02	.97	.93	.90	.95	.91	.95	.92	.88	.91	.88	.85	.87	.85	.83	.80
2.0	.88	.81	.74	.86	.79	.73	.82	.77	.72	.79	.74	.70	.76	.72	.68	.66
3.0	.77	.68	.61	.75	.67	.61	.72	.65	.59	.69	.63	.58	.66	.61	.57	.55
4.0	.68	.58	.51	.66	.58	.51	.64	.56	.50	.61	.55	.49	.59	.53	.48	.46
5.0	.60	.51	.44	.59	.50	.44	.57	.49	.43	.55	.48	.42	.53	.47	.42	.40
6.0	.54	.45	.38	.53	.44	.38	.51	.43	.37	.49	.42	.37	.48	.41	.37	.34
7.0	.49	.40	.33	.48	.39	.33	.46	.39	.33	.45	.38	.33	.43	.37	.32	.30
8.0	.44	.36	.30	.44	.35	.29	.42	.35	.29	.41	.34	.29	.40	.33	.29	.27
9.0	.41	.32	.27	.40	.32	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.24
10.0	.37	.29	.24	.37	.29	.24	.36	.29	.24	.35	.28	.24	.34	.28	.23	.22



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

$\rho_{cc}$	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	.343	.195	.062	.335	.191	.061	.321	.184	.059	.309	.178	.057	.297	.172	.055	
2.0	.313	.172	.053	.306	.169	.052	.294	.164	.051	.283	.159	.050	.272	.154	.049	
3.0	.285	.152	.045	.280	.150	.045	.269	.146	.044	.259	.142	.043	.249	.138	.043	
4.0	.261	.136	.040	.256	.134	.040	.246	.130	.039	.237	.127	.038	.229	.124	.038	
5.0	.239	.122	.035	.235	.121	.035	.226	.118	.035	.218	.115	.034	.211	.113	.034	
6.0	.221	.111	.032	.217	.110	.032	.209	.107	.031	.202	.105	.031	.195	.103	.031	
7.0	.205	.101	.029	.201	.100	.029	.194	.098	.028	.188	.096	.028	.182	.094	.028	
8.0	.191	.093	.026	.187	.092	.026	.181	.091	.026	.175	.089	.026	.170	.087	.025	
9.0	.178	.086	.024	.175	.085	.024	.170	.084	.024	.165	.082	.024	.160	.081	.023	
10.0	.167	.080	.022	.165	.079	.022	.160	.078	.022	.155	.077	.022	.150	.076	.022	

$\rho_{cc}$	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	.197	.197	.197	.168	.168	.168	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.189	.162	.138	.161	.139	.119	.110	.096	.082	.064	.055	.048	.020	.018	.015	
2.0	.181	.138	.102	.155	.119	.088	.106	.082	.061	.061	.048	.036	.020	.015	.012	
3.0	.174	.121	.078	.149	.104	.068	.102	.072	.048	.059	.042	.028	.019	.014	.009	
4.0	.166	.107	.063	.142	.093	.055	.098	.065	.038	.057	.038	.023	.018	.012	.007	
5.0	.158	.097	.052	.136	.084	.045	.094	.059	.032	.054	.034	.019	.017	.011	.006	
6.0	.151	.089	.044	.130	.077	.039	.090	.054	.027	.052	.032	.016	.017	.010	.005	
7.0	.144	.082	.039	.124	.071	.034	.086	.050	.024	.050	.029	.014	.016	.010	.005	
8.0	.137	.076	.034	.118	.066	.030	.082	.046	.021	.048	.027	.013	.015	.009	.004	
9.0	.131	.071	.031	.113	.062	.027	.078	.044	.019	.046	.026	.011	.015	.008	.004	
10.0	.125	.067	.028	.108	.058	.025	.075	.041	.018	.044	.024	.010	.014	.008	.003	

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:

## 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	8.9	10.6	9.3	10.9	11.2	11.2	12.9	11.6	13.2	13.6
3H	10.5	12.0	10.9	12.4	12.8	13.5	15.0	13.9	15.4	15.8
4H	11.1	12.5	11.5	12.9	13.3	14.5	15.9	14.9	16.3	16.7
6H	11.5	12.9	11.9	13.2	13.7	15.4	16.7	15.8	17.1	17.5
8H	11.7	13.0	12.1	13.4	13.8	15.8	17.1	16.2	17.5	17.9
12H	11.8	13.0	12.2	13.4	13.9	16.1	17.3	16.5	17.7	18.2
4H 2H	9.9	11.3	10.3	11.7	12.1	12.1	13.5	12.5	13.9	14.3
3H	11.8	13.0	12.2	13.4	13.9	14.6	15.8	15.0	16.2	16.6
4H	12.5	13.7	13.0	14.1	14.5	15.7	16.9	16.2	17.3	17.7
6H	13.1	14.1	13.6	14.6	15.0	16.8	17.8	17.3	18.2	18.7
8H	13.4	14.3	13.8	14.7	15.2	17.3	18.2	17.7	18.7	19.1
12H	13.5	14.4	14.0	14.9	15.3	17.7	18.5	18.2	19.0	19.5
8H 4H	13.2	14.1	13.7	14.6	15.1	16.3	17.2	16.7	17.7	18.1
6H	14.0	14.8	14.5	15.3	15.8	17.6	18.3	18.1	18.8	19.3
8H	14.4	15.1	14.9	15.6	16.1	18.2	18.9	18.7	19.4	19.9
12H	14.6	15.3	15.2	15.8	16.3	18.7	19.3	19.2	19.8	20.4
12H 4H	13.4	14.2	13.9	14.7	15.2	16.4	17.2	16.9	17.7	18.2
6H	14.3	15.0	14.8	15.4	16.0	17.7	18.4	18.3	18.9	19.5
8H	14.7	15.3	15.2	15.8	16.4	18.4	19.1	19.0	19.6	20.1
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

$\gamma$  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:

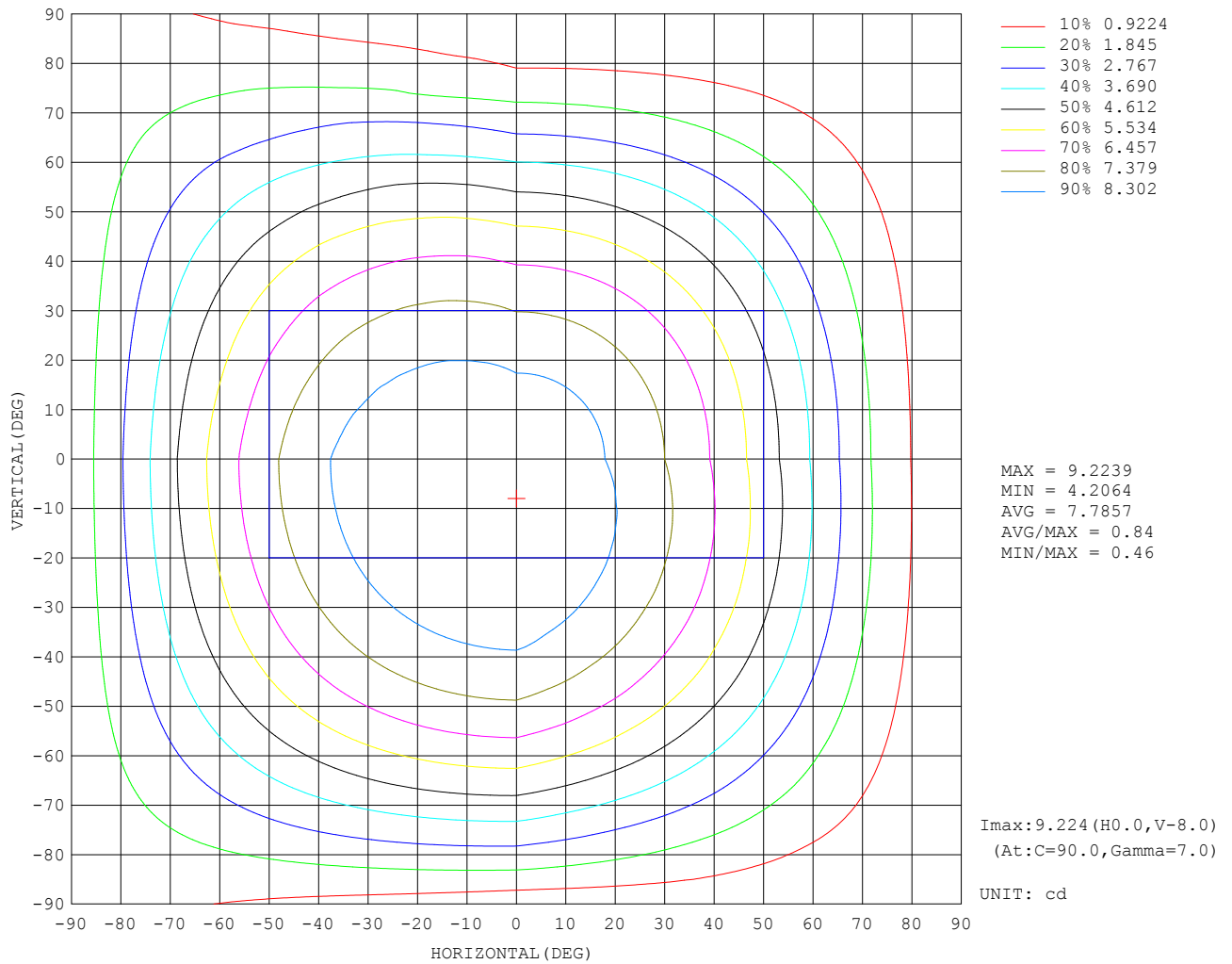
## UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	55	43	36	54	43	35	53	42	35	29
0.80	65	53	45	64	52	45	62	51	44	37
1.00	73	61	54	72	61	53	70	62	53	45
1.25	80	69	61	79	68	61	76	67	60	52
1.50	85	75	67	84	74	67	80	72	66	58
2.00	92	83	76	91	82	75	87	80	74	65
2.50	97	88	81	94	87	81	90	84	79	70
3.00	100	93	86	98	91	85	94	88	83	74
4.00	104	98	93	102	96	91	97	93	89	79
5.00	107	102	97	104	100	95	100	96	92	83
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

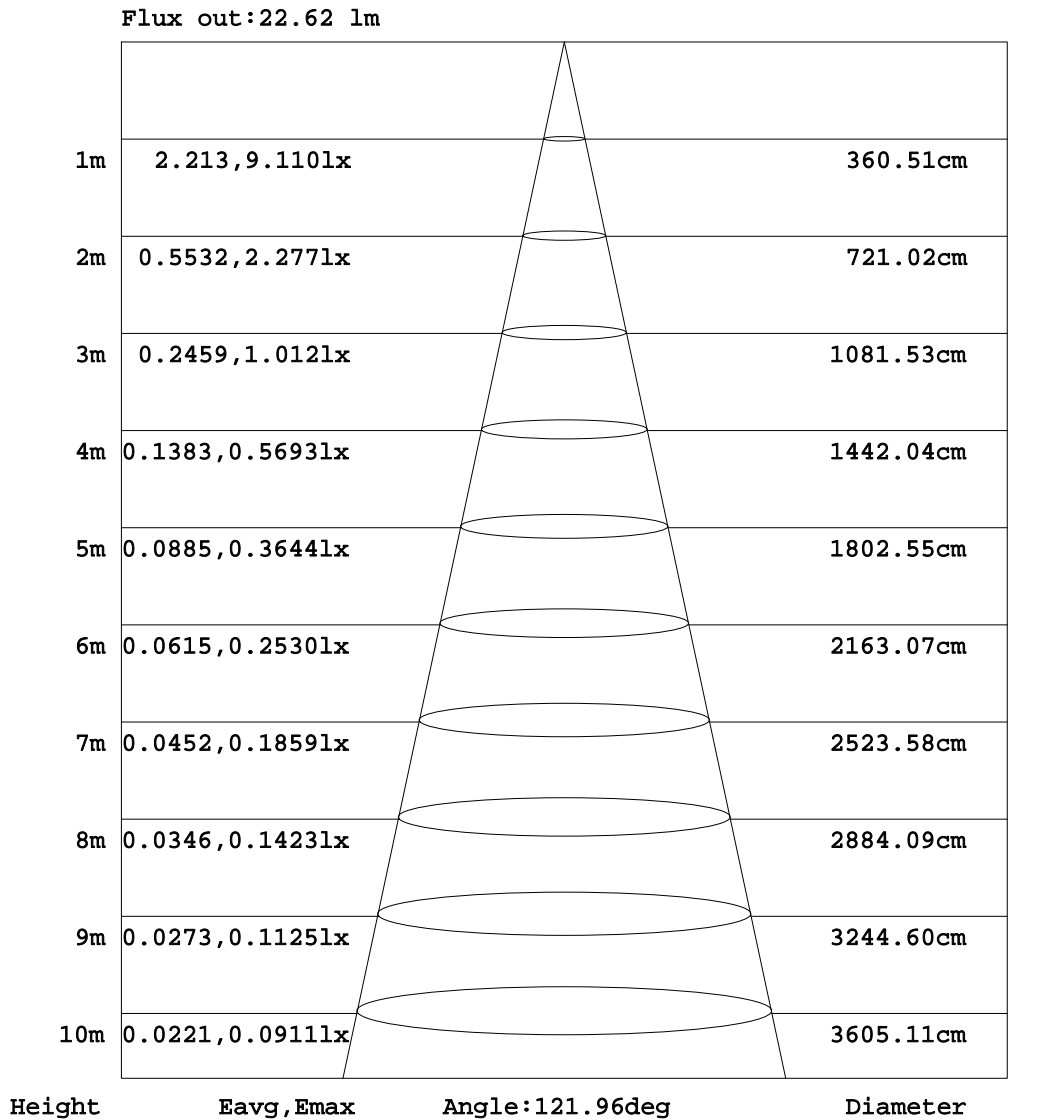


C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Test Date: 2021-11-17

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

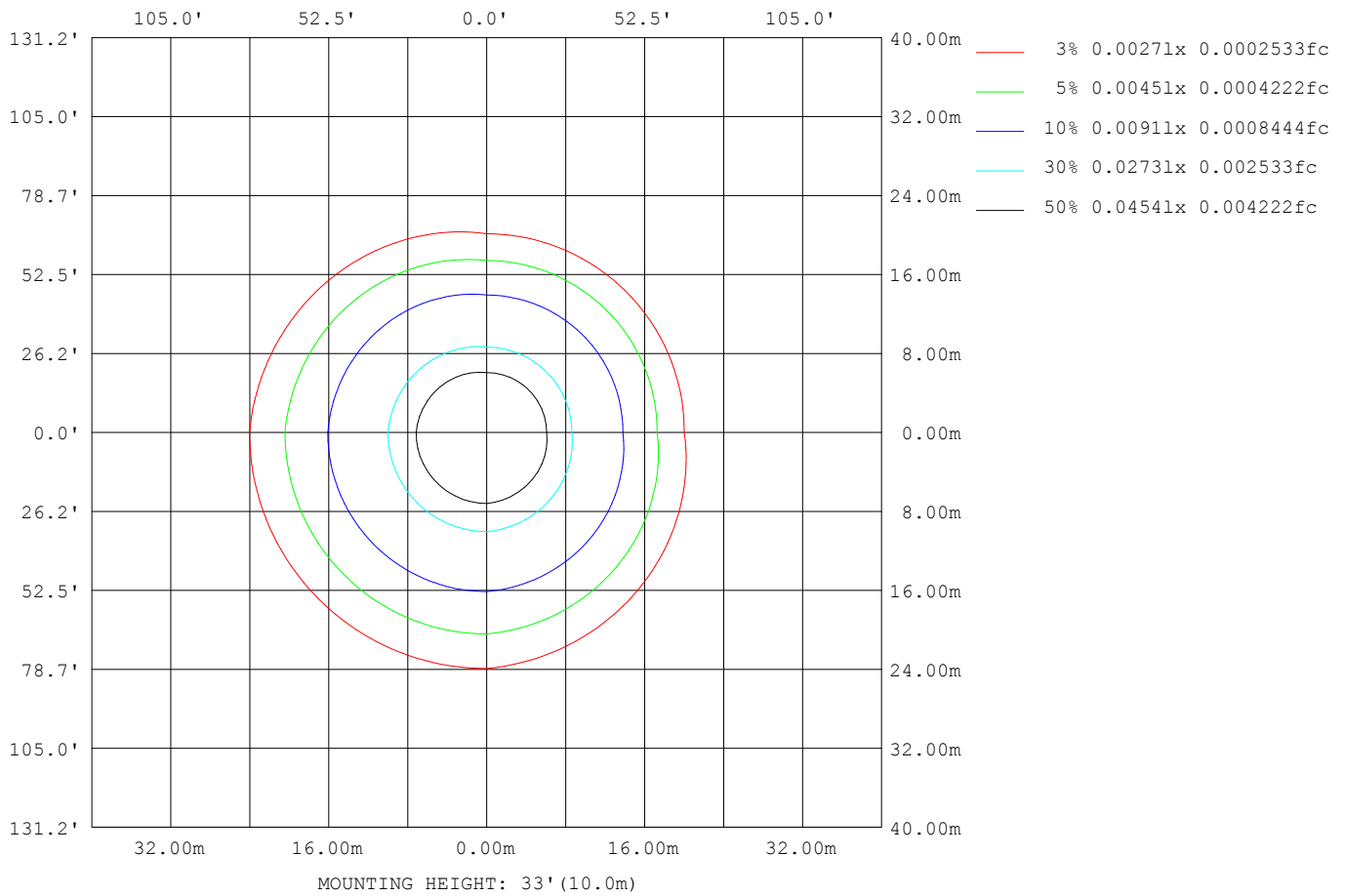


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

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:0.1000A P:2.4000W PF:1.0000 Freq:0Hz Lamp Flux:30.1246x1 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

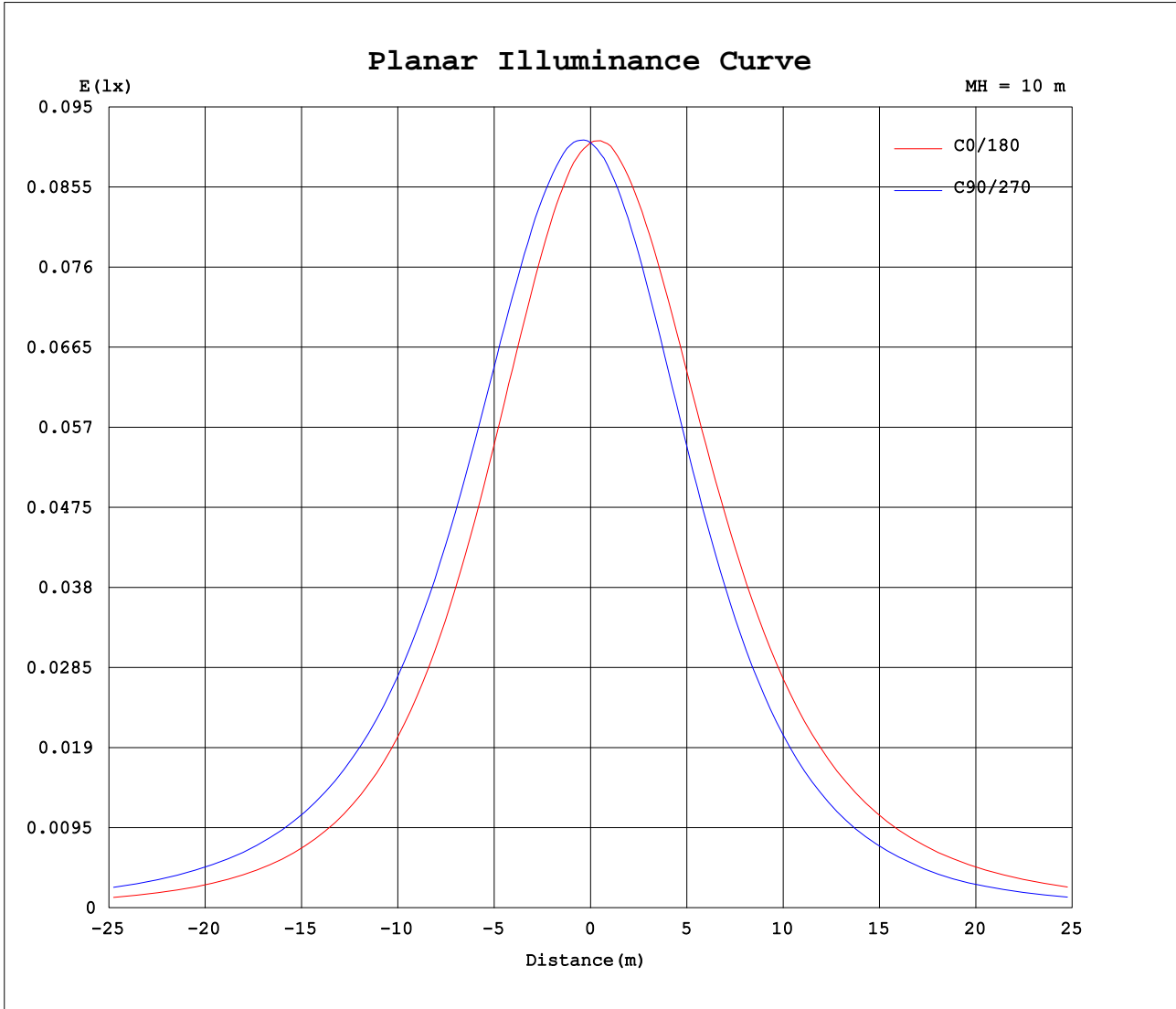
AvgL	cd/m2
L_0~180(65)av	473
L_0~180(75)av	480
L_0~180(85)av	689
L_90~270(65)av	475
L_90~270(75)av	450
L_90~270(85)av	528
L_45(65)av	483
L_45(75)av	474
L_45(85)av	614

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	9.08	9.08	9.08	9.08																
5	8.94	9.19	9.17	8.91																
10	8.74	9.21	9.18	8.69																
15	8.48	9.21	9.16	8.45																
20	8.17	9.14	9.08	8.14																
25	7.80	9.03	8.95	7.77																
30	7.38	8.83	8.74	7.36																
35	6.90	8.55	8.47	6.91																
40	6.35	8.20	8.12	6.37																
45	5.74	7.77	7.68	5.80																
50	5.06	7.26	7.19	5.17																
55	4.34	6.64	6.59	4.47																
60	3.58	5.93	5.93	3.70																
65	2.82	5.14	5.18	2.88																
70	2.08	4.27	4.38	2.15																
75	1.43	3.37	3.54	1.29																
80	0.90	2.45	2.70	0.84																
85	0.48	1.42	1.92	0.42																
90	0.22	0.28	1.23	0.11																
95	0.07	0.00	0.65	0.00																
100	0.00	0.00	0.28	0.00																
105	0.00	0.00	0.05	0.00																
110	0.00	0.00	0.00	0.00																
115	0.00	0.00	0.00	0.00																
120	0.00	0.00	0.00	0.00																
125	0.00	0.00	0.00	0.00																
130	0.00	0.00	0.00	0.00																
135	0.00	0.00	0.00	0.00																
140	0.00	0.00	0.00	0.00																
145	0.00	0.00	0.00	0.00																
150	0.00	0.00	0.00	0.00																
155	0.00	0.00	0.00	0.00																
160	0.00	0.00	0.00	0.00																
165	0.00	0.00	0.00	0.00																
170	0.00	0.00	0.00	0.00																
175	0.00	0.00	0.00	0.00																
180	0.00	0.00	0.00	0.00																

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: