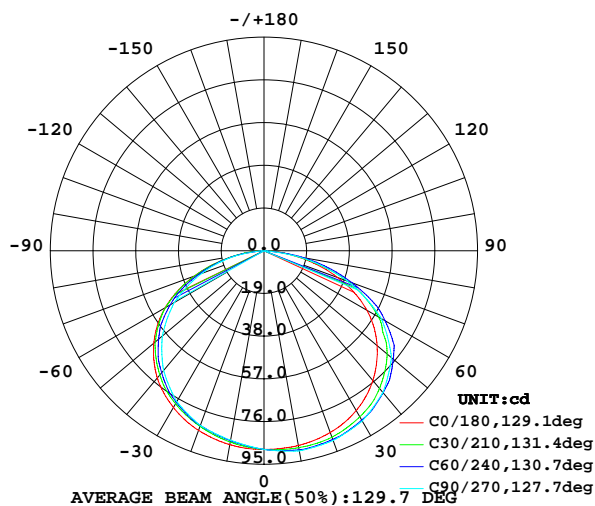


## LUMINAIRE PHOTOMETRIC TEST REPORT

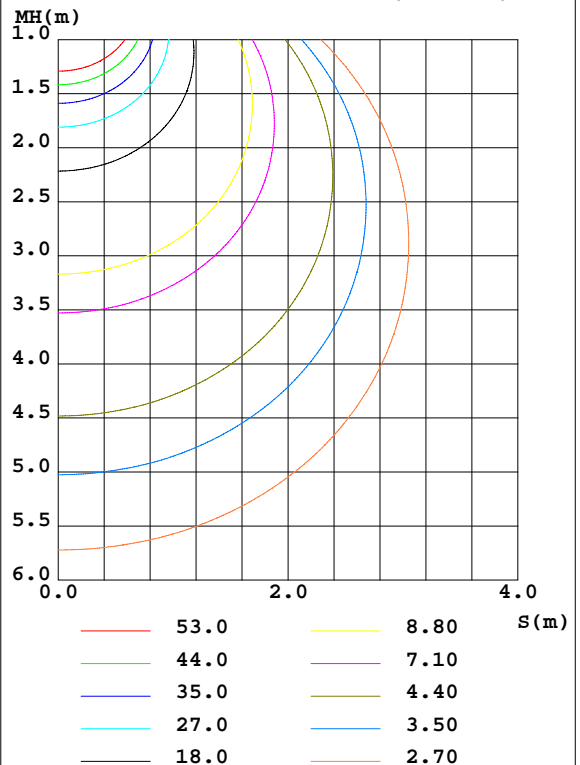
Test:U:24.00V I:0.1802A P:4.325W PF:1.000 Lamp Flux:78.3038x1 lm		
NAME: 3535RGB-60-24V	TYPE:LED Strip LIGHT	WEIGHT:1
SPEC.:1000*12MM	DIM.: 1000*12MM	SERIAL No.:1
MFR.: ESTAR	SUR.:1000*12MM	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 70.79 lm/W			
MODEL	G	Imax(cd)	90.40	S/MH(C0/180)	1.36
NOMINAL POWER(W)	23	LOR(%)	391.0	S/MH(C90/270)	1.30
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	306.17	$\eta$ UP,DN(C0-180)	0.0,207.0
NOMINAL FLUX(lm)	78.3038	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,184.0
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	$\eta$ down(%)	391.0	CIBSE SHR MAX	1.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



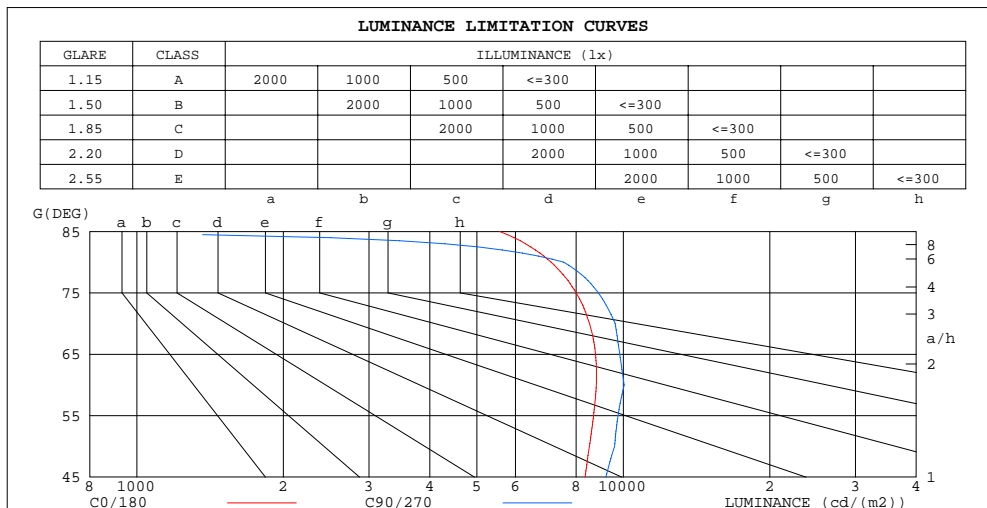
C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: MEDIUM  
 Temperature:25.3DEG  
 Operators:ZP  
 Test Date:2020-07-14

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.292  
 Humidity:65.0%  
 Test Distance:9.900m [K=1.0000]  
 Remarks:

# ZONAL FLUX DIAGRAM AND LUMINANCE LIMITATION CURVES

## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\%lum, lamp$
5	88.27	89.02	89.38	89.02	88.21	87.30	86.95	87.30	0- 5	2.110	2.110	0.69,2.69
10	87.96	89.43	90.40	89.41	87.58	86.03	85.54	86.08	5- 10	6.294	8.404	2.74,10.7
15	87.21	89.55	90.11	89.35	86.50	84.53	84.14	84.80	10- 15	10.37	18.77	6.13,24
20	86.05	88.83	89.82	88.35	85.04	82.80	82.74	83.35	15- 20	14.24	33.01	10.8,42.2
25	84.39	87.93	88.61	87.12	83.07	80.92	80.14	81.72	20- 25	17.84	50.85	16.6,64.9
30	82.04	86.40	87.40	85.38	80.51	78.39	77.54	79.24	25- 30	21.04	71.89	23.5,91.8
35	79.05	84.30	84.85	83.14	77.52	75.41	73.53	76.11	30- 35	23.76	95.65	31.2,122
40	75.35	81.81	82.30	80.37	73.82	72.05	69.52	72.51	35- 40	25.87	121.5	39.7,155
45	70.81	78.23	78.16	76.44	69.22	67.56	64.27	67.75	40- 45	27.30	148.8	48.6,190
50	65.68	74.39	74.01	72.22	63.95	62.92	59.02	62.78	45- 50	27.93	176.7	57.7,226
55	59.79	68.69	67.13	66.11	57.91	56.90	52.52	56.52	50- 55	27.72	204.5	66.8,261
60	52.78	61.73	60.24	59.10	50.75	50.37	46.03	49.85	55- 60	26.44	230.9	75.4,295
65	44.46	52.65	49.86	49.17	42.37	41.86	37.74	41.51	60- 65	23.99	254.9	83.3,326
70	34.97	41.40	39.48	38.27	32.97	32.64	29.46	32.51	65- 70	20.26	275.2	89.9,351
75	24.84	29.90	27.59	26.51	22.92	22.72	20.85	22.93	70- 75	15.51	290.7	94.9,371
80	14.81	18.18	15.70	15.36	13.16	13.69	12.24	14.09	75- 80	10.26	300.9	98.3,384
85	5.825	4.678	0	3.701	4.543	3.524	0	3.718	80- 85	4.761	305.7	99.8,390
90	0.2339	0	0	0	0.2259	0	0	0	85- 90	0.4811	306.2	100,391
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



LUMINANCE cd/(m2)		
G(°)	C0/180	C90/270
85	5569	0
80	7105	7537
75	7998	8885
70	8520	9620
65	8767	9832
60	8796	10041
55	8686	9753
50	8515	9596
45	8345	9211

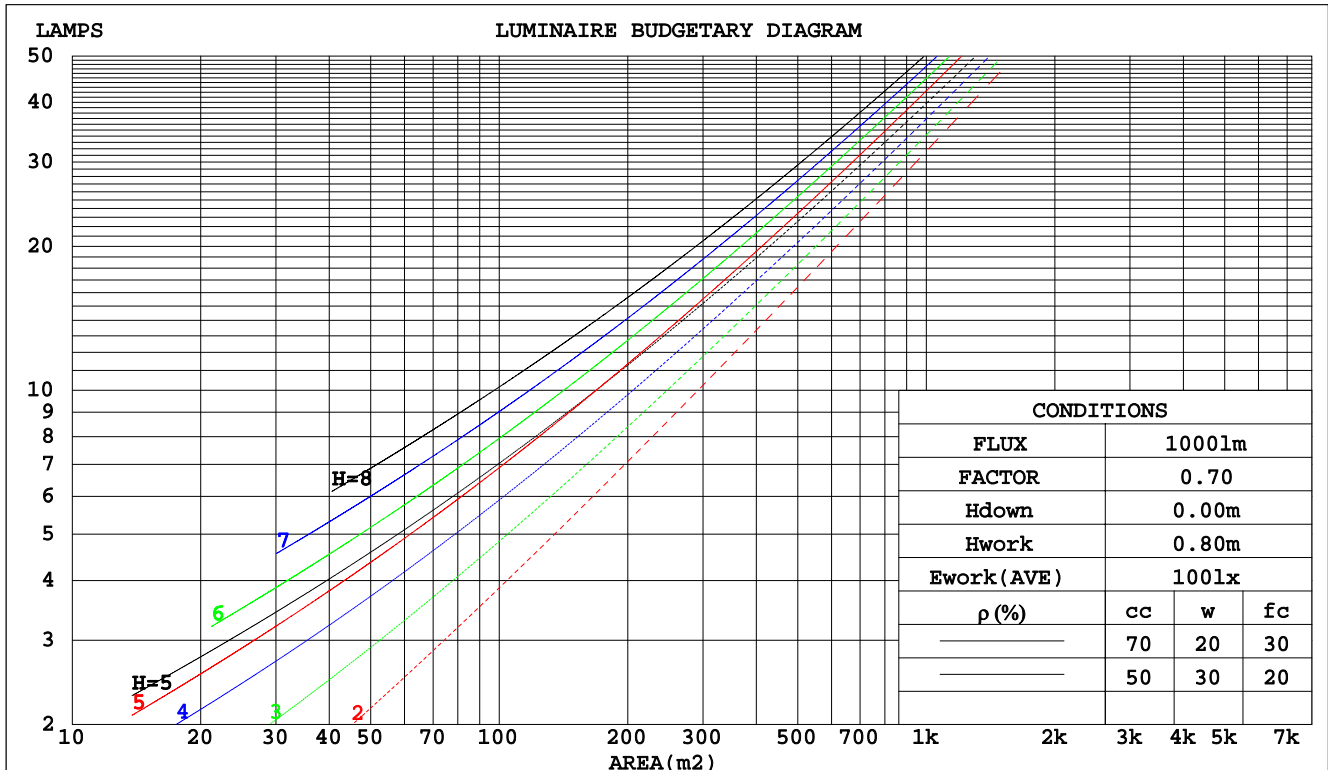
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:ZP  
Test Date:2020-07-14

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.292  
Humidity:65.0%  
Test Distance:9.900m [K=1.0000]  
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.00V I:0.1802A P:4.325W PF:1.000 Lamp Flux:78.3038x1 lm		
NAME: 3535RGB-60-24V	TYPE:LED Strip LIGHT	WEIGHT:1
SPEC.:1000*12MM	DIM.: 1000*12MM	SERIAL No.:1
MFR.: ESTAR	SUR.:1000*12MM	PROTECTION 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	4.65	4.65	4.65	4.55	4.55	4.55	4.34	4.34	4.34	4.16	4.16	4.16	3.99	3.99	3.99	3.91
1.0	4.03	3.86	3.70	3.94	3.78	3.64	3.78	3.64	3.52	3.62	3.51	3.41	3.48	3.39	3.31	3.23
2.0	3.48	3.20	2.96	3.40	3.14	2.92	3.26	3.04	2.85	3.13	2.95	2.79	3.01	2.86	2.73	2.64
3.0	3.03	2.69	2.42	2.96	2.65	2.40	2.84	2.58	2.36	2.73	2.51	2.31	2.63	2.44	2.27	2.18
4.0	2.66	2.30	2.02	2.61	2.27	2.01	2.51	2.21	1.98	2.41	2.16	1.95	2.33	2.11	1.92	1.84
5.0	2.36	1.99	1.72	2.32	1.97	1.71	2.23	1.93	1.69	2.15	1.88	1.67	2.08	1.84	1.65	1.57
6.0	2.11	1.75	1.49	2.08	1.73	1.48	2.00	1.70	1.47	1.94	1.66	1.45	1.87	1.63	1.44	1.35
7.0	1.91	1.55	1.30	1.87	1.54	1.30	1.81	1.51	1.29	1.75	1.48	1.28	1.70	1.45	1.27	1.18
8.0	1.73	1.39	1.15	1.71	1.38	1.15	1.65	1.35	1.14	1.60	1.33	1.13	1.56	1.31	1.12	1.05
9.0	1.59	1.25	1.03	1.56	1.24	1.03	1.52	1.22	1.02	1.47	1.21	1.01	1.43	1.19	1.01	.93
10.0	1.46	1.14	.93	1.44	1.13	.92	1.40	1.12	.92	1.36	1.10	.92	1.32	1.08	.91	.84



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:ZP  
Test Date:2020-07-14

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.292  
Humidity:65.0%  
Test Distance:9.900m [K=1.0000]  
Remarks:

## WEC AND CCEC

Test:U:24.00V I:0.1802A P:4.325W PF:1.000 Lamp Flux:78.3038x1 lm					
NAME: 3535RGB-60-24V			TYPE:LED Strip LIGHT		WEIGHT:1
SPEC.:1000*12MM			DIM.: 1000*12MM		SERIAL No.:1
MFR.: ESTAR			SUR.:1000*12MM		PROTECTION 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						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	1.267	.721	.228	1.239	.707	.225	1.187	.681	.217	1.139	.657	.211	1.095	.635	.205		
2.0	1.196	.655	.201	1.171	.645	.199	1.125	.626	.194	1.082	.607	.190	1.043	.590	.186		
3.0	1.105	.588	.176	1.083	.580	.175	1.042	.565	.172	1.004	.550	.169	.968	.536	.166		
4.0	1.016	.528	.155	.997	.522	.154	.960	.509	.152	.926	.498	.150	.895	.486	.148		
5.0	.936	.477	.138	.919	.472	.137	.887	.462	.136	.857	.452	.134	.828	.443	.133		
6.0	.866	.434	.124	.850	.430	.124	.822	.421	.122	.795	.413	.121	.769	.405	.120		
7.0	.803	.397	.113	.790	.394	.112	.764	.386	.111	.740	.379	.110	.717	.373	.110		
8.0	.748	.366	.103	.736	.363	.102	.713	.356	.102	.692	.350	.101	.671	.345	.100		
9.0	.700	.339	.095	.689	.336	.094	.668	.330	.094	.649	.325	.093	.630	.320	.093		
10.0	.657	.315	.087	.647	.312	.087	.628	.308	.087	.611	.303	.086	.594	.299	.086		

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	.745	.745	.745	.637	.637	.637	.434	.434	.434	.250	.250	.250	.080	.080	.080		
1.0	.709	.610	.521	.607	.524	.448	.415	.360	.310	.239	.208	.180	.076	.067	.058		
2.0	.681	.516	.377	.583	.444	.325	.400	.307	.227	.230	.179	.133	.074	.058	.043		
3.0	.653	.447	.284	.559	.386	.246	.384	.268	.172	.222	.157	.102	.071	.051	.033		
4.0	.624	.396	.222	.535	.342	.193	.368	.238	.136	.213	.140	.080	.068	.045	.026		
5.0	.595	.356	.179	.511	.308	.156	.352	.215	.110	.204	.126	.065	.066	.041	.022		
6.0	.566	.323	.149	.487	.280	.129	.336	.196	.092	.195	.115	.054	.063	.038	.018		
7.0	.539	.296	.126	.464	.257	.110	.321	.180	.078	.186	.106	.046	.060	.035	.015		
8.0	.513	.274	.109	.442	.238	.095	.306	.167	.068	.178	.098	.040	.058	.032	.013		
9.0	.489	.255	.096	.421	.221	.084	.292	.155	.060	.170	.092	.036	.055	.030	.012		
10.0	.466	.238	.086	.402	.206	.075	.279	.145	.053	.163	.086	.032	.053	.028	.011		

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:ZP  
Test Date:2020-07-14

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.292  
Humidity:65.0%  
Test Distance:9.900m [K=1.0000]  
Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.00V I:0.1802A P:4.325W PF:1.000 Lamp Flux:78.3038x1 lm											
NAME: 3535RGB-60-24V						TYPE:LED Strip LIGHT		WEIGHT:1			
SPEC.:1000*12MM						DIM.: 1000*12MM		SERIAL No.:1			
MFR.: ESTAR						SUR.:1000*12MM		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		21.0	22.6	21.3	22.8	23.0	21.6	23.2	21.9	23.4	23.6
	3H	22.7	24.2	23.0	24.4	24.7	23.4	24.8	23.7	25.1	25.3
	4H	23.3	24.7	23.6	25.0	25.2	24.1	25.5	24.4	25.7	26.0
	6H	23.7	25.0	24.0	25.3	25.6	24.5	25.8	24.9	26.1	26.4
	8H	23.8	25.0	24.1	25.3	25.6	24.6	25.9	24.9	26.2	26.5
	12H	23.8	25.0	24.2	25.3	25.7	24.6	25.8	24.9	26.1	26.4
4H	2H	21.9	23.3	22.3	23.6	23.9	22.3	23.7	22.7	24.0	24.3
	3H	23.8	25.0	24.2	25.3	25.6	24.3	25.5	24.7	25.8	26.1
	4H	24.5	25.6	24.8	25.9	26.3	25.1	26.3	25.5	26.6	26.9
	6H	24.9	25.9	25.3	26.3	26.6	25.7	26.7	26.1	27.1	27.4
	8H	25.0	26.0	25.5	26.3	26.7	25.8	26.8	26.3	27.1	27.5
	12H	25.1	26.0	25.5	26.4	26.8	25.8	26.7	26.3	27.1	27.5
8H	4H	24.9	25.8	25.3	26.2	26.6	25.5	26.4	25.9	26.8	27.1
	6H	25.5	26.3	25.9	26.7	27.1	26.2	27.0	26.7	27.4	27.8
	8H	25.7	26.4	26.1	26.8	27.3	26.4	27.1	26.9	27.5	28.0
	12H	25.8	26.4	26.3	26.9	27.3	26.4	27.0	26.9	27.4	27.9
12H	4H	24.9	25.8	25.3	26.2	26.6	25.5	26.3	25.9	26.7	27.1
	6H	25.6	26.3	26.0	26.7	27.1	26.3	27.0	26.7	27.4	27.8
	8H	25.8	26.4	26.3	26.9	27.3	26.5	27.1	27.0	27.5	28.0
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.4					+ 0.2 / - 0.5					

CIE Pub.117 Corrected 78.30 lm Total Lamp Luminous Flux.(8log(F/F0) = -8.8)

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:ZP  
Test Date:2020-07-14

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.292  
Humidity:65.0%  
Test Distance:9.900m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:24.00V I:0.1802A P:4.325W PF:1.000 Lamp Flux:78.3038x1 lm		
NAME: 3535RGB-60-24V	TYPE:LED Strip LIGHT	WEIGHT:1
SPEC.:1000*12MM	DIM.: 1000*12MM	SERIAL No.:1
MFR.: ESTAR	SUR.:1000*12MM	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) $k(RI) \times RCR = 5$									
k = 0.60	214	166	138	211	165	138	206	163	137	111
0.80	253	205	175	249	204	175	242	201	173	145
1.00	287	241	211	282	239	210	273	245	208	178
1.25	316	272	243	310	269	241	299	264	238	208
1.50	336	295	266	330	292	264	317	285	260	229
2.00	365	329	303	358	325	300	343	316	294	262
2.50	381	349	324	373	344	321	358	333	313	280
3.00	395	367	344	387	361	340	371	349	332	297
4.00	412	389	370	403	382	364	386	369	354	318
5.00	423	403	386	413	395	380	395	381	368	332
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:ZP  
Test Date:2020-07-14

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.292  
Humidity:65.0%  
Test Distance:9.900m [K=1.0000]  
Remarks:

# ISOCANDELA DIAGRAM

Test:U:24.00V I:0.1802A P:4.325W PF:1.000 Lamp Flux:78.3038x1 lm		
NAME: 3535RGB-60-24V	TYPE:LED Strip LIGHT	WEIGHT:1
SPEC.:1000*12MM	DIM.: 1000*12MM	SERIAL No.:1
MFR.: ESTAR	SUR.:1000*12MM	PROTECTION ANGLE:

Conical surface Flux(90deg):

148.81 lm

%lum = 48.6%

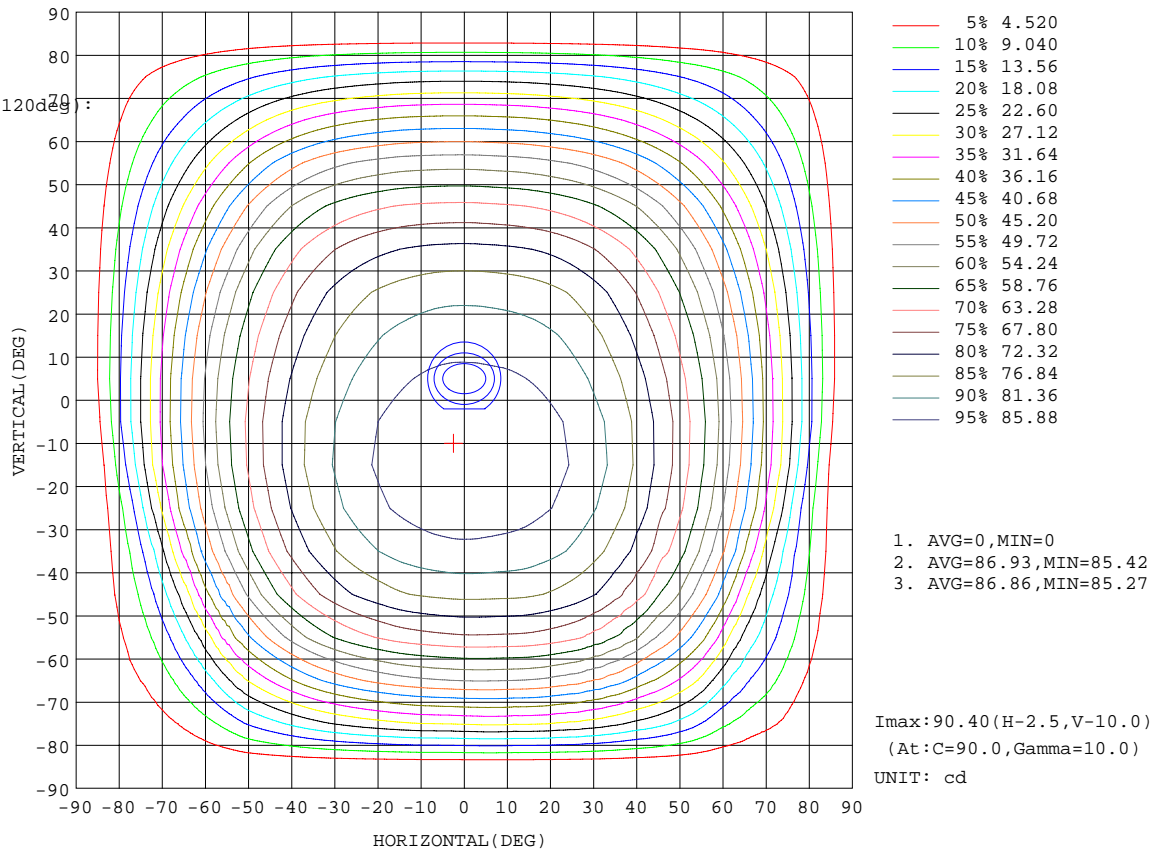
%lamp = 190.0%

Conical surface Flux(120deg):

230.9 lm

%lum = 75.4%

%lamp = 294.9%

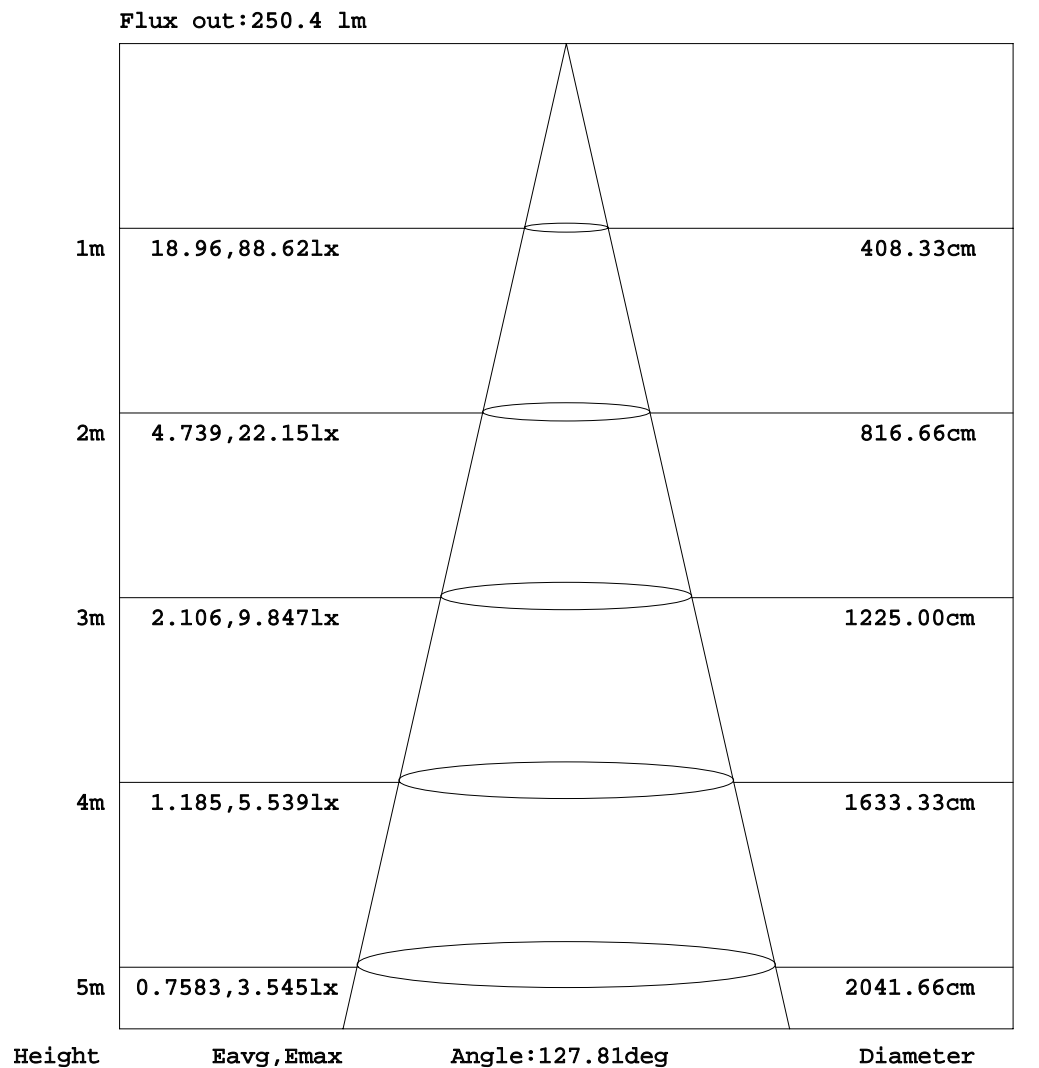


C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:ZP  
Test Date:2020-07-14

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.292  
Humidity:65.0%  
Test Distance:9.900m [K=1.0000]  
Remarks:

### AAI Figure

Test:U:24.00V I:0.1802A P:4.325W PF:1.000 Lamp Flux:78.3038x1 lm		
NAME: 3535RGB-60-24V	TYPE:LED Strip LIGHT	WEIGHT:1
SPEC.:1000*12MM	DIM.: 1000*12MM	SERIAL No.:1
MFR.: ESTAR	SUR.:1000*12MM	PROTECTION ANGLE:



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

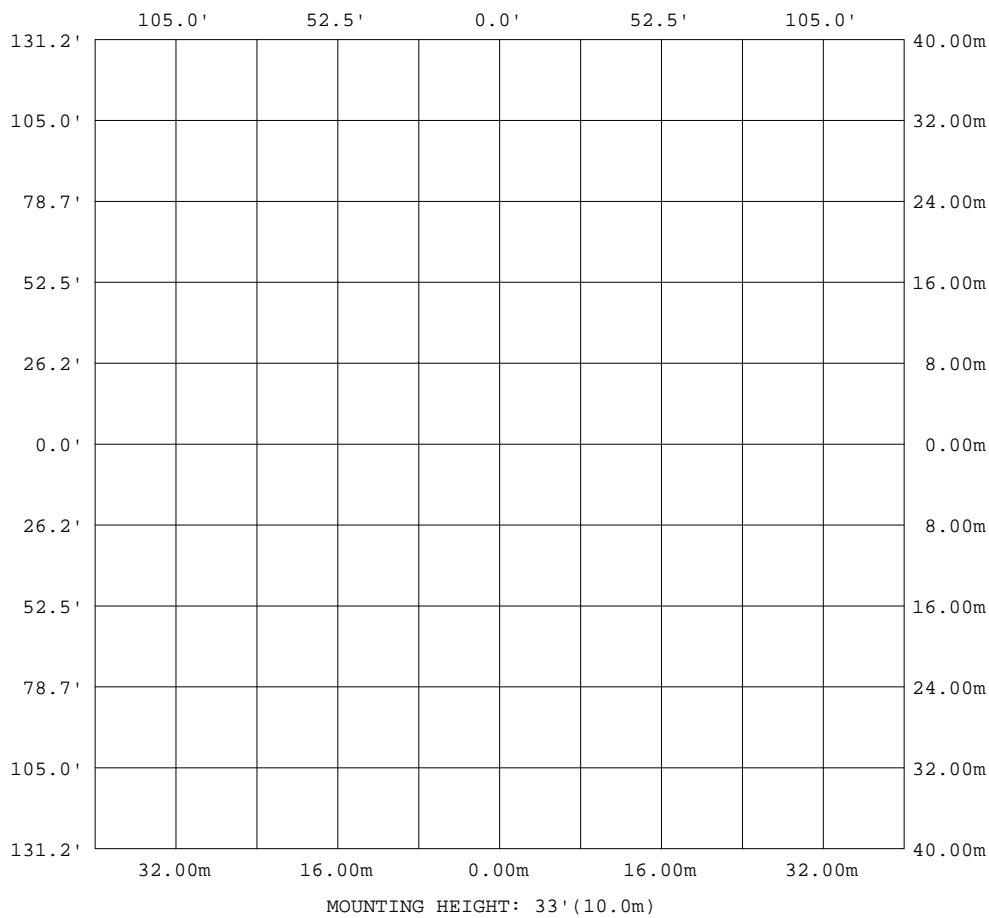
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:ZP  
Test Date:2020-07-14

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.292  
Humidity:65.0%  
Test Distance:9.900m [K=1.0000]  
Remarks:



## ISOLUX DIAGRAM

Test:U:24.00V I:0.1802A P:4.325W PF:1.000 Lamp Flux:78.3038x1 lm		
NAME: 3535RGB-60-24V	TYPE:LED Strip LIGHT	WEIGHT:1
SPEC.:1000*12MM	DIM.: 1000*12MM	SERIAL No.:1
MFR.: ESTAR	SUR.:1000*12MM	PROTECTION ANGLE:



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:ZP  
Test Date:2020-07-14

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.292  
Humidity:65.0%  
Test Distance:9.900m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:24.00V I:0.1802A P:4.325W PF:1.000 Lamp Flux:78.3038x1 lm		
NAME: 3535RGB-60-24V	TYPE:LED Strip LIGHT	WEIGHT:1
SPEC.:1000*12MM	DIM.: 1000*12MM	SERIAL No.:1
MFR.: ESTAR	SUR.:1000*12MM	PROTECTION ANGLE:

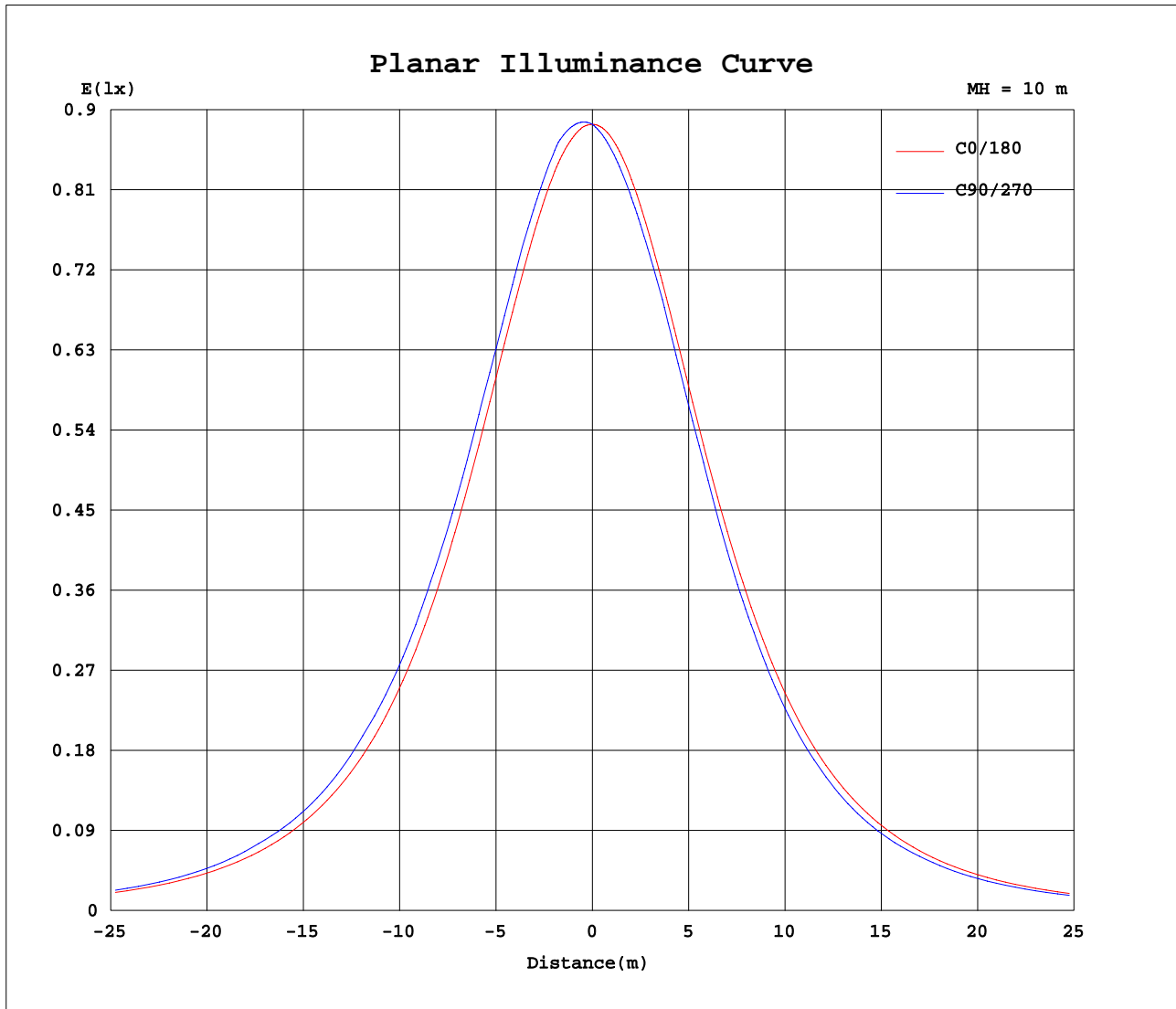
AvgL	cd/m2
L_0~180(65)av	8561
L_0~180(75)av	7690
L_0~180(85)av	4956
L_90~270(65)av	8637
L_90~270(75)av	7799
L_90~270(85)av	0
L_45(65)av	9129
L_45(75)av	8216
L_45(85)av	3734

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:ZP  
Test Date:2020-07-14

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.292  
Humidity:65.0%  
Test Distance:9.900m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature: 25.3DEG  
Operators: ZP  
Test Date: 2020-07-14

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.292  
Humidity: 65.0%  
Test Distance: 9.900m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.292
Humidity:65.0%
Test Distance:9.900m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.292
Humidity:65.0%
Test Distance:9.900m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.292
Humidity:65.0%
Test Distance:9.900m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.292
Humidity:65.0%
Test Distance:9.900m [K=1.0000]
Remarks:

```