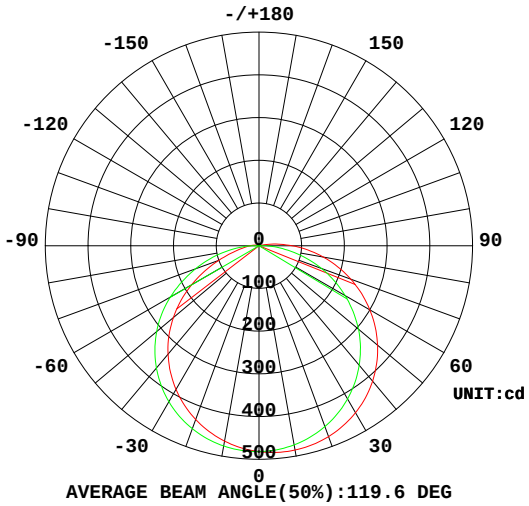
LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.000V I:0.6000A P:14.400W PF:1.0000 Freq:0Hz Lamp Flux:1567.81x1 lm		
NAME: UB-AS-30K90C	TYPE:LED Strip	WEIGHT:
SPEC.:14.4W	DIM.: 1000*10*2(MM)	SERIAL No.:001
MFR.: Flexfire LEDs, Inc.	SUR.:1000*10(MM)	Shielding Angle:120

DATA OF LAMP		PHOTOMETRIC DATA Eff: 108.88 lm/W			
MODEL		Imax(cd)	486.1	S/MH(C0/180)	1.21
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.30
RATED VOLTAGE(V)		TOTAL FLUX(lm)	1567.8	η UP,DN(C0-180)	1.5,53.3
NOMINAL FLUX(lm)	1567.81	CIE CLASS	DIRECT	η UP,DN(C180-360)	1.0,44.3
LAMPS INSIDE	1	η up(%)	2.4	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)		η down(%)	97.6	CIBSE SHR MAX	1.35

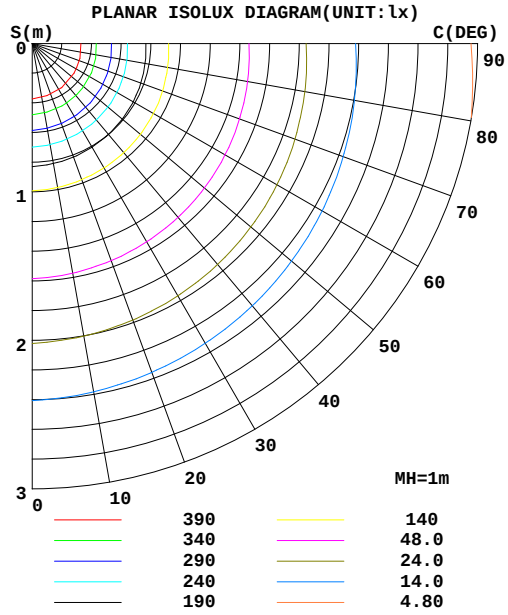
LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



AVERAGE BEAM ANGLE(50%):119.6 DEG

C0/180 Ic=486.1
52.4,68.0
C90/270 Ic=481.9
59.8,58.9

PLANAR ISOLUX DIAGRAM(UNIT:lx)



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Test Date:2021-12-31

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:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum,lamp
10	485.7	473.4	464.4	476.0					0- 10	45.66	45.66	2.91,2.91
20	475.5	450.8	433.0	455.9					10- 20	131.6	177.3	11.3,11.3
30	451.5	414.5	388.6	421.7					20- 30	202.0	379.3	24.2,24.2
40	413.8	364.8	331.3	373.7					30- 40	248.2	627.5	40,40
50	362.3	304.2	261.8	312.9					40- 50	263.9	891.4	56.9,56.9
60	299.7	232.7	181.7	239.5					50- 60	246.1	1137	72.6,72.6
70	228.6	155.9	100.3	158.4					60- 70	197.6	1335	85.2,85.2
80	153.3	76.59	44.51	79.92					70- 80	130.7	1466	93.5,93.5
90	77.68	12.19	21.53	15.94					80- 90	64.15	1530	97.6,97.6
100	18.60	2.024	9.853	1.849					90-100	18.76	1549	98.8,98.8
110	2.420	2.541	4.027	2.328					100-110	4.837	1554	99.1,99.1
120	2.432	3.003	3.346	2.796					110-120	2.726	1556	99.3,99.3
130	2.867	3.411	3.693	3.225					120-130	2.775	1559	99.4,99.4
140	3.318	3.781	4.025	3.628					130-140	2.705	1562	99.6,99.6
150	3.720	4.124	4.296	3.966					140-150	2.420	1564	99.8,99.8
160	4.143	4.418	4.578	4.297					150-160	1.938	1566	99.9,99.9
170	4.551	4.690	4.828	4.618					160-170	1.277	1567	100,100
180	4.828	4.820	4.817	4.814					170-180	0.4525	1568	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

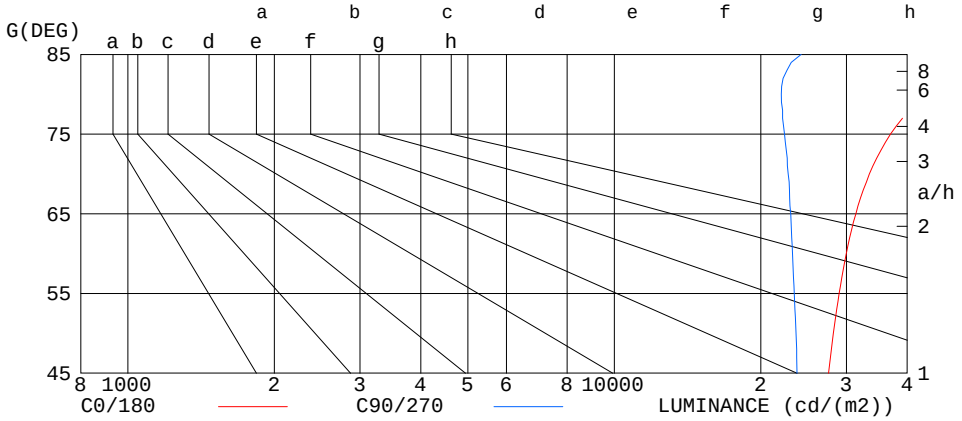
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Test Date:2021-12-31

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:

LUMINANCE LIMITATION CURVES

LUMINANCE LIMITATION CURVES

GLARE	CLASS	ILLUMINANCE (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	65901	24221
80	44168	22035
75	36951	22379
70	33443	22773
65	31369	23053
60	29991	23249
55	28981	23429
50	28207	23641
45	27572	23734

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
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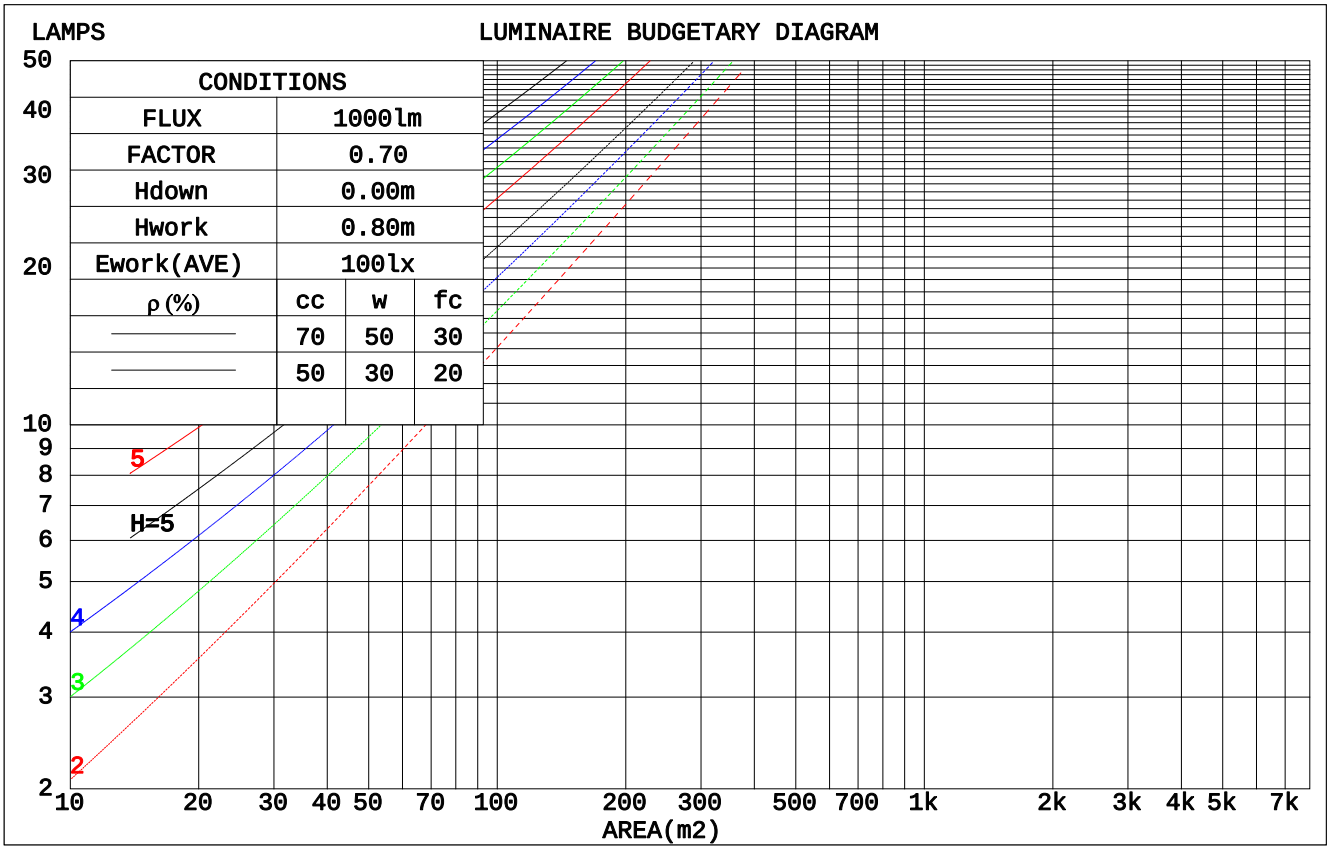
γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.429
Humidity:65.0%
Test Distance:8.270m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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			Coefficients of Utilization(CU)												
0.0	1.18	1.18	1.18	1.15	1.15	1.15	1.10	1.10	1.10	1.05	1.05	1.05	.00	.00	.00	.98
1.0	1.02	.97	.93	.99	.95	.91	.94	.91	.87	.90	.87	.84	.86	.84	.81	.79
2.0	.88	.81	.74	.86	.79	.73	.82	.76	.71	.78	.73	.69	.75	.71	.67	.65
3.0	.77	.68	.61	.75	.67	.60	.72	.65	.59	.68	.63	.58	.65	.61	.56	.54
4.0	.68	.58	.51	.66	.58	.51	.63	.56	.50	.61	.54	.49	.58	.53	.48	.46
5.0	.60	.51	.44	.59	.50	.44	.57	.49	.43	.54	.48	.42	.52	.46	.42	.39
6.0	.54	.45	.38	.53	.44	.38	.51	.43	.37	.49	.42	.37	.47	.41	.36	.34
7.0	.49	.40	.34	.48	.39	.33	.46	.39	.33	.45	.38	.33	.43	.37	.32	.30
8.0	.45	.36	.30	.44	.35	.30	.42	.35	.29	.41	.34	.29	.39	.33	.29	.27
9.0	.41	.32	.27	.40	.32	.27	.39	.32	.26	.38	.31	.26	.36	.30	.26	.24
10.0	.38	.30	.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:2021-12-31

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:

WEC AND CCEC

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 Coeffcients(WEC)									
0.0																
1.0	.342	.194	.062	.334	.191	.061	.319	.183	.058	.306	.176	.057	.293	.170	.055	
2.0	.311	.171	.052	.304	.168	.052	.291	.162	.050	.279	.156	.049	.268	.151	.048	
3.0	.283	.151	.045	.277	.148	.045	.265	.144	.044	.255	.139	.043	.245	.135	.042	
4.0	.259	.135	.040	.253	.133	.039	.243	.129	.038	.233	.125	.038	.224	.122	.037	
5.0	.238	.121	.035	.233	.119	.035	.223	.116	.034	.215	.113	.034	.207	.110	.033	
6.0	.219	.110	.031	.215	.109	.031	.207	.106	.031	.199	.103	.030	.192	.101	.030	
7.0	.203	.101	.028	.199	.099	.028	.192	.097	.028	.185	.095	.028	.178	.093	.027	
8.0	.189	.093	.026	.186	.091	.026	.179	.089	.026	.173	.088	.025	.167	.086	.025	
9.0	.177	.086	.024	.174	.085	.024	.168	.083	.024	.162	.081	.023	.157	.080	.023	
10.0	.166	.080	.022	.163	.079	.022	.158	.077	.022	.152	.076	.022	.148	.074	.021	

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	.209	.209	.209	.179	.179	.179	.122	.122	.122	.070	.070	.070	.022	.022	.022	
1.0	.201	.174	.150	.172	.150	.129	.118	.103	.090	.068	.060	.052	.022	.019	.017	
2.0	.194	.151	.114	.166	.130	.099	.114	.090	.069	.065	.052	.040	.021	.017	.013	
3.0	.186	.133	.091	.159	.115	.079	.109	.080	.055	.063	.047	.033	.020	.015	.011	
4.0	.178	.120	.076	.153	.104	.066	.105	.072	.046	.061	.042	.027	.020	.014	.009	
5.0	.171	.110	.065	.146	.095	.057	.101	.066	.040	.058	.039	.024	.019	.013	.008	
6.0	.163	.102	.057	.140	.088	.050	.097	.062	.035	.056	.036	.021	.018	.012	.007	
7.0	.156	.095	.052	.134	.082	.045	.093	.058	.032	.054	.034	.019	.017	.011	.006	
8.0	.150	.089	.047	.129	.077	.041	.089	.054	.029	.052	.032	.017	.017	.010	.006	
9.0	.143	.084	.044	.123	.073	.038	.086	.051	.027	.050	.030	.016	.016	.010	.005	
10.0	.137	.080	.041	.119	.069	.036	.082	.049	.026	.048	.029	.015	.016	.009	.005	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Test Date:2021-12-31

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	24.1	25.8	24.5	26.1	26.5	22.4	24.1	22.8	24.4	24.8
	3H	26.6	28.1	27.0	28.5	28.9	24.5	26.0	24.9	26.3	26.8
	4H	27.8	29.2	28.2	29.6	30.0	25.3	26.7	25.7	27.1	27.5
	6H	28.9	30.2	29.4	30.7	31.1	26.0	27.3	26.4	27.7	28.1
	8H	29.5	30.8	30.0	31.2	31.6	26.2	27.5	26.7	27.9	28.4
	12H	30.1	31.3	30.6	31.7	32.2	26.5	27.7	26.9	28.1	28.6
4H	2H	24.8	26.2	25.2	26.6	27.0	22.9	24.3	23.4	24.7	25.2
	3H	27.5	28.7	27.9	29.1	29.6	25.2	26.3	25.6	26.8	27.2
	4H	28.8	29.9	29.3	30.4	30.8	26.1	27.2	26.6	27.7	28.1
	6H	30.1	31.1	30.6	31.6	32.1	26.9	27.9	27.4	28.4	28.9
	8H	30.8	31.7	31.3	32.2	32.7	27.3	28.2	27.8	28.7	29.2
	12H	31.5	32.3	32.0	32.9	33.4	27.6	28.4	28.1	28.9	29.4
8H	4H	29.2	30.1	29.7	30.6	31.1	26.3	27.2	26.8	27.7	28.2
	6H	30.7	31.4	31.2	32.0	32.5	27.3	28.0	27.8	28.6	29.1
	8H	31.5	32.2	32.0	32.7	33.3	27.7	28.4	28.3	28.9	29.5
	12H	32.4	33.0	32.9	33.5	34.1	28.1	28.8	28.7	29.3	29.9
12H	4H	29.2	30.0	29.7	30.6	31.1	26.3	27.2	26.9	27.7	28.2
	6H	30.8	31.5	31.3	32.0	32.6	27.3	28.0	27.9	28.5	29.1
	8H	31.7	32.3	32.2	32.8	33.4	27.8	28.4	28.4	29.0	29.6
CIE190: 2010											

CIE190: 2010
Area: 0.02 m2

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Test Date:2021-12-31

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) x RCR = 5									
k = 0.60	55	43	36	54	43	36	53	42	35	29
0.80	65	53	45	64	52	45	62	51	44	37
1.00	73	61	53	72	61	53	69	62	53	45
1.25	80	69	61	78	68	61	75	66	60	52
1.50	85	74	67	83	73	66	80	71	65	57
2.00	92	83	76	90	81	75	86	79	73	65
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	91	81
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended					SHRNOM = 1.25	

C Range: 0 - 360DEG
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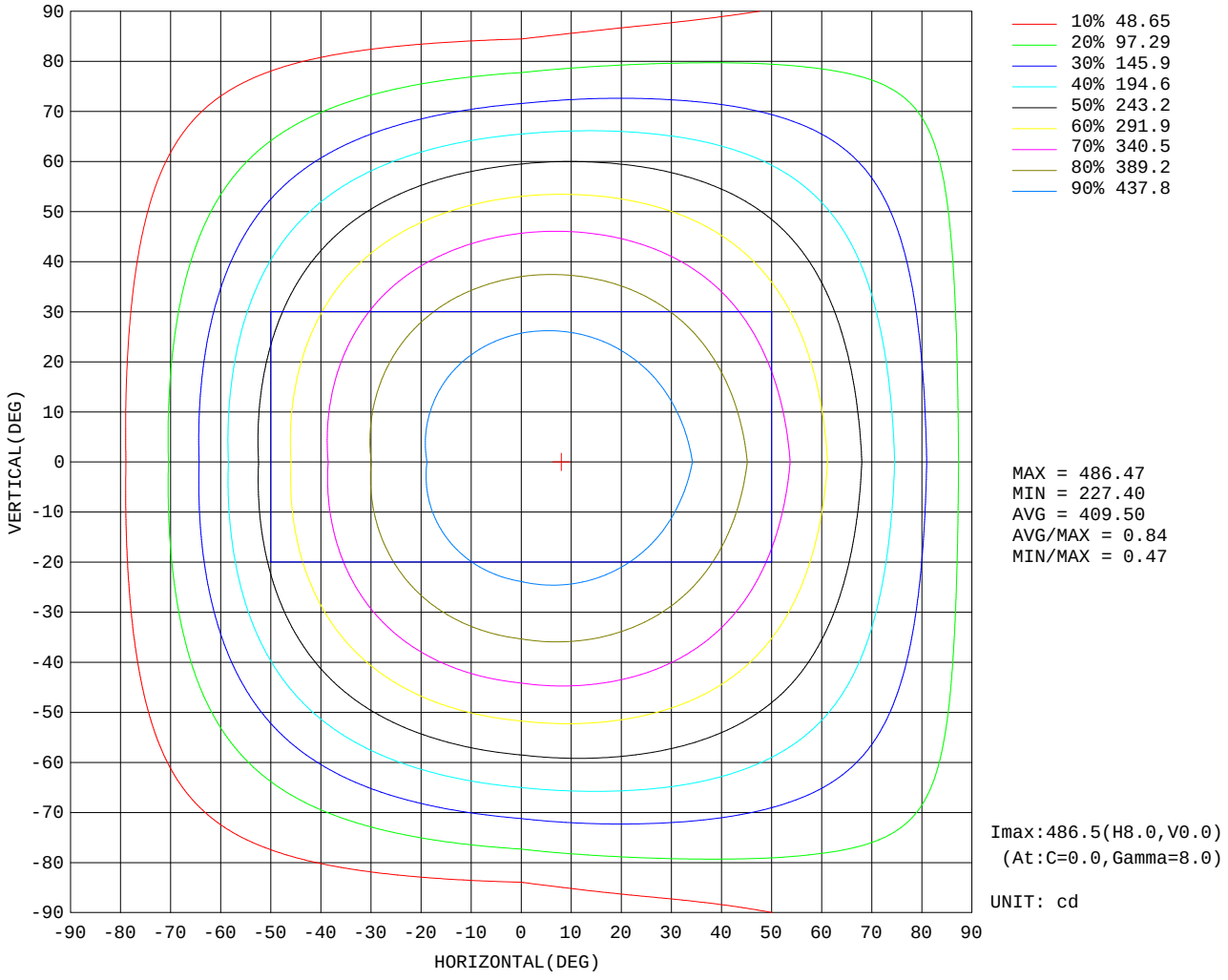
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.429
Humidity:65.0%
Test Distance:8.270m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM



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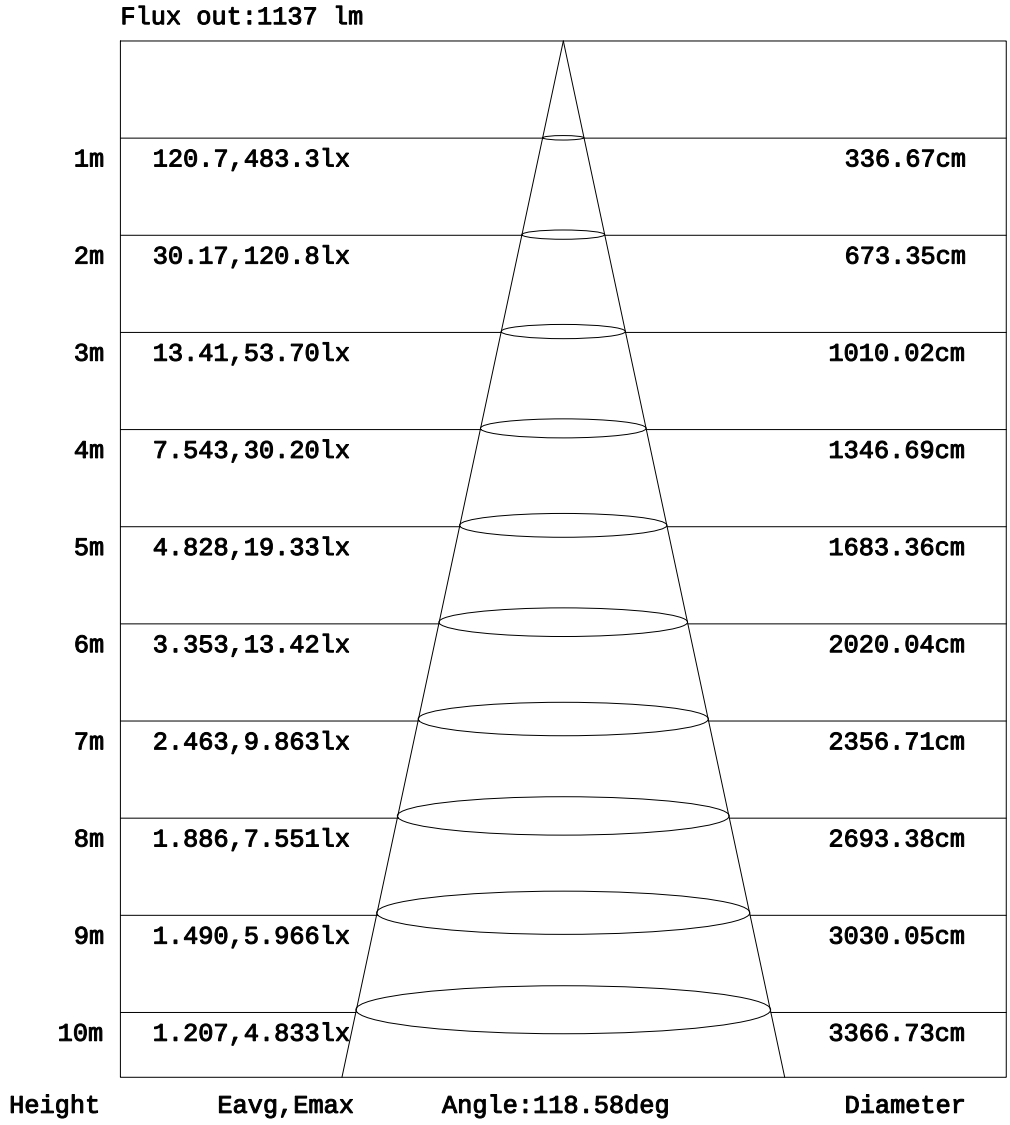
Remarks:

AAI Figure



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

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Humidity:65.0%
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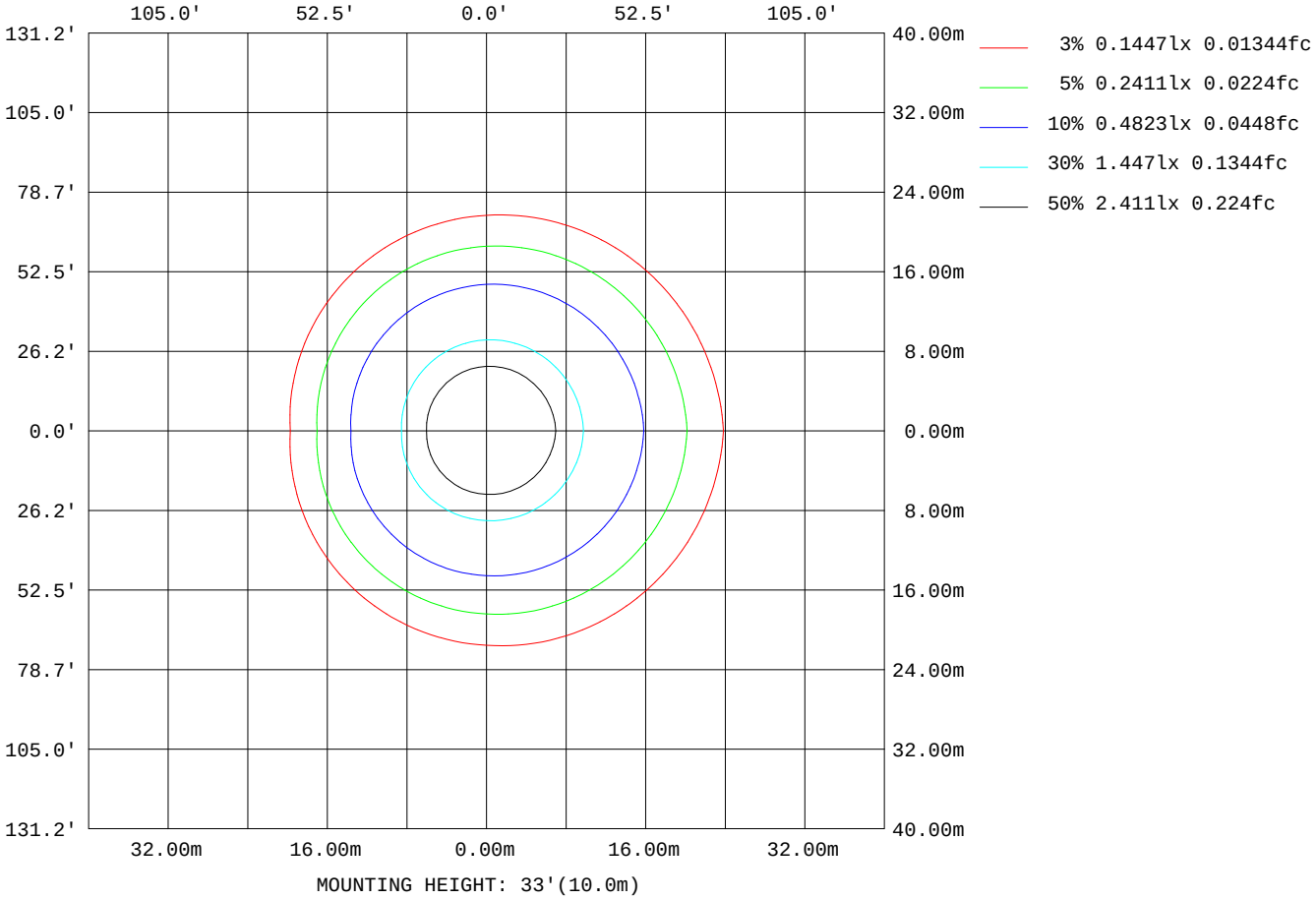
Remarks:

ISOLUX DIAGRAM



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Remarks:

LED Avg.L Report

Test:U:24.000V I:0.6000A P:14.400W PF:1.0000 Freq:0Hz Lamp Flux:1567.81x1 lm		
NAME: UB-AS-30K90C	TYPE:LED Strip	WEIGHT:
SPEC.:14.4W	DIM.: 1000*10*2(MM)	SERIAL No.:001
MFR.: Flexfire LEDs, Inc.	SUR.:1000*10(MM)	Shielding Angle:120

AvgL	cd/m2
L_0~180(65)av	23961
L_0~180(75)av	24965
L_0~180(85)av	41707
L_90~270(65)av	23280
L_90~270(75)av	22683
L_90~270(85)av	25017
L_45(65)av	23075
L_45(75)av	22793
L_45(85)av	29775

Standard: GB/T 29293-2012

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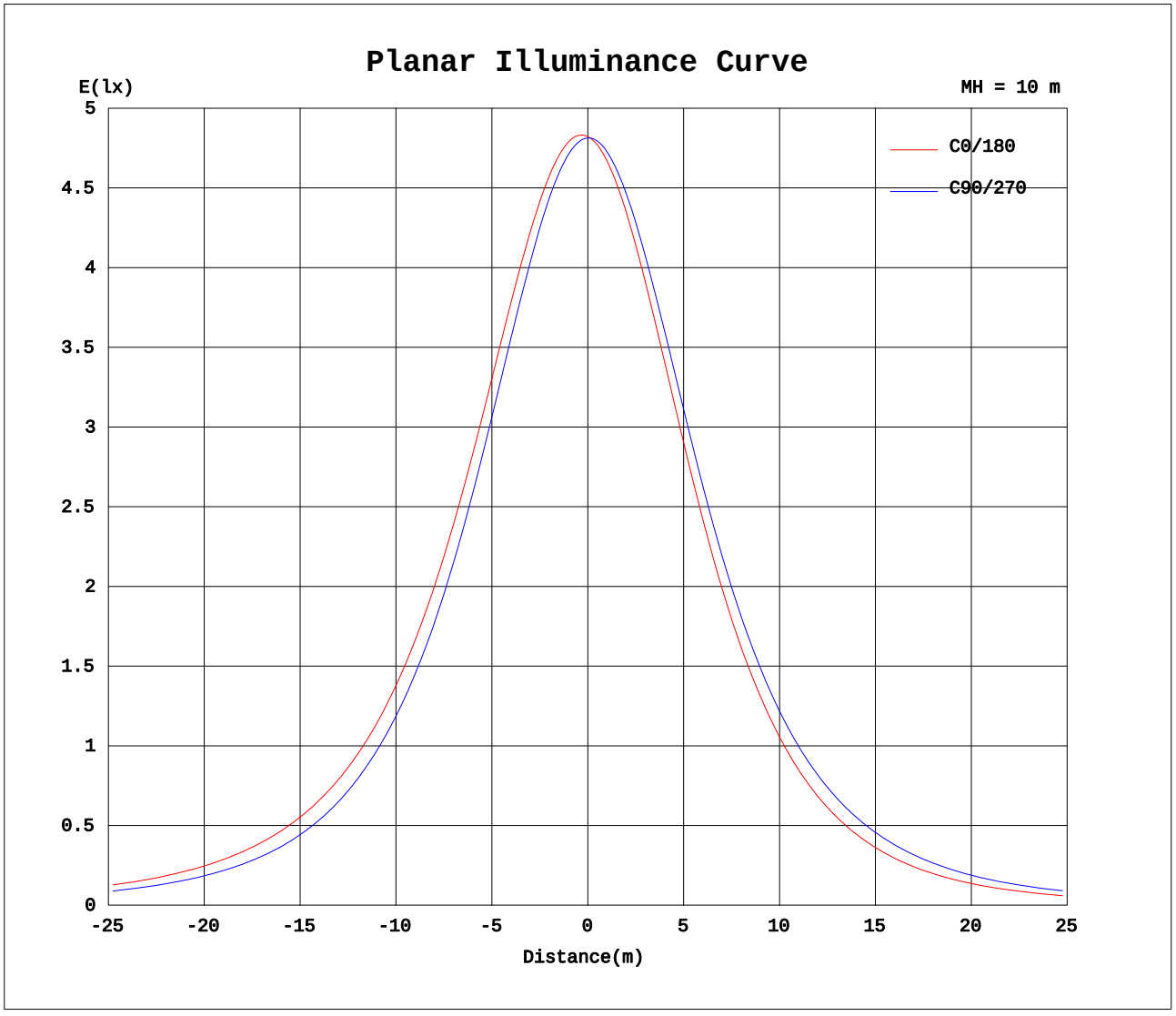
Remarks:

Planar Illuminance Curve



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Humidity:65.0%
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Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1 UNIT: cd

C(DEG) / γ (DEG)	0	90	180	270															
0	482	482	482	482															
5	486	479	475	481															
10	486	473	464	476															
15	482	464	450	468															
20	476	451	433	456															
25	465	434	412	441															
30	452	415	389	422															
35	434	391	361	399															
40	414	365	331	374															
45	390	336	298	345															
50	362	304	262	313															
55	332	269	223	278															
60	300	233	182	240															
65	265	195	140	199															
70	229	156	100	158															
75	191	116	67.3	119															
80	153	76.6	44.5	79.9															
85	115	42.3	30.6	45.0															
90	77.7	12.2	21.5	15.9															
95	45.6	1.78	15.2	1.67															
100	18.6	2.02	9.85	1.85															
105	5.90	2.29	6.14	2.09															
110	2.42	2.54	4.03	2.33															
115	2.23	2.79	3.19	2.57															
120	2.43	3.00	3.35	2.80															
125	2.64	3.22	3.54	3.00															
130	2.87	3.41	3.69	3.23															
135	3.09	3.61	3.86	3.44															
140	3.32	3.78	4.02	3.63															
145	3.52	3.96	4.16	3.80															
150	3.72	4.12	4.30	3.97															
155	3.94	4.27	4.45	4.14															
160	4.14	4.42	4.58	4.30															
165	4.37	4.56	4.70	4.47															
170	4.55	4.69	4.83	4.62															
175	4.71	4.78	4.86	4.75															
180	4.83	4.82	4.82	4.81															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Test Date:2021-12-31

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: