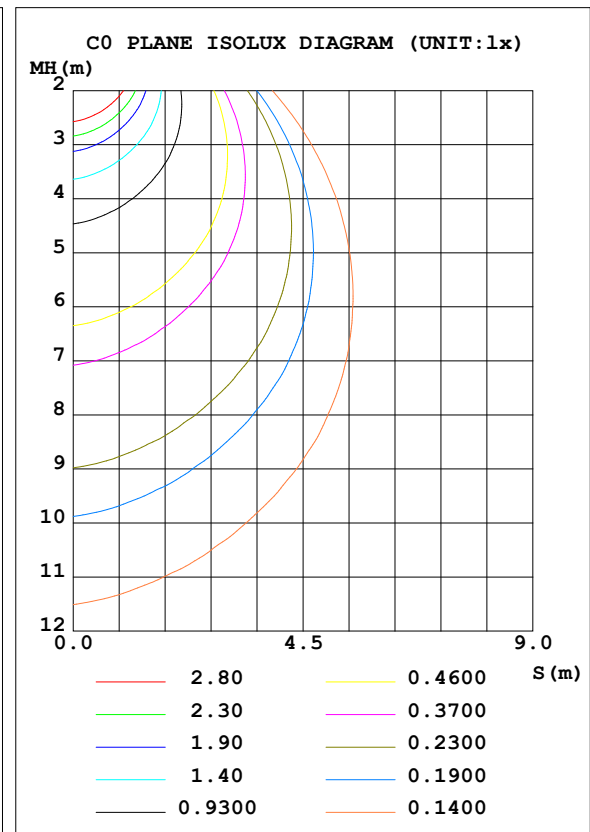
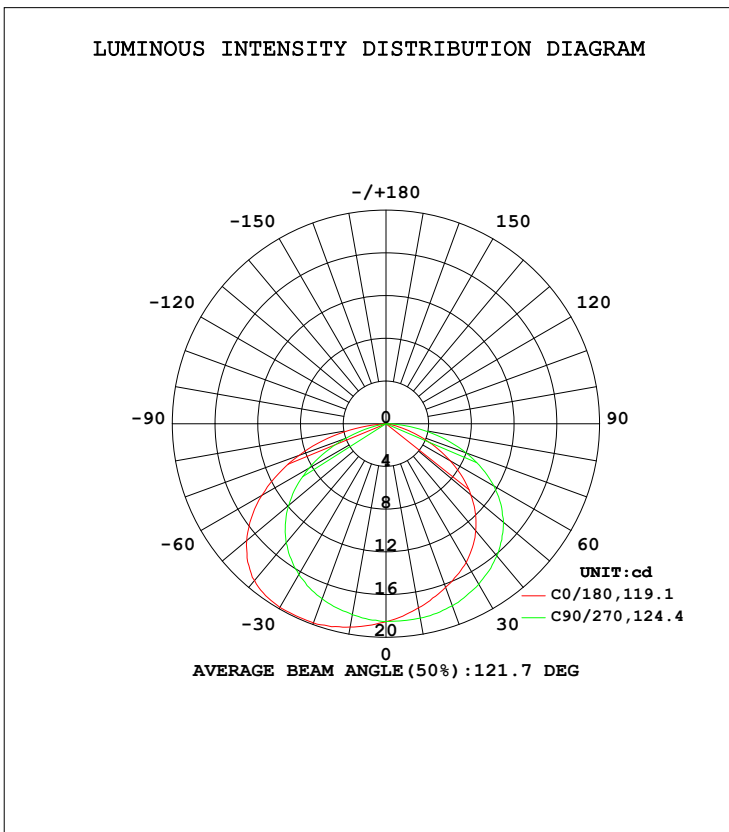


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.002V I:0.1881A P:4.5148W PF:1.0000 Freq:60.00Hz Lamp Flux:60.0871lx1 lm		
NAME: CB-RGBW	TYPE: LED Strip	WEIGHT:
SPEC.: 19W	DIM.: 1000*12*2 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.02*1	Shielding Angle: 120

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax (cd)	19.86	S/MH (C0/180)	1.60
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.31
RATED VOLTAGE (V)		TOTAL FLUX (lm)	60.087	η UP, DN (C0-180)	0.0, 47.0
NOMINAL FLUX (lm)	60.0871	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 53.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE (V)		η down (%)	100.0	CIBSE SHR MAX	1.55



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Test Date: 2022-09-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity: 65.0%
 Test Distance: 8.820m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM
ZONAL FLUX DIAGRAM:

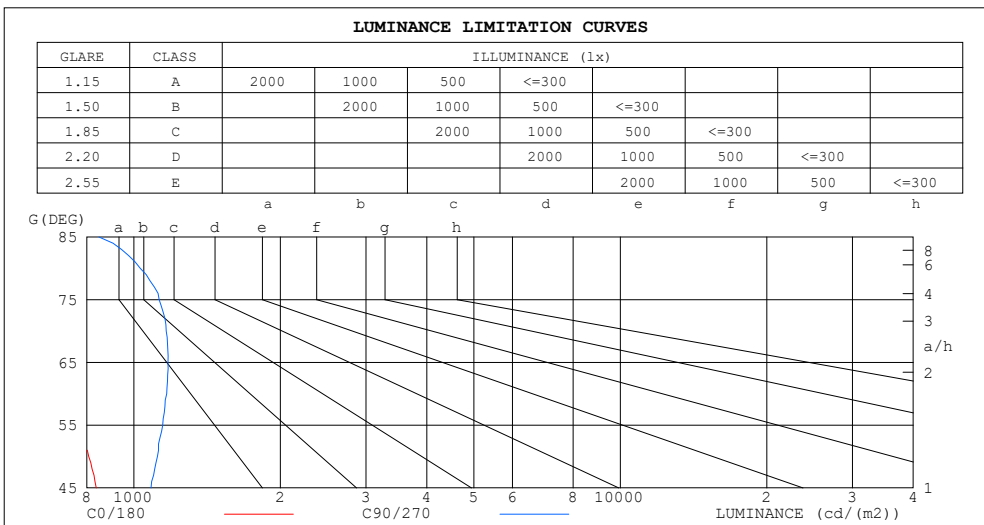
γ	C0	C90	C180	C270				γ	Φ zone	Φ total	%lum, lamp
10	17.50	18.47	19.33	18.15				0- 10	1.760	1.760	2.93,2.93
20	16.31	18.15	19.85	17.46				10- 20	5.147	6.907	11.5,11.5
30	15.01	17.35	19.86	16.32				20- 30	8.116	15.02	25,25
40	13.07	16.16	19.15	14.55				30- 40	10.34	25.36	42.2,42.2
50	10.38	14.37	17.02	11.89				40- 50	11.32	36.68	61.1,61.1
60	6.966	11.68	13.41	8.332				50- 60	10.59	47.27	78.7,78.7
70	3.206	7.971	8.653	4.041				60- 70	7.988	55.26	92,92
80	0.1926	3.579	3.412	0.2683				70- 80	4.100	59.36	98.8,98.8
90	0	0	0	0				80- 90	0.7250	60.09	100,100
100	0	0	0	0				90-100	0	60.09	100,100
110	0	0	0	0				100-110	0	60.09	100,100
120	0	0	0	0				110-120	0	60.09	100,100
130	0	0	0	0				120-130	0	60.09	100,100
140	0	0	0	0				130-140	0	60.09	100,100
150	0	0	0	0				140-150	0	60.09	100,100
160	0	0	0	0				150-160	0	60.09	100,100
170	0	0	0	0				160-170	0	60.09	100,100
180	0	0	0	0				170-180	0	60.09	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2022-09-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.820m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:24.002V I:0.1881A P:4.5148W PF:1.0000 Freq:60.00Hz Lamp Flux:60.0871x1 lm		
NAME: CB-RGBW	TYPE: LED Strip	WEIGHT:
SPEC.: 19W	DIM.: 1000*12*2 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.02*1	Shielding Angle: 120



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	0	848
80	55	1030
75	299	1127
70	469	1165
65	600	1175
60	697	1168
55	764	1146
50	808	1117
45	837	1085

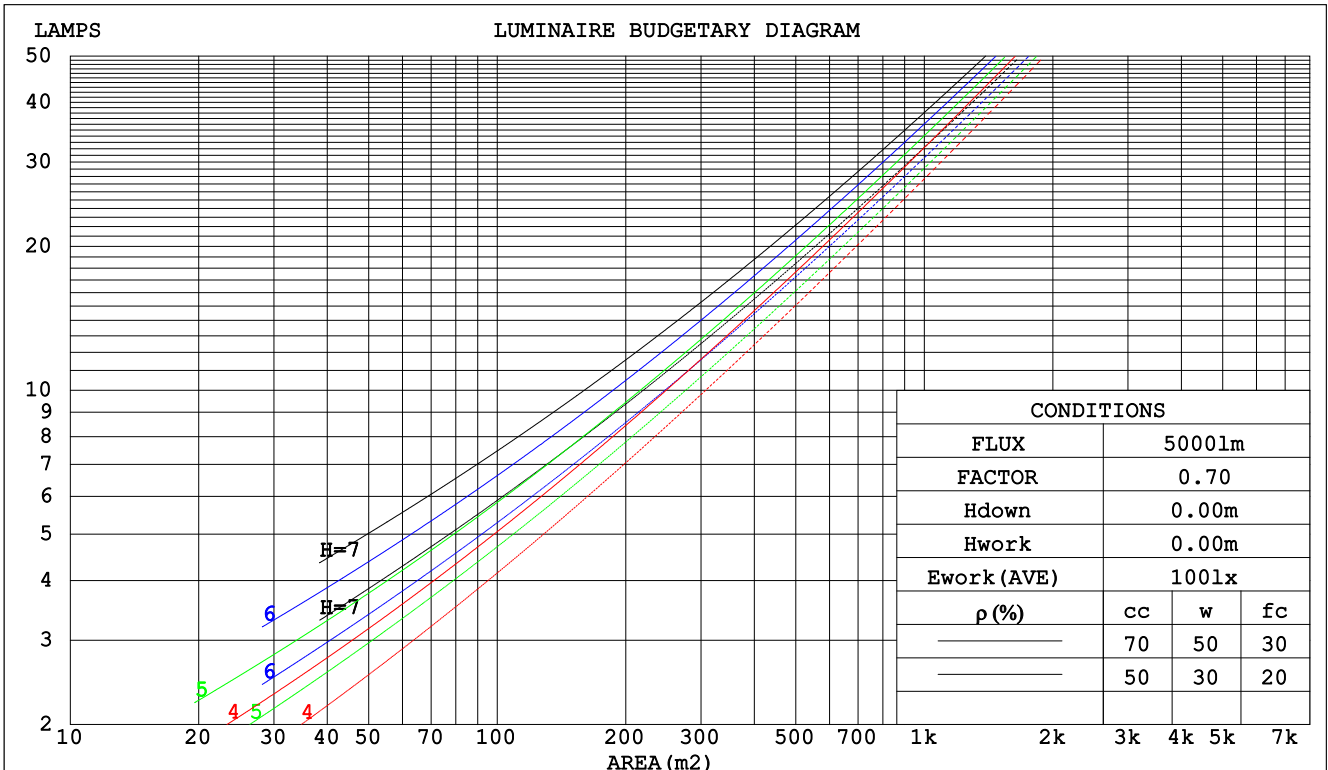
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2022-09-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.820m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.002V I:0.1881A P:4.5148W PF:1.0000 Freq:60.00Hz Lamp Flux:60.087lx1 lm		
NAME: CB-RGBW	TYPE: LED Strip	WEIGHT:
SPEC.: 19W	DIM.: 1000*12*2(MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.02*1	Shielding Angle: 120

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	.00
1.0	1.04	.00	.96	1.02	.98	.94	.97	.94	.91	.94	.91	.89	.90	.88	.86	.84
2.0	.90	.83	.78	.88	.82	.77	.85	.79	.75	.82	.77	.73	.78	.75	.71	.69
3.0	.79	.71	.64	.77	.70	.63	.74	.68	.62	.72	.66	.61	.69	.64	.60	.58
4.0	.70	.61	.54	.68	.60	.53	.66	.58	.53	.63	.57	.52	.61	.56	.51	.49
5.0	.62	.53	.46	.61	.52	.46	.59	.51	.45	.57	.50	.45	.55	.49	.44	.42
6.0	.55	.46	.40	.55	.46	.40	.53	.45	.39	.51	.44	.39	.49	.43	.39	.36
7.0	.50	.41	.35	.49	.41	.35	.48	.40	.34	.46	.39	.34	.45	.39	.34	.32
8.0	.46	.37	.31	.45	.37	.31	.44	.36	.31	.42	.35	.30	.41	.35	.30	.28
9.0	.42	.33	.28	.41	.33	.28	.40	.33	.27	.39	.32	.27	.38	.32	.27	.25
10.0	.38	.30	.25	.38	.30	.25	.37	.30	.25	.36	.29	.25	.35	.29	.25	.23



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2022-09-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.820m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:24.002V I:0.1881A P:4.5148W PF:1.0000 Freq:60.00Hz Lamp Flux:60.0871lx1 lm									
NAME: CB-RGBW				TYPE: LED Strip				WEIGHT:	
SPEC.: 19W				DIM.: 1000*12*2(MM)				SERIAL No.: 001	
MFR.: Flexfire LEDs, Inc.				SUR.: 0.02*1				Shielding Angle: 120	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.307	.175	.055	.300	.171	.054	.287	.165	.053	.275	.159	.051	.264	.153	.049	
2.0	.293	.161	.049	.287	.158	.049	.275	.153	.048	.265	.148	.046	.255	.144	.045	
3.0	.273	.145	.043	.267	.143	.043	.257	.139	.042	.247	.136	.042	.238	.132	.041	
4.0	.252	.131	.039	.248	.130	.038	.238	.126	.038	.230	.123	.037	.222	.121	.037	
5.0	.234	.119	.034	.229	.118	.034	.221	.115	.034	.214	.113	.034	.206	.110	.033	
6.0	.217	.109	.031	.213	.108	.031	.206	.105	.031	.199	.103	.030	.192	.101	.030	
7.0	.202	.100	.028	.198	.099	.028	.192	.097	.028	.186	.095	.028	.180	.093	.027	
8.0	.188	.092	.026	.185	.091	.026	.179	.090	.026	.174	.088	.025	.169	.087	.025	
9.0	.176	.085	.024	.174	.085	.024	.168	.083	.024	.164	.082	.023	.159	.081	.023	
10.0	.166	.080	.022	.163	.079	.022	.159	.078	.022	.154	.077	.022	.150	.075	.022	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.180	.156	.135	.154	.134	.116	.105	.092	.080	.061	.053	.047	.019	.017	.015	
2.0	.172	.132	.098	.148	.114	.085	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.165	.114	.074	.141	.099	.064	.097	.069	.045	.056	.040	.026	.018	.013	.009	
4.0	.158	.101	.058	.135	.087	.050	.093	.061	.035	.054	.036	.021	.017	.012	.007	
5.0	.150	.091	.047	.129	.078	.041	.089	.055	.029	.052	.032	.017	.017	.011	.006	
6.0	.143	.082	.039	.123	.071	.034	.085	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.137	.076	.033	.117	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.130	.070	.028	.112	.061	.025	.077	.042	.018	.045	.025	.010	.015	.008	.003	
9.0	.124	.065	.025	.107	.056	.022	.074	.040	.015	.043	.023	.009	.014	.008	.003	
10.0	.118	.061	.022	.102	.053	.019	.071	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2022-09-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.820m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.002V I:0.1881A P:4.5148W PF:1.0000 Freq:60.00Hz Lamp Flux:60.0871lx1 lm										
NAME: CB-RGBW			TYPE: LED Strip			WEIGHT:				
SPEC.: 19W			DIM.: 1000*12*2(MM)			SERIAL No.: 001				
MFR.: Flexfire LEDs, Inc.			SUR.: 0.02*1			Shielding Angle: 120				
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	21.5	23.1	21.8	23.3	23.5	23.3	24.8	23.5	25.0	25.2
3H	22.5	23.9	22.8	24.2	24.4	25.2	26.6	25.5	26.8	27.1
4H	22.7	24.1	23.0	24.3	24.6	25.9	27.3	26.3	27.6	27.8
6H	22.7	24.0	23.0	24.2	24.5	26.5	27.8	26.9	28.1	28.4
8H	22.6	23.9	23.0	24.2	24.4	26.7	27.9	27.1	28.2	28.5
12H	22.6	23.8	22.9	24.1	24.4	26.8	28.0	27.2	28.3	28.6
4H 2H	22.4	23.7	22.7	24.0	24.2	23.7	25.1	24.0	25.3	25.6
3H	23.5	24.7	23.9	25.0	25.3	25.8	27.0	26.1	27.2	27.6
4H	23.9	24.9	24.2	25.3	25.6	26.7	27.8	27.0	28.1	28.4
6H	23.9	24.9	24.3	25.2	25.6	27.4	28.3	27.8	28.7	29.1
8H	23.9	24.8	24.3	25.1	25.5	27.6	28.5	28.0	28.9	29.3
12H	23.8	24.7	24.3	25.0	25.4	27.8	28.6	28.2	29.0	29.4
8H 4H	24.3	25.2	24.7	25.5	25.9	26.8	27.7	27.2	28.0	28.4
6H	24.4	25.2	24.9	25.6	26.0	27.6	28.3	28.0	28.7	29.2
8H	24.4	25.1	24.9	25.5	25.9	27.9	28.6	28.4	29.0	29.5
12H	24.4	25.0	24.9	25.4	25.9	28.2	28.7	28.6	29.2	29.7
12H 4H	24.3	25.1	24.7	25.5	25.9	26.7	27.6	27.2	28.0	28.4
6H	24.5	25.2	25.0	25.6	26.0	27.6	28.2	28.1	28.7	29.1
8H	24.5	25.1	25.0	25.5	26.0	27.9	28.5	28.4	29.0	29.4
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.2 / - 0.3					+ 0.1 / - 0.1				
1.5H	+ 0.3 / - 0.6					+ 0.1 / - 0.2				
2.0H	+ 0.3 / - 0.7					+ 0.2 / - 0.4				

CIE Pub.117, 60.09 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -9.8)
 Area: 0.02 m2

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2022-09-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.820m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:24.002V I:0.1881A P:4.5148W PF:1.0000 Freq:60.00Hz Lamp Flux:60.0871x1 lm		
NAME: CB-RGBW	TYPE: LED Strip	WEIGHT:
SPEC.: 19W	DIM.: 1000*12*2 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.02*1	Shielding Angle: 120

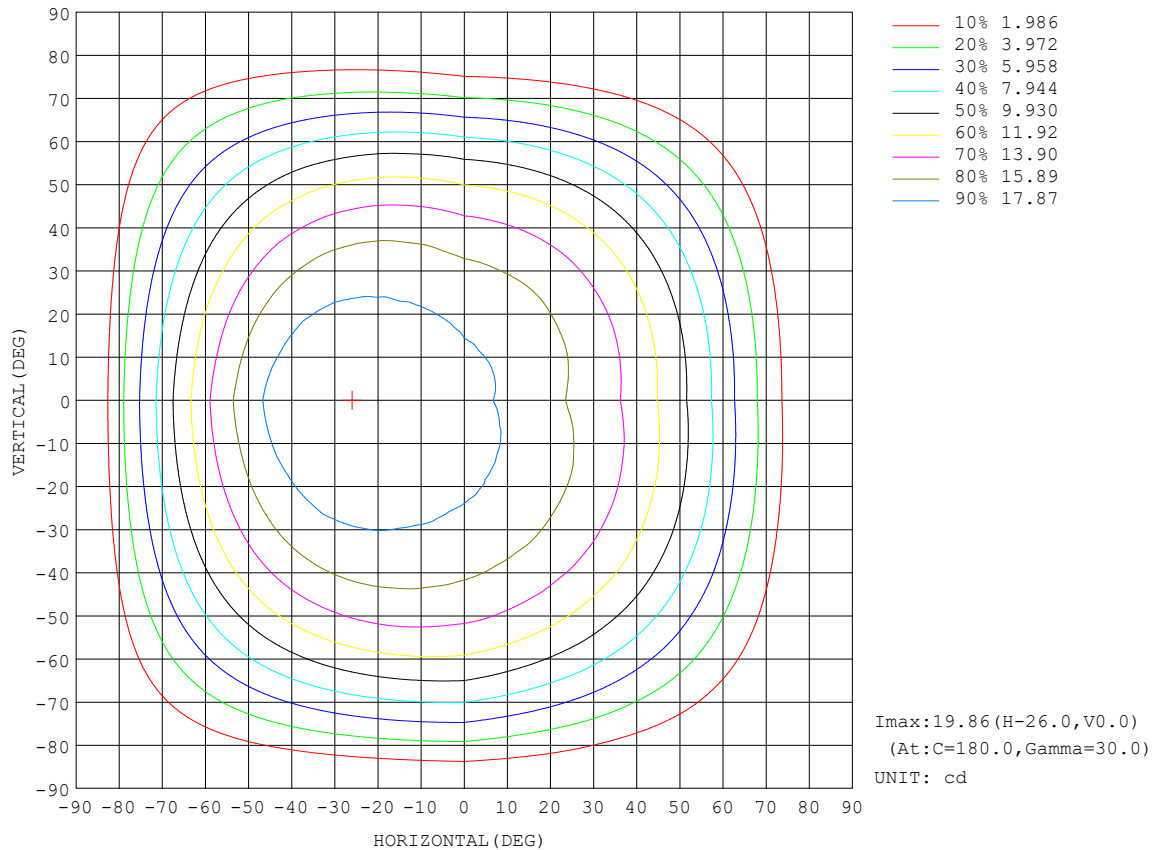
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	56	44	37	55	44	37	54	43	37	30
0.80	66	54	47	65	54	47	63	53	46	39
1.00	75	64	56	74	63	56	71	64	55	48
1.25	82	72	64	81	71	64	78	69	63	56
1.50	87	77	70	86	76	70	83	75	69	61
2.00	95	86	79	93	85	79	89	83	77	69
2.50	99	91	85	97	89	84	93	87	82	74
3.00	102	95	90	100	94	89	96	91	86	78
4.00	106	101	96	104	99	94	100	95	92	83
5.00	109	104	100	106	102	98	102	98	95	86
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:2022-09-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.820m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:24.002V I:0.1881A P:4.5148W PF:1.0000 Freq:60.00Hz Lamp Flux:60.0871x1 lm		
NAME: CB-RGBW	TYPE: LED Strip	WEIGHT:
SPEC.: 19W	DIM.: 1000*12*2 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.02*1	Shielding Angle: 120

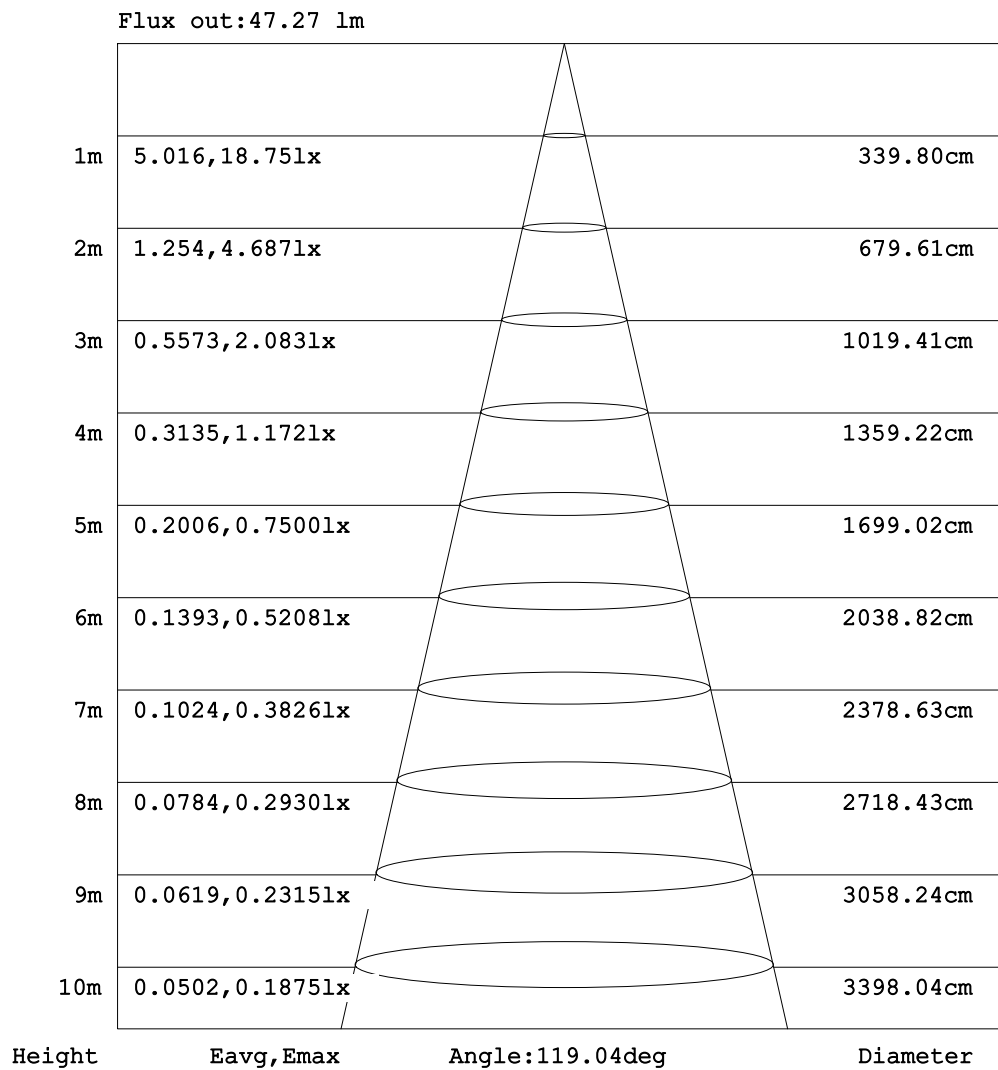


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2022-09-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.820m [K=1.0000]
 Remarks:

AAI Figure

Test:U:24.002V I:0.1881A P:4.5148W PF:1.0000 Freq:60.00Hz Lamp Flux:60.087lx1 lm		
NAME: CB-RGBW	TYPE: LED Strip	WEIGHT:
SPEC.: 19W	DIM.: 1000*12*2(MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.02*1	Shielding Angle: 120



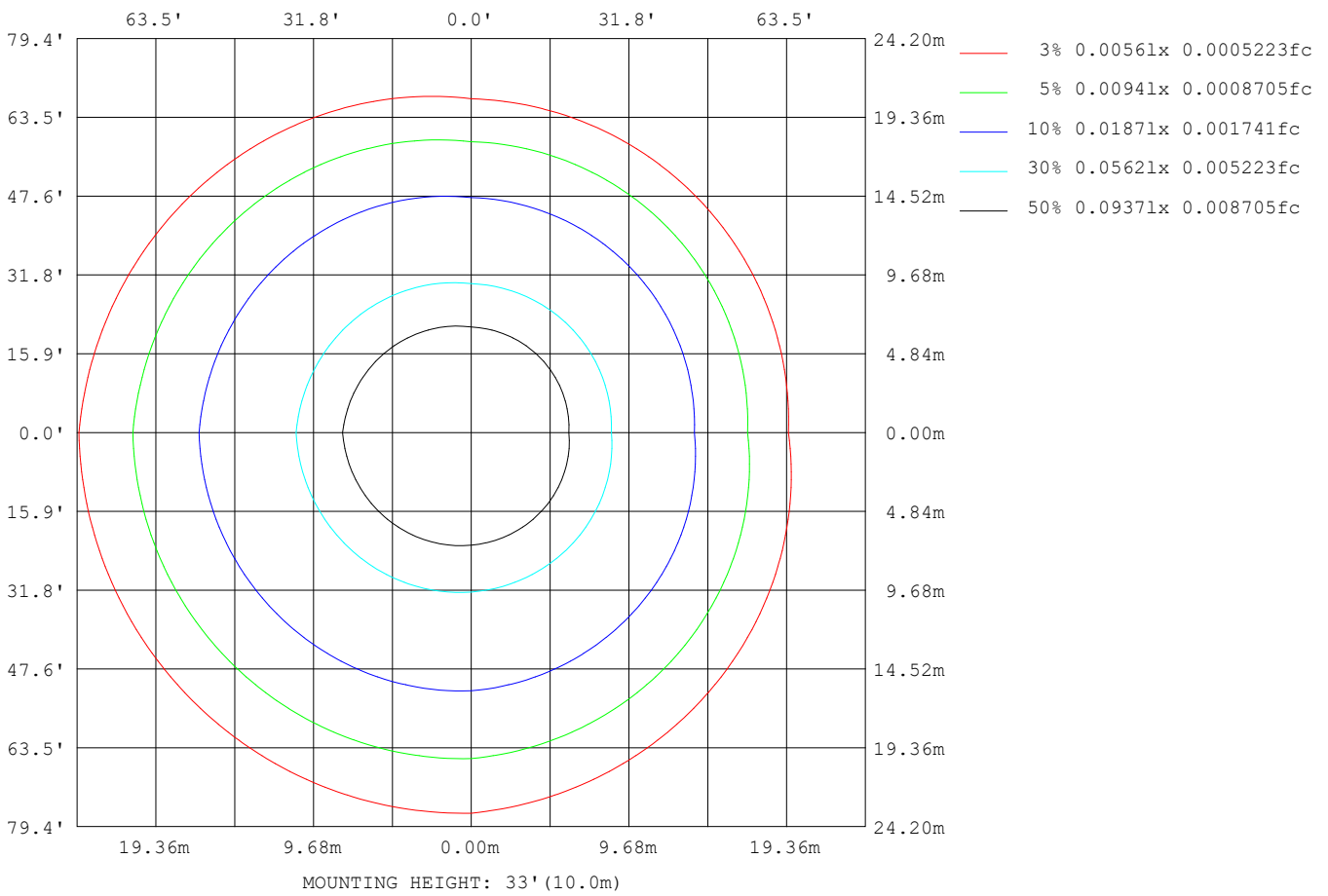
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2022-09-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.820m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:24.002V I:0.1881A P:4.5148W PF:1.0000 Freq:60.00Hz Lamp Flux:60.087lx1 lm		
NAME: CB-RGBW	TYPE: LED Strip	WEIGHT:
SPEC.: 19W	DIM.: 1000*12*2 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.02*1	Shielding Angle: 120



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2022-09-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.820m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:24.002V I:0.1881A P:4.5148W PF:1.0000 Freq:60.00Hz Lamp Flux:60.0871x1 lm		
NAME: CB-RGBW	TYPE: LED Strip	WEIGHT:
SPEC.: 19W	DIM.: 1000*12*2(MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.02*1	Shielding Angle: 120

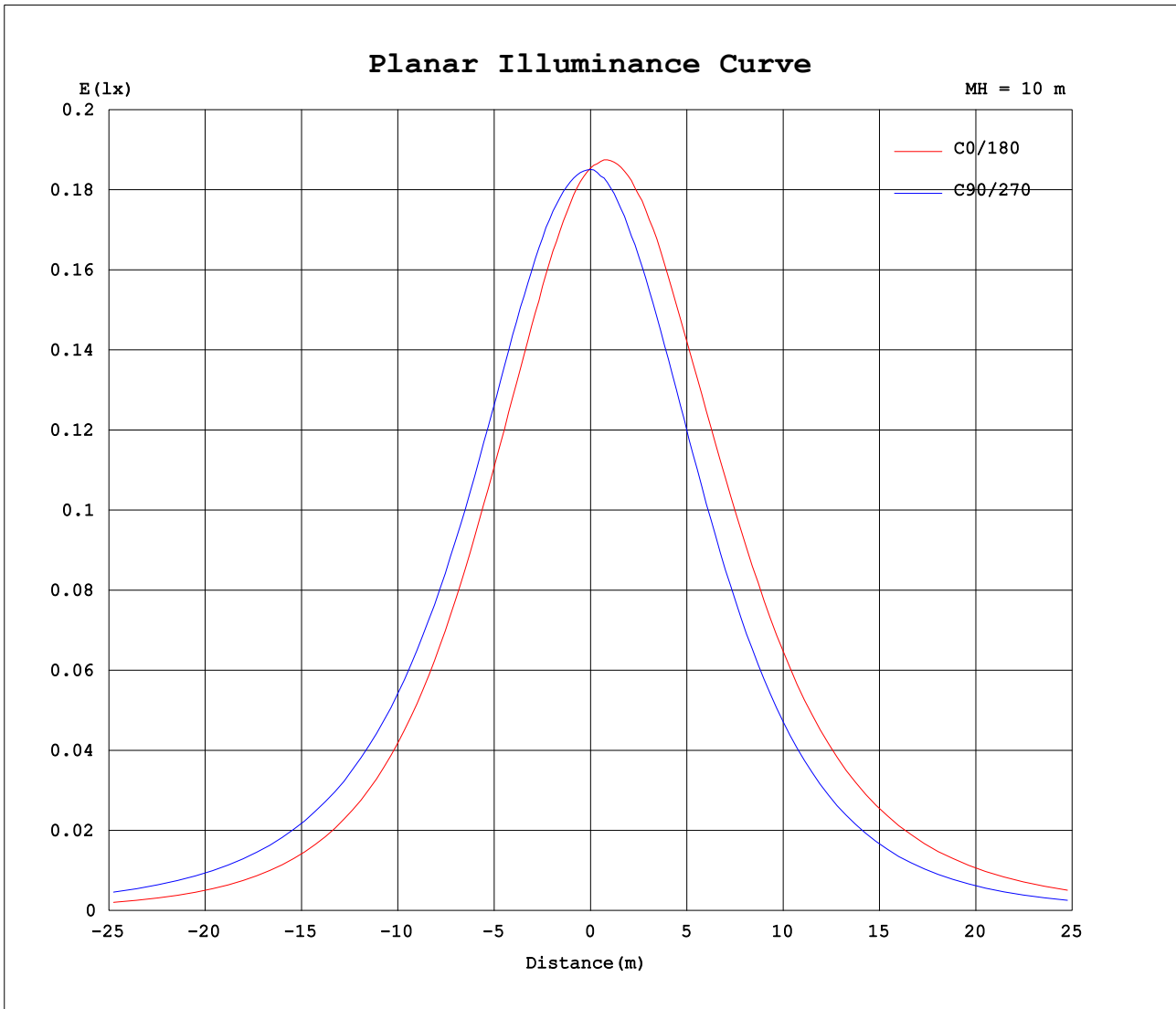
AvgL	cd/m2
L_0~180 (65) av	958
L_0~180 (75) av	740
L_0~180 (85) av	198
L_90~270 (65) av	956
L_90~270 (75) av	758
L_90~270 (85) av	424
L_45 (65) av	980
L_45 (75) av	779
L_45 (85) av	364

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2022-09-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.820m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Test Date: 2022-09-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity: 65.0%
 Test Distance: 8.820m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.002V I:0.1881A P:4.5148W PF:1.0000 Freq:60.00Hz Lamp Flux:60.0871lx1 lm		
NAME: CB-RGBW	TYPE: LED Strip	WEIGHT:
SPEC.: 19W	DIM.: 1000*12*2(MM)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.02*1	Shielding Angle: 120

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	90	180	270															
0	18.5	18.5	18.5	18.5															
5	18.1	18.5	19.0	18.4															
10	17.5	18.5	19.3	18.2															
15	16.9	18.4	19.7	17.8															
20	16.3	18.2	19.8	17.5															
25	15.7	17.8	19.9	17.0															
30	15.0	17.4	19.9	16.3															
35	14.1	16.8	19.7	15.5															
40	13.1	16.2	19.2	14.5															
45	11.8	15.3	18.3	13.3															
50	10.4	14.4	17.0	11.9															
55	8.76	13.1	15.4	10.2															
60	6.97	11.7	13.4	8.33															
65	5.07	9.93	11.1	6.23															
70	3.21	7.97	8.65	4.04															
75	1.55	5.83	6.11	2.02															
80	0.19	3.58	3.41	0.27															
85	0.00	1.48	0.69	0.00															
90	0.00	0.00	0.00	0.00															
95	0.00	0.00	0.00	0.00															
100	0.00	0.00	0.00	0.00															
105	0.00	0.00	0.00	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:2022-09-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.820m [K=1.0000]
 Remarks: