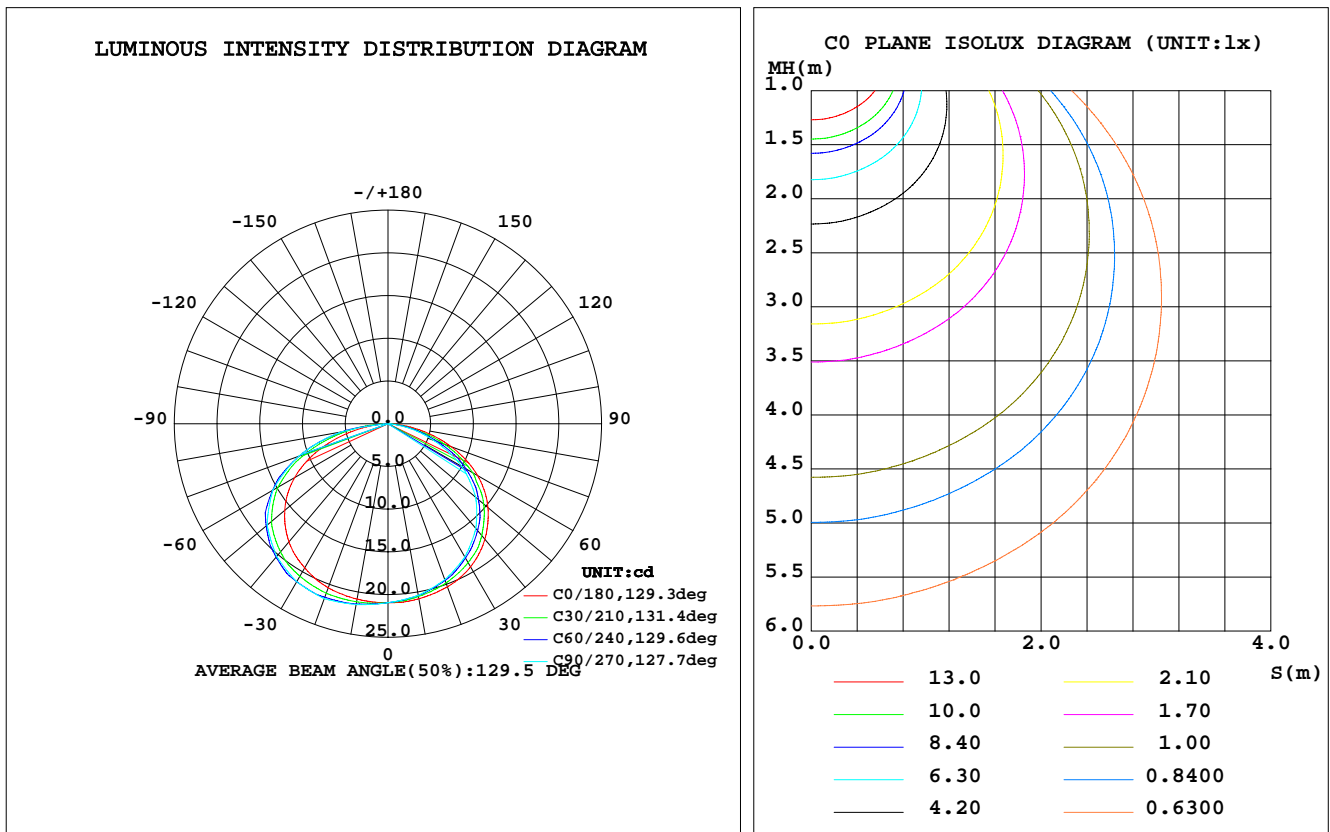


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.00V I:0.1703A P:4.087W PF:1.000 Lamp Flux:73.4687x1 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: 17.98 lm/W
MODEL	B		Imax(cd)	21.79	S/MH(C0/180)	1.39
NOMINAL POWER(W)	23		LOR(%)	100.0	S/MH(C90/270)	1.51
RATED VOLTAGE(V)	24		TOTAL FLUX(lm)	73.469	$\eta$ UP,DN(C0-180)	0.0,44.5
NOMINAL FLUX(lm)	73.4687		CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,55.5
LAMPS INSIDE	1		$\eta$ up(%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24		$\eta$ down(%)	100.0	CIBSE SHR MAX	1.55



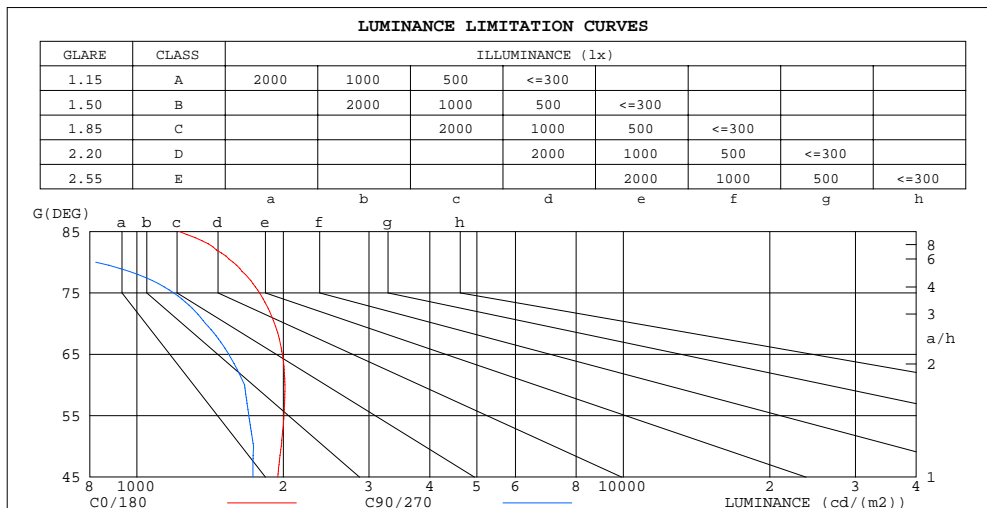
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:ZP  
Test Date:2020-07-14

$\gamma$  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:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	lum, lamp
5	20.94	20.74	20.67	20.76	20.94	21.13	21.22	21.13	0- 5	0.5008	0.5008	0.68,0.68
10	20.80	20.45	20.40	20.55	20.84	21.31	21.48	21.23	5- 10	1.496	1.997	2.72,2.72
15	20.58	20.10	19.91	20.26	20.66	21.40	21.64	21.25	10- 15	2.468	4.465	6.08,6.08
20	20.31	19.62	19.43	19.82	20.43	21.38	21.79	21.23	15- 20	3.398	7.863	10.7,10.7
25	19.91	19.14	18.72	19.31	20.04	21.33	21.57	21.18	20- 25	4.265	12.13	16.5,16.5
30	19.33	18.49	18.01	18.70	19.49	21.12	21.36	20.90	25- 30	5.038	17.17	23.4,23.4
35	18.57	17.67	17.00	17.95	18.86	20.77	20.81	20.37	30- 35	5.697	22.86	31.1,31.1
40	17.64	16.75	15.99	17.09	18.03	20.28	20.27	19.71	35- 40	6.208	29.07	39.6,39.6
45	16.53	15.60	14.70	15.89	17.00	19.42	19.36	18.75	40- 45	6.550	35.62	48.5,48.5
50	15.27	14.39	13.40	14.63	15.77	18.51	18.46	17.72	45- 50	6.699	42.32	57.6,57.6
55	13.81	12.75	11.69	13.04	14.35	17.19	17.01	16.32	50- 55	6.644	48.97	66.6,66.6
60	12.09	10.92	9.988	11.32	12.62	15.69	15.55	14.79	55- 60	6.334	55.30	75.3,75.3
65	10.10	8.941	7.834	9.033	10.58	13.47	13.32	12.72	60- 65	5.745	61.04	83.1,83.1
70	7.873	6.629	5.679	6.681	8.248	10.98	11.10	10.35	65- 70	4.858	65.90	89.7,89.7
75	5.554	4.332	3.697	4.310	5.741	8.187	8.344	7.679	70- 75	3.738	69.64	94.8,94.8
80	3.285	2.437	1.716	2.301	3.290	5.306	5.588	5.037	75- 80	2.513	72.15	98.2,98.2
85	1.277	0.5628	0	0.4840	1.134	1.493	0	1.445	80- 85	1.196	73.35	99.8,99.8
90	0.0520	0	0	0	0.0635	0	0	0	85- 90	0.1197	73.47	100,100
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		



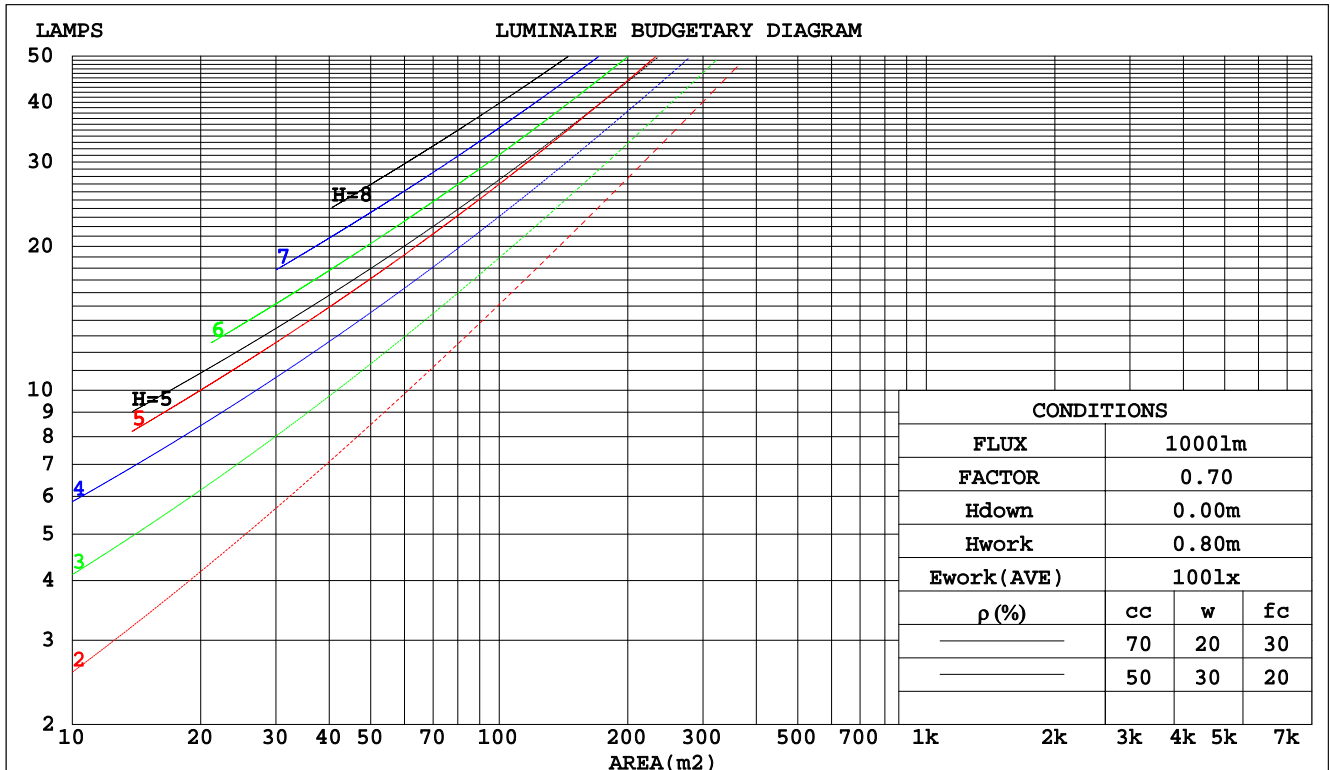
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:ZP  
Test Date:2020-07-14

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.00V I:0.1703A P:4.087W PF:1.000 Lamp Flux:73.4687x1 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	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1.0	1.03	.99	.94	1.01	.97	.93	.96	.93	.90	.93	.90	.87	.89	.87	.85	.82
2.0	.89	.82	.76	.87	.80	.75	.83	.78	.73	.80	.75	.71	.77	.73	.70	.67
3.0	.77	.69	.62	.76	.68	.61	.73	.66	.60	.70	.64	.59	.67	.62	.58	.56
4.0	.68	.59	.52	.67	.58	.51	.64	.56	.51	.62	.55	.50	.59	.54	.49	.47
5.0	.60	.51	.44	.59	.50	.44	.57	.49	.43	.55	.48	.43	.53	.47	.42	.40
6.0	.54	.45	.38	.53	.44	.38	.51	.43	.37	.49	.42	.37	.48	.42	.37	.35
7.0	.49	.40	.33	.48	.39	.33	.46	.38	.33	.45	.38	.33	.43	.37	.32	.30
8.0	.44	.35	.29	.44	.35	.29	.42	.35	.29	.41	.34	.29	.40	.33	.29	.27
9.0	.40	.32	.26	.40	.32	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.24
10.0	.37	.29	.24	.37	.29	.24	.36	.28	.23	.35	.28	.23	.34	.28	.23	.21



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:0.1703A P:4.087W PF:1.000 Lamp Flux:73.4687x1 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	.325	.185	.059	.318	.182	.058	.305	.175	.056	.293	.169	.054	.281	.163	.053		
2.0	.307	.168	.052	.300	.165	.051	.289	.160	.050	.278	.156	.049	.268	.151	.048		
3.0	.283	.151	.045	.277	.149	.045	.267	.145	.044	.257	.141	.043	.248	.137	.043		
4.0	.260	.135	.040	.255	.134	.039	.246	.130	.039	.237	.127	.038	.229	.125	.038		
5.0	.240	.122	.035	.235	.121	.035	.227	.118	.035	.219	.116	.034	.212	.113	.034		
6.0	.222	.111	.032	.218	.110	.032	.210	.108	.031	.203	.106	.031	.197	.104	.031		
7.0	.206	.102	.029	.202	.101	.029	.196	.099	.028	.189	.097	.028	.184	.095	.028		
8.0	.192	.094	.026	.189	.093	.026	.183	.091	.026	.177	.090	.026	.172	.088	.026		
9.0	.179	.087	.024	.176	.086	.024	.171	.085	.024	.166	.083	.024	.161	.082	.024		
10.0	.168	.081	.022	.166	.080	.022	.161	.079	.022	.156	.078	.022	.152	.076	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.181	.156	.133	.155	.134	.115	.106	.092	.079	.061	.053	.046	.020	.017	.015	
2.0	.174	.132	.096	.149	.113	.083	.102	.079	.058	.059	.046	.034	.019	.015	.011	
3.0	.167	.114	.072	.143	.099	.063	.098	.069	.044	.057	.040	.026	.018	.013	.009	
4.0	.160	.101	.057	.137	.087	.049	.094	.061	.035	.054	.036	.021	.018	.012	.007	
5.0	.152	.091	.046	.131	.079	.040	.090	.055	.028	.052	.032	.017	.017	.011	.005	
6.0	.145	.083	.038	.125	.072	.033	.086	.050	.023	.050	.029	.014	.016	.010	.005	
7.0	.138	.076	.032	.119	.066	.028	.082	.046	.020	.048	.027	.012	.015	.009	.004	
8.0	.131	.070	.028	.113	.061	.024	.078	.043	.017	.046	.025	.010	.015	.008	.003	
9.0	.125	.065	.025	.108	.057	.021	.075	.040	.015	.044	.023	.009	.014	.008	.003	
10.0	.119	.061	.022	.103	.053	.019	.071	.037	.014	.042	.022	.008	.013	.007	.003	

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:0.1703A P:4.087W PF:1.000 Lamp Flux:73.4687x1 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		15.2	16.7	15.4	16.9	17.2	14.4	16.0	14.7	16.2	16.4
	3H	16.8	18.3	17.1	18.5	18.8	15.8	17.2	16.1	17.5	17.7
	4H	17.4	18.8	17.7	19.1	19.3	16.2	17.6	16.5	17.9	18.1
	6H	17.8	19.1	18.1	19.4	19.7	16.4	17.8	16.8	18.0	18.3
	8H	17.9	19.1	18.2	19.4	19.7	16.5	17.7	16.8	18.0	18.3
	12H	17.9	19.2	18.3	19.4	19.8	16.4	17.6	16.8	17.9	18.3
4H	2H	15.7	17.1	16.0	17.4	17.6	15.1	16.5	15.5	16.8	17.1
	3H	17.5	18.8	17.9	19.1	19.4	16.6	17.9	17.0	18.2	18.5
	4H	18.2	19.3	18.6	19.7	20.0	17.2	18.3	17.6	18.7	19.0
	6H	18.7	19.7	19.1	20.0	20.4	17.5	18.5	17.9	18.9	19.3
	8H	18.8	19.7	19.2	20.1	20.5	17.6	18.5	18.0	18.9	19.3
	12H	18.9	19.7	19.3	20.1	20.5	17.5	18.4	18.0	18.8	19.2
8H	4H	18.4	19.3	18.8	19.7	20.1	17.5	18.4	17.9	18.8	19.2
	6H	18.9	19.7	19.4	20.1	20.6	17.9	18.7	18.4	19.1	19.5
	8H	19.1	19.8	19.6	20.2	20.7	18.0	18.7	18.5	19.1	19.6
	12H	19.3	19.9	19.7	20.3	20.8	18.0	18.6	18.5	19.0	19.5
12H	4H	18.4	19.2	18.8	19.6	20.0	17.5	18.4	17.9	18.7	19.2
	6H	19.0	19.7	19.4	20.1	20.5	18.0	18.7	18.4	19.1	19.5
	8H	19.2	19.8	19.7	20.2	20.7	18.1	18.7	18.6	19.1	19.6
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.2 / - 0.2					
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.4					
2.0H	+ 0.3 / - 0.5					+ 0.2 / - 0.5					

CIE Pub.117 Corrected 73.47 lm Total Lamp Luminous Flux.(8log(F/F0) = -9.1)

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:0.1703A P:4.087W PF:1.000 Lamp Flux:73.4687x1 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	55	42	35	54	42	35	53	42	35	28
0.80	65	52	45	64	52	45	62	51	44	37
1.00	73	62	54	72	61	54	70	63	53	46
1.25	81	70	62	79	69	62	76	67	61	53
1.50	86	75	68	84	74	67	81	73	66	58
2.00	93	84	77	91	83	77	88	81	75	67
2.50	97	89	83	95	88	82	91	85	80	71
3.00	101	94	88	99	92	87	95	89	85	76
4.00	105	99	94	103	98	93	99	94	90	81
5.00	108	103	99	106	101	97	101	97	94	85
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:0.1703A P:4.087W PF:1.000 Lamp Flux:73.4687x1 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):

35.622 lm

%lum = 48.5%

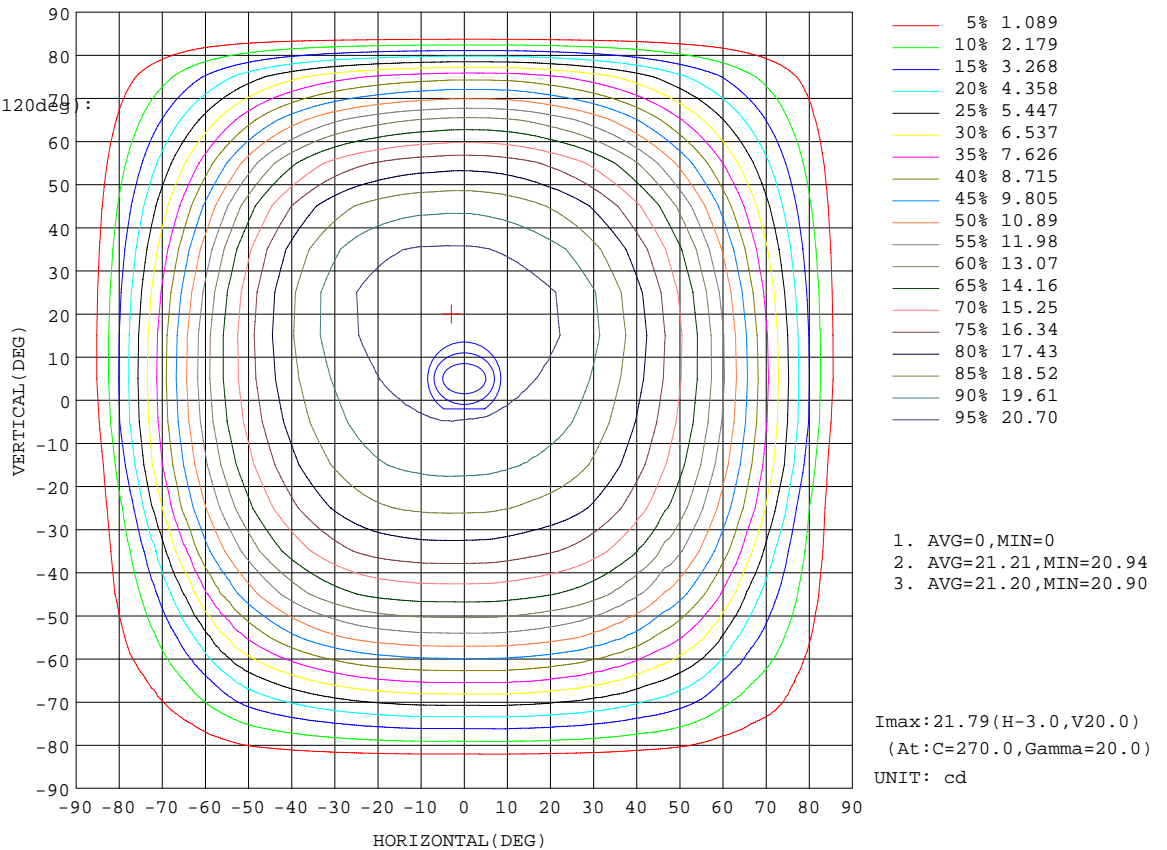
%lamp = 48.5%

Conical surface Flux(120deg):

55.299 lm

%lum = 75.3%

%lamp = 75.3%

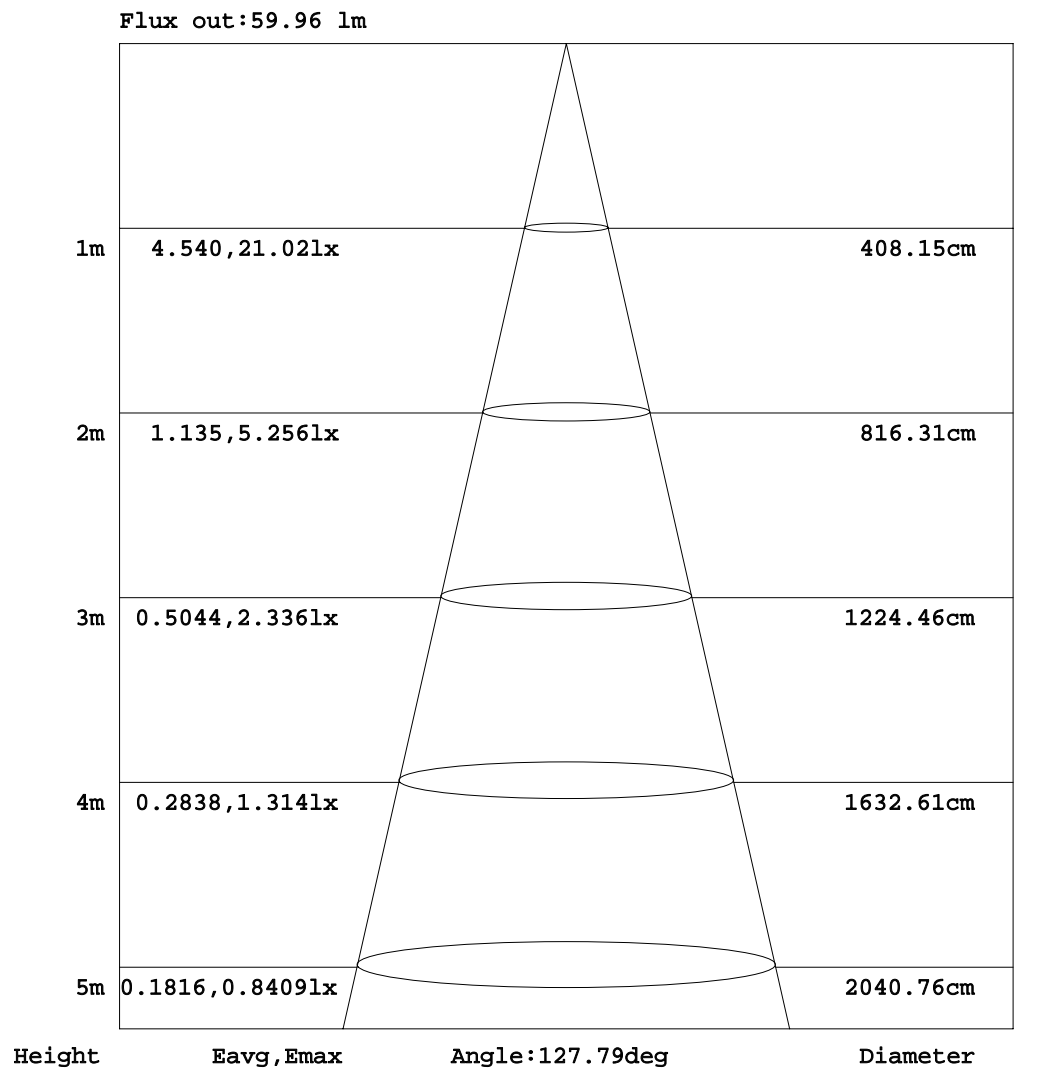


C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature: 25.3DEG  
Operators: ZP  
Test Date: 2020-07-14

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:0.1703A P:4.087W PF:1.000 Lamp Flux:73.4687x1 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.

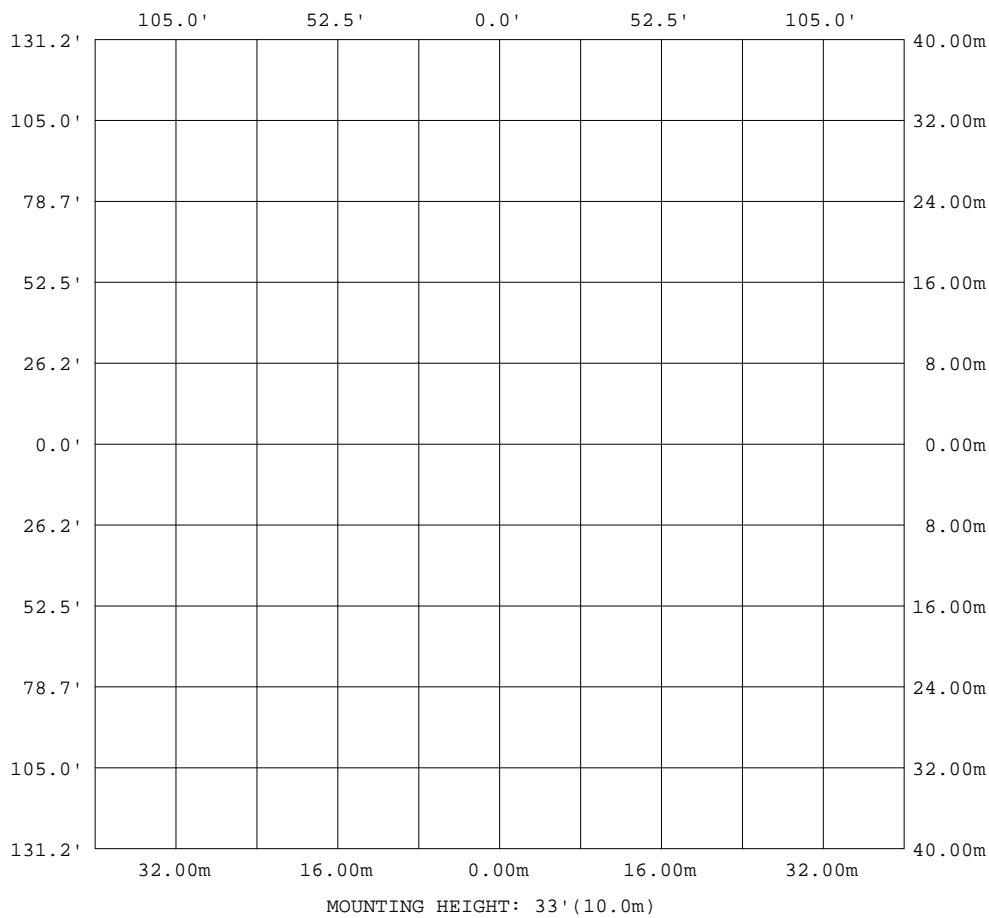
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:ZP  
Test Date:2020-07-14

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:0.1703A P:4.087W PF:1.000 Lamp Flux:73.4687x1 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:0.1703A P:4.087W PF:1.000 Lamp Flux:73.4687x1 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:

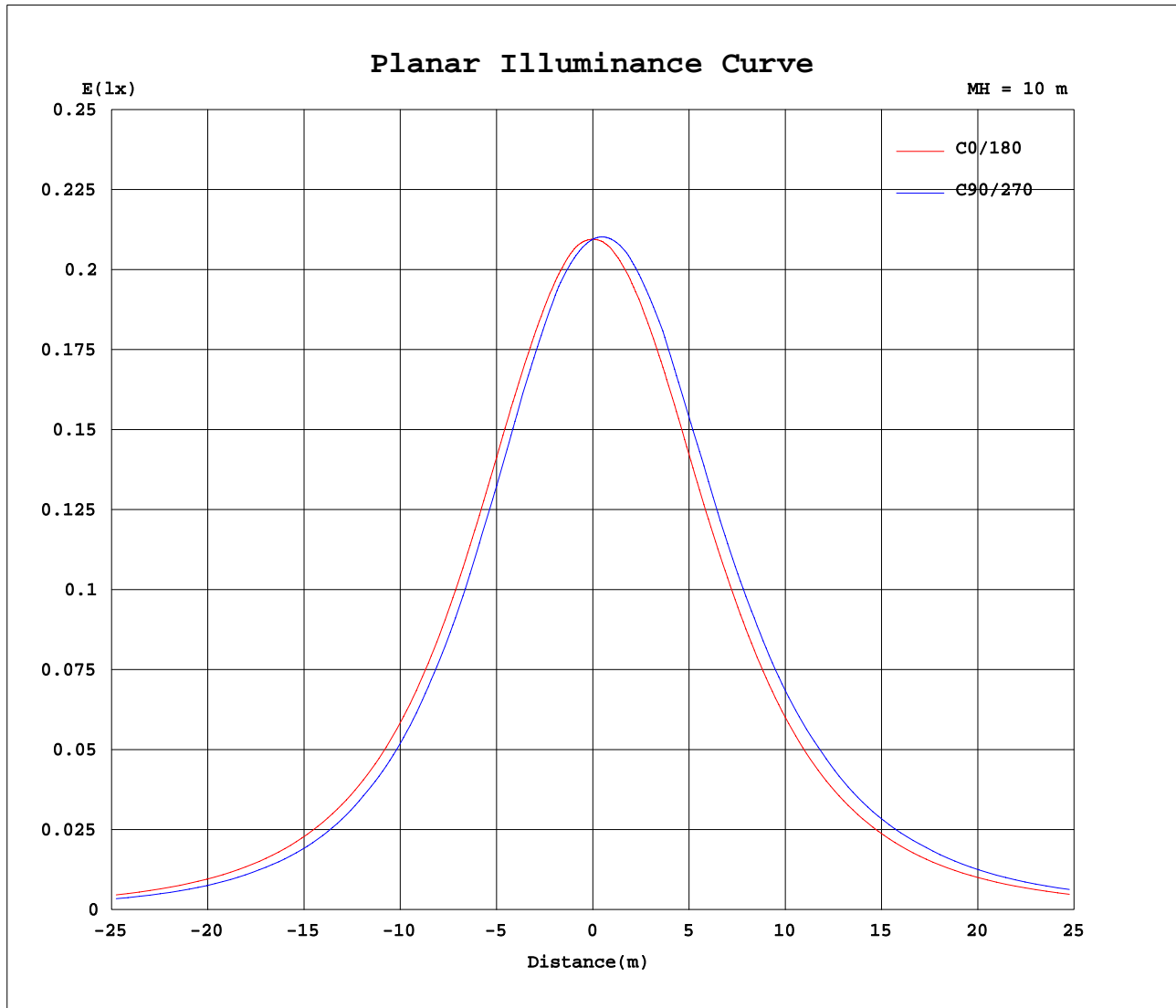
AvgL	cd/m2
L_0~180(65)av	2039
L_0~180(75)av	1818
L_0~180(85)av	1152
L_90~270(65)av	2086
L_90~270(75)av	1938
L_90~270(85)av	0
L_45(65)av	2177
L_45(75)av	1973
L_45(85)av	952

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:

```