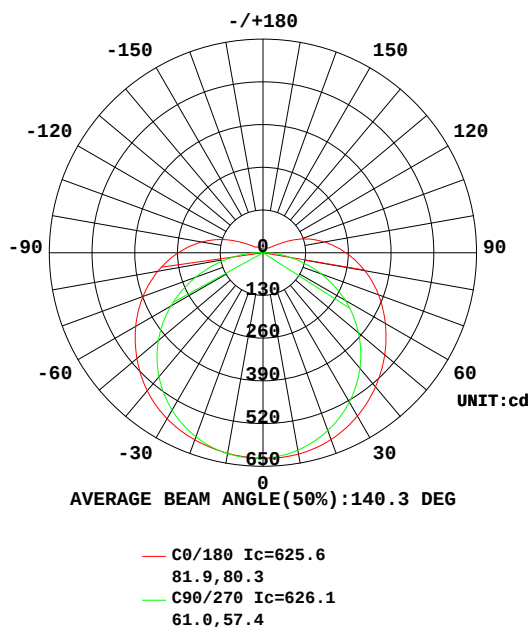


LUMINAIRE PHOTOMETRIC TEST REPORT

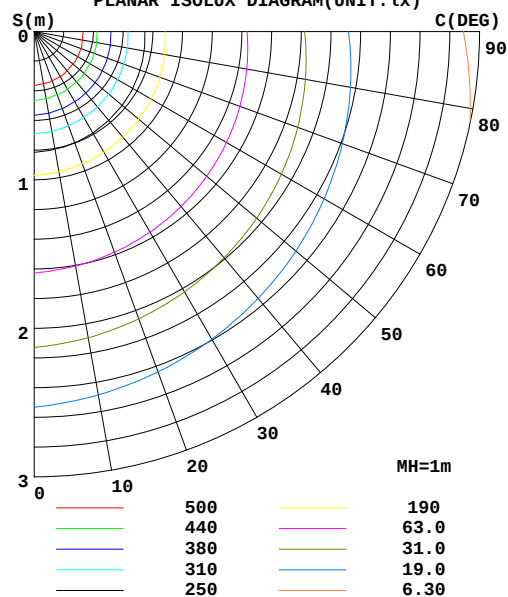
Test:U:24.000V I:0.9900A P:23.760W PF:1.0000 Freq:0Hz Lamp Flux:2644.31x1 lm		
NAME: IP67-UB-VA-50K	TYPE: LED Strip	WEIGHT:
SPEC.: 24W	DIM.: 1000*12*2 (mm)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.02*1	Shielding Angle: 120

DATA OF LAMP		PHOTOMETRIC DATA Eff: 111.29 lm/W			
MODEL		I _{max} (cd)	626.1	S/MH(C0/180)	1.40
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.31
RATED VOLTAGE(V)		TOTAL FLUX(lm)	2644.3	η UP, DN(C0-180)	5.5, 43.3
NOMINAL FLUX(lm)	2644.31	CIE CLASS	SEMI-D.	η UP, DN(C180-360)	5.6, 45.6
LAMPS INSIDE	1	η up(%)	11.1	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)		η down(%)	88.9	CIBSE SHR MAX	1.50

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



PLANAR ISOLUX DIAGRAM(UNIT:lx)



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Test Date: 2022-02-17

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.429
Humidity: 65.0%
Test Distance: 8.270m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

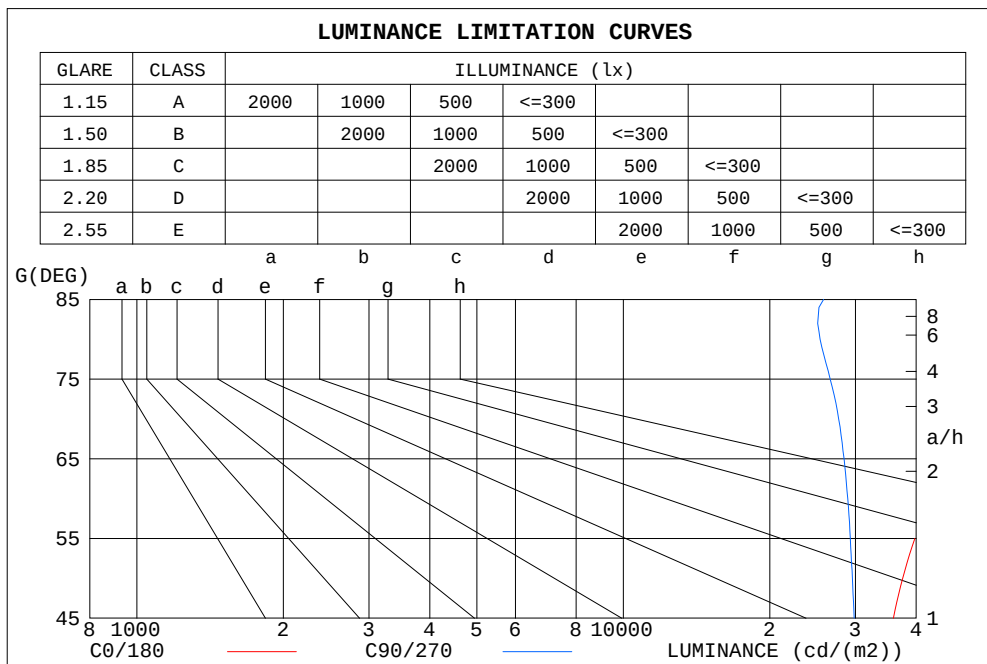
ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	622.1	610.1	619.8	620.7					0- 10	59.35	59.35	2.24, 2.24
20	604.9	576.0	606.1	596.3					10- 20	172.1	231.4	8.75, 8.75
30	574.0	525.1	583.3	553.2					20- 30	267.3	498.7	18.9, 18.9
40	532.5	459.0	548.1	492.5					30- 40	335.2	833.8	31.5, 31.5
50	483.2	379.4	500.9	415.7					40- 50	368.9	1203	45.5, 45.5
60	429.8	288.7	447.3	323.5					50- 60	366.3	1569	59.3, 59.3
70	374.0	189.2	388.7	218.1					60- 70	329.7	1899	71.8, 71.8
80	314.6	87.98	325.0	109.3					70- 80	264.8	2164	81.8, 81.8
90	252.3	15.14	257.8	24.49					80- 90	186.5	2350	88.9, 88.9
100	189.8	3.618	189.6	2.940					90-100	125.2	2475	93.6, 93.6
110	122.5	4.172	116.0	3.515					100-110	83.88	2559	96.8, 96.8
120	50.27	4.687	49.33	4.068					110-120	43.13	2602	98.4, 98.4
130	23.46	5.159	27.26	4.589					120-130	17.34	2620	99.1, 99.1
140	18.08	5.549	23.12	5.066					130-140	10.90	2630	99.5, 99.5
150	10.49	5.902	17.80	5.527					140-150	7.234	2638	99.7, 99.7
160	6.716	6.238	11.21	5.967					150-160	4.048	2642	99.9, 99.9
170	6.585	6.575	6.850	6.449					160-170	1.970	2644	100, 100
180	6.628	6.753	6.612	6.775					170-180	0.6292	2644	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT: lm		

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Test Date: 2022-02-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 γ Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.429
 Humidity: 65.0%
 Test Distance: 8.270m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES



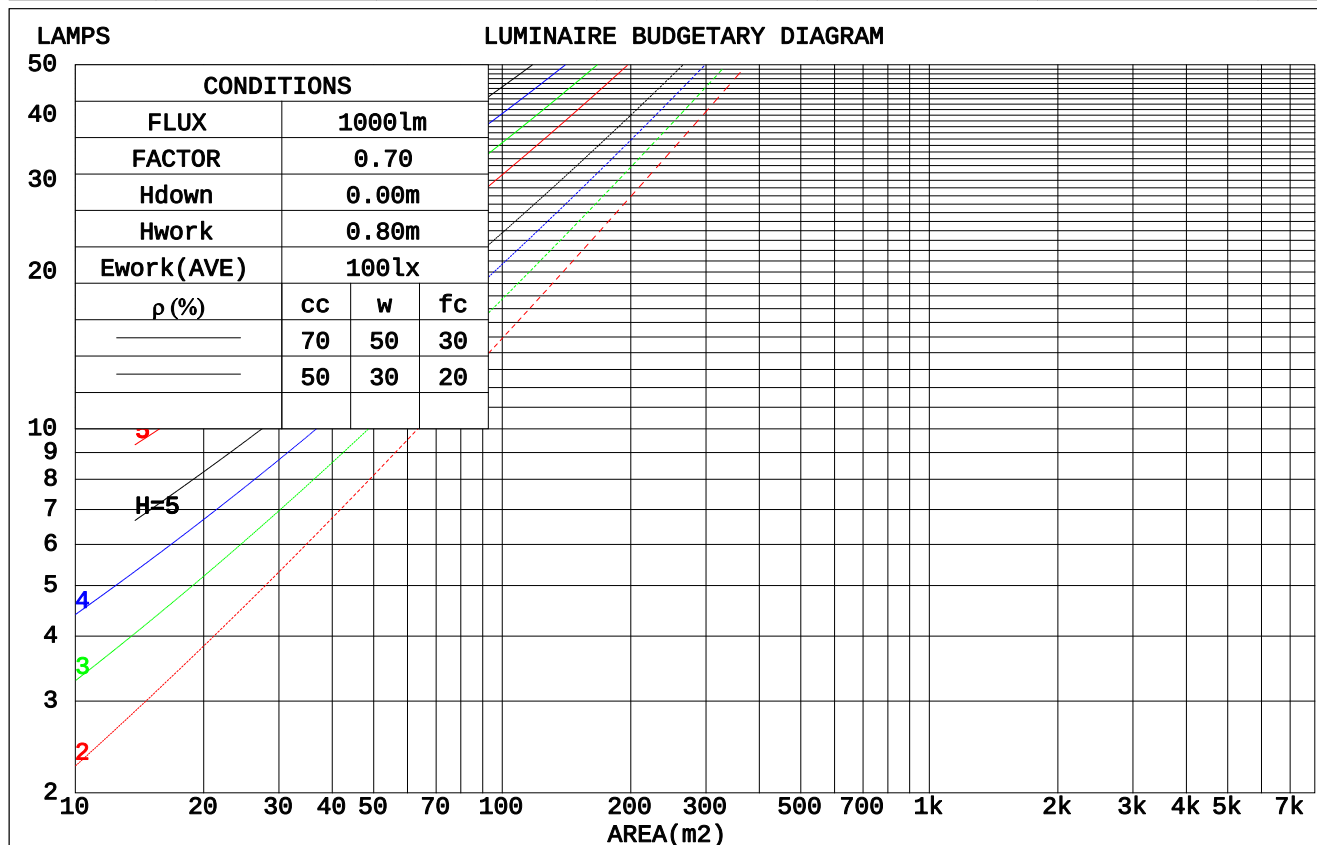
LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	162356	25804
80	90393	25383
75	66476	26615
70	54558	27717
65	47492	28434
60	42892	28930
55	39741	29283
50	37510	29575
45	35896	29814

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Test Date: 2022-02-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_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	1.16	1.16	1.16	1.12	1.12	1.12	1.05	1.05	1.05	.98	.98	.98	.92	.92	.92	.89
1.0	.97	.92	.87	.94	.89	.85	.87	.84	.80	.82	.78	.75	.76	.74	.71	.68
2.0	.83	.75	.69	.80	.73	.67	.75	.69	.64	.70	.65	.61	.65	.61	.58	.55
3.0	.72	.63	.56	.70	.61	.55	.65	.58	.52	.61	.55	.50	.57	.52	.48	.45
4.0	.63	.54	.46	.61	.52	.45	.57	.50	.44	.53	.47	.42	.50	.45	.40	.37
5.0	.56	.47	.39	.54	.45	.39	.51	.43	.37	.48	.41	.36	.45	.39	.34	.32
6.0	.50	.41	.34	.49	.40	.33	.46	.38	.32	.43	.36	.31	.40	.34	.30	.27
7.0	.45	.36	.30	.44	.35	.29	.41	.34	.28	.39	.32	.27	.37	.31	.26	.24
8.0	.41	.32	.26	.40	.32	.26	.38	.30	.25	.36	.29	.24	.34	.28	.23	.21
9.0	.38	.29	.23	.37	.29	.23	.35	.27	.22	.33	.26	.22	.31	.25	.21	.19
10.0	.35	.27	.21	.34	.26	.21	.32	.25	.20	.30	.24	.20	.29	.23	.19	.17



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Test Date: 2022-02-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.429
Humidity: 65.0%
Test Distance: 8.270m [K=1.0000]
Remarks:

WEC AND CCEC

ρ_{CC}	80%			70%			50%			30%			10%			0	
ρ_W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.384	.219	.069	.374	.213	.068	.354	.203	.065	.335	.193	.062	.319	.185	.060		
2.0	.336	.184	.056	.326	.180	.055	.308	.171	.053	.291	.164	.051	.276	.156	.049		
3.0	.299	.159	.048	.290	.156	.047	.274	.149	.045	.259	.142	.044	.246	.136	.042		
4.0	.270	.140	.041	.262	.137	.041	.247	.131	.039	.234	.126	.038	.221	.120	.037		
5.0	.245	.125	.036	.238	.122	.036	.225	.117	.035	.213	.112	.033	.201	.108	.032		
6.0	.225	.113	.032	.218	.110	.032	.207	.106	.031	.195	.102	.030	.185	.097	.029		
7.0	.207	.103	.029	.202	.100	.029	.191	.096	.028	.181	.093	.027	.171	.089	.026		
8.0	.192	.094	.026	.187	.092	.026	.177	.089	.025	.168	.085	.025	.159	.082	.024		
9.0	.179	.087	.024	.174	.085	.024	.165	.082	.023	.157	.079	.023	.149	.076	.022		
10.0	.168	.080	.022	.163	.079	.022	.155	.076	.021	.147	.073	.021	.140	.070	.020		

ρ _{CC}	80%			70%			50%			30%			10%			0
ρ _W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ _{FC}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.275	.275	.275	.235	.235	.235	.161	.161	.161	.092	.092	.092	.029	.029	.029	
1.0	.271	.241	.214	.232	.207	.184	.159	.142	.127	.091	.082	.074	.029	.027	.024	
2.0	.264	.218	.179	.226	.187	.155	.155	.130	.108	.089	.075	.063	.029	.024	.021	
3.0	.257	.201	.157	.220	.173	.136	.151	.120	.095	.087	.070	.056	.028	.023	.018	
4.0	.249	.188	.142	.213	.163	.124	.147	.113	.087	.085	.066	.051	.027	.022	.017	
5.0	.241	.178	.132	.207	.154	.115	.143	.108	.081	.083	.063	.048	.027	.021	.016	
6.0	.234	.170	.125	.201	.148	.109	.138	.103	.077	.080	.061	.046	.026	.020	.015	
7.0	.226	.164	.120	.195	.142	.104	.135	.099	.074	.078	.059	.044	.025	.019	.015	
8.0	.220	.158	.116	.189	.137	.101	.131	.096	.072	.076	.057	.043	.025	.019	.014	
9.0	.213	.153	.113	.184	.133	.098	.127	.093	.070	.074	.055	.042	.024	.018	.014	
10.0	.207	.149	.110	.179	.129	.096	.124	.091	.068	.072	.054	.041	.023	.018	.014	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Test Date: 2022-02-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_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	23.8	25.3	24.4	25.9	26.4	22.8	24.3	23.3	24.8	25.4
3H	26.8	28.2	27.3	28.7	29.3	24.7	26.1	25.3	26.7	27.3
4H	28.3	29.6	28.9	30.2	30.8	25.5	26.8	26.1	27.4	28.0
6H	30.0	31.2	30.6	31.8	32.4	26.1	27.4	26.7	27.9	28.6
8H	30.9	32.1	31.5	32.7	33.3	26.4	27.5	26.9	28.1	28.8
12H	32.0	33.1	32.6	33.7	34.4	26.5	27.7	27.1	28.2	28.9
4H 2H	24.4	25.7	24.9	26.2	26.8	23.8	25.1	24.4	25.7	26.3
3H	27.5	28.6	28.1	29.2	29.9	26.1	27.2	26.7	27.8	28.5
4H	29.2	30.2	29.8	30.8	31.5	27.1	28.1	27.7	28.7	29.4
6H	31.1	32.0	31.7	32.6	33.3	27.9	28.8	28.5	29.4	30.1
8H	32.1	33.0	32.7	33.6	34.3	28.2	29.0	28.8	29.7	30.4
12H	33.4	34.2	34.0	34.8	35.5	28.4	29.2	29.0	29.9	30.6
8H 4H	29.4	30.3	30.0	30.9	31.6	28.0	28.9	28.6	29.5	30.2
6H	31.5	32.2	32.1	32.9	33.6	29.1	29.8	29.7	30.5	31.2
8H	32.7	33.4	33.4	34.1	34.8	29.5	30.2	30.2	30.9	31.6
12H	34.2	34.8	34.8	35.4	36.2	30.0	30.6	30.6	31.2	32.0
12H 4H	29.4	30.2	30.1	30.9	31.6	28.3	29.1	28.9	29.7	30.5
6H	31.6	32.2	32.2	32.9	33.6	29.5	30.2	30.2	30.9	31.6
8H	32.8	33.4	33.5	34.1	34.9	30.2	30.8	30.8	31.4	32.2
CIE190: 2010										

CIE190: 2010
Area: 0.02 m2

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Test Date: 2022-02-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 γ Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.429
Humidity: 65.0%
Test Distance: 8.270m [K=1.0000]
Remarks:

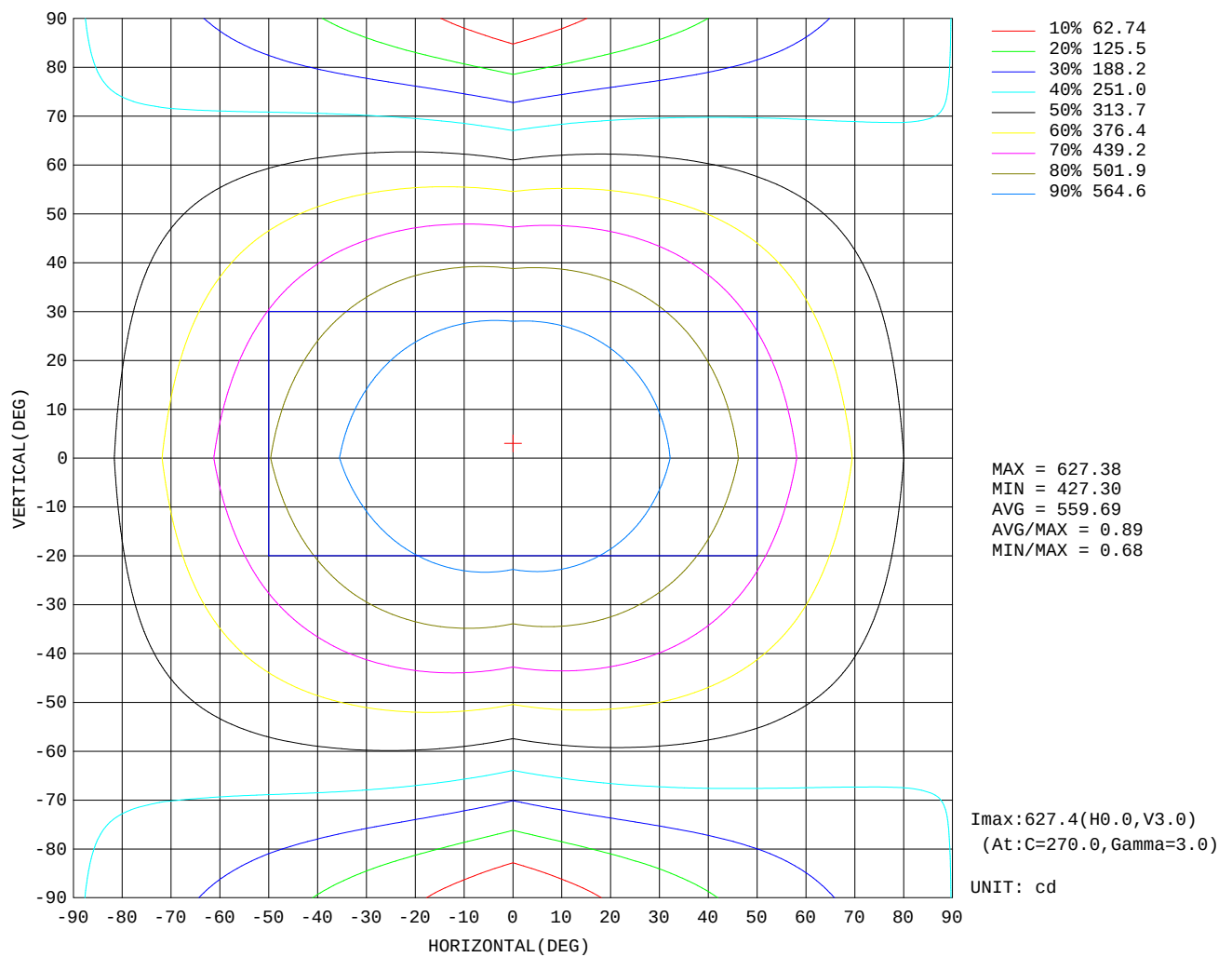
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	50	37	30	49	37	30	47	36	29	23
0.80	59	46	38	58	45	38	55	44	37	29
1.00	67	54	46	65	53	45	62	54	44	36
1.25	74	61	53	72	60	52	68	58	51	42
1.50	79	67	58	77	66	58	73	63	56	47
2.00	86	75	67	84	74	66	79	71	64	54
2.50	91	81	73	88	79	72	82	75	69	58
3.00	94	85	78	91	83	76	86	79	73	62
4.00	99	91	85	96	89	83	90	84	79	67
5.00	102	95	90	99	93	87	92	87	83	70
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: 2022-02-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.429
 Humidity: 65.0%
 Test Distance: 8.270m [K=1.0000]
 Remarks:

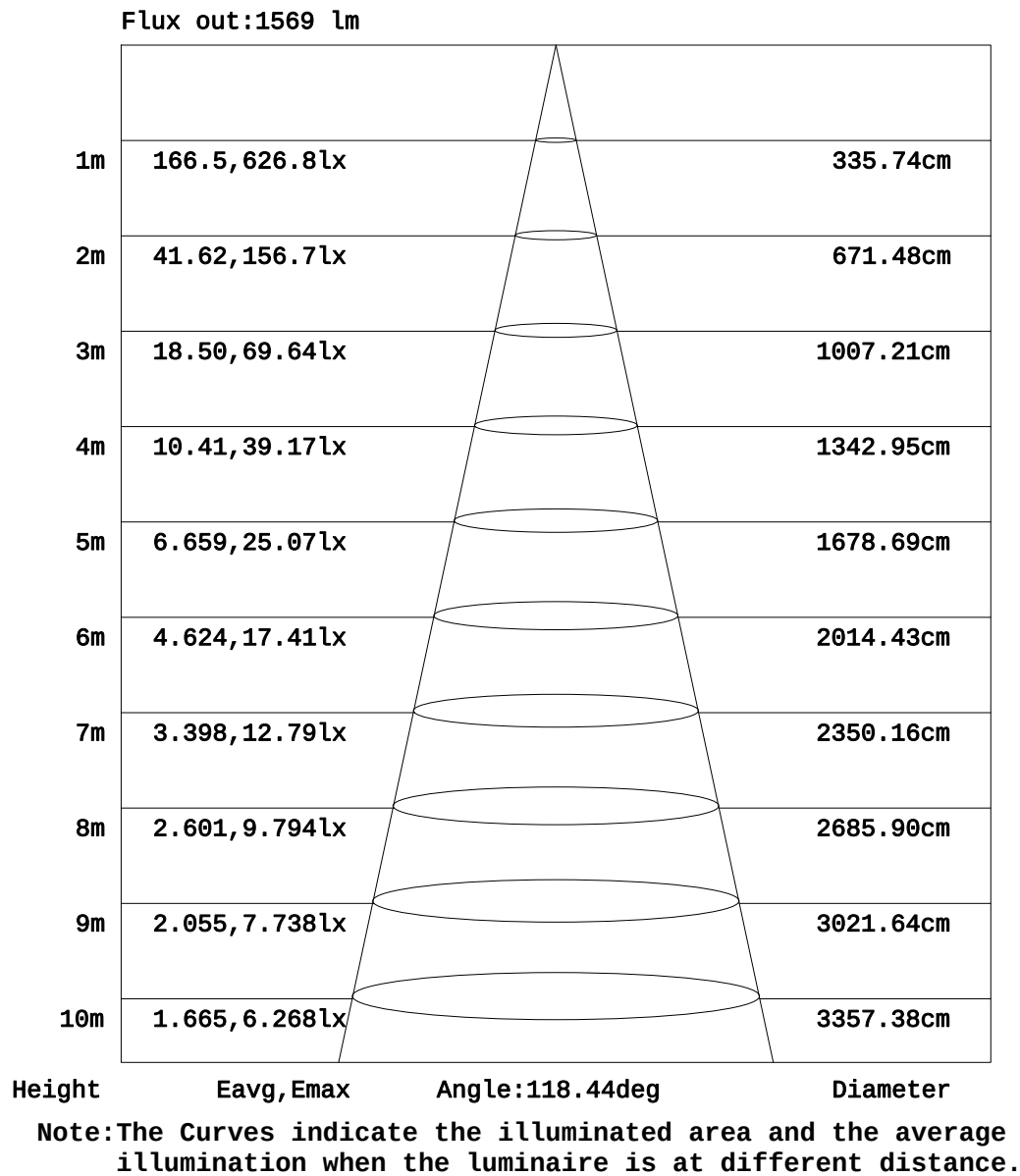
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Test Date: 2022-02-17

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.429
Humidity: 65.0%
Test Distance: 8.270m [K=1.0000]
Remarks:

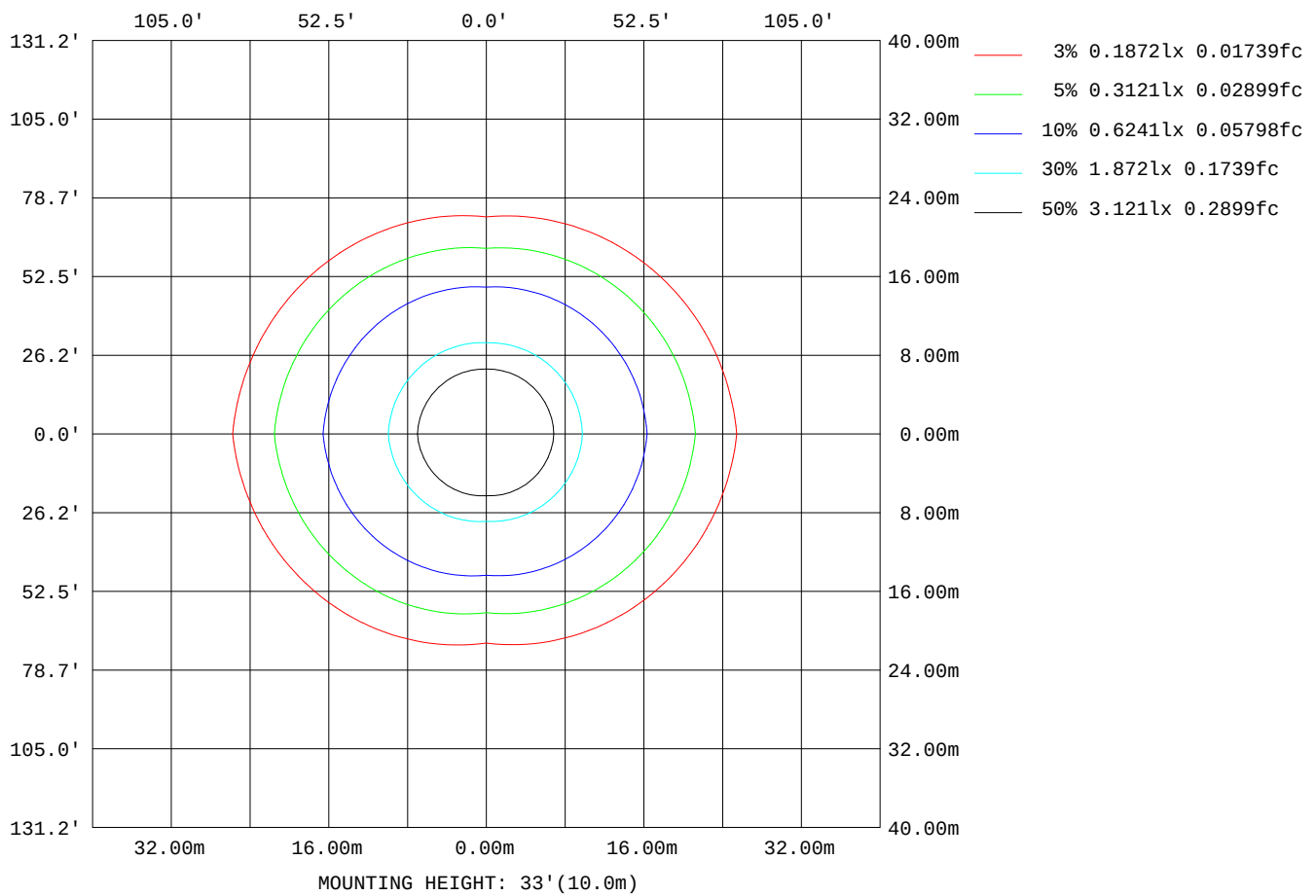
AAI Figure



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2022-02-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000B_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: 2022-02-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_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:0.9900A P:23.760W PF:1.0000 Freq:0Hz Lamp Flux:2644.31x1 lm		
NAME: IP67-UB-VA-50K	TYPE: LED Strip	WEIGHT:
SPEC.: 24W	DIM.: 1000*12*2 (mm)	SERIAL No.: 001
MFR.: Flexfire LEDs, Inc.	SUR.: 0.02*1	Shielding Angle: 120

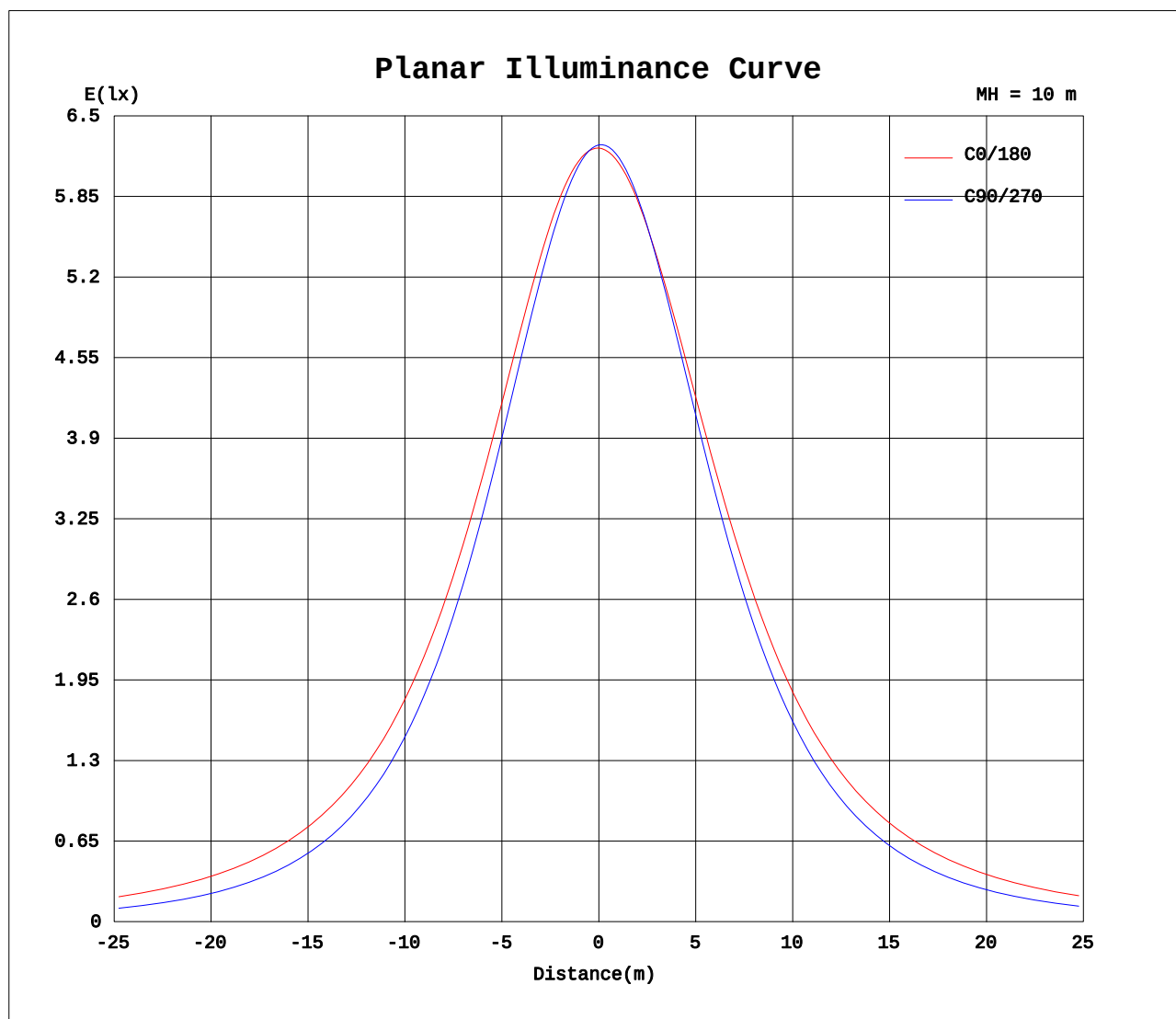
AvgL	cd/m2
L_0~180(65)av	48552
L_0~180(75)av	67801
L_0~180(85)av	165015
L_90~270(65)av	30271
L_90~270(75)av	29075
L_90~270(85)av	30210
L_45(65)av	37171
L_45(75)av	43637
L_45(85)av	80788

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
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γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE G0-2000B_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: 2022-02-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE G0-2000B_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	625	625	625	625														
5	625	620	623	626														
10	622	610	620	621														
15	615	595	614	611														
20	605	576	606	596														
25	591	553	596	577														
30	574	525	583	553														
35	554	494	568	525														
40	533	459	548	493														
45	509	421	526	456														
50	483	379	501	416														
55	457	335	475	372														
60	430	289	447	324														
65	402	240	419	272														
70	374	189	389	218														
75	345	137	357	164														
80	315	88.0	325	109														
85	284	44.9	292	60.4														
90	252	15.1	258	24.5														
95	221	3.73	224	5.95														
100	190	3.62	190	2.94														
105	157	3.88	154	3.23														
110	122	4.17	116	3.51														
115	84.3	4.43	78.8	3.81														
120	50.3	4.69	49.3	4.07														
125	31.8	4.93	32.0	4.34														
130	23.5	5.16	27.3	4.59														
135	21.0	5.36	25.1	4.84														
140	18.1	5.55	23.1	5.07														
145	14.1	5.73	20.6	5.29														
150	10.5	5.90	17.8	5.53														
155	7.77	6.08	14.6	5.75														
160	6.72	6.24	11.2	5.97														
165	6.66	6.42	8.03	6.22														
170	6.59	6.57	6.85	6.45														
175	6.53	6.70	6.53	6.64														
180	6.63	6.75	6.61	6.78														

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Test Date: 2022-02-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE G0-2000B_V1 SYSTEM V2.00.429
 Humidity: 65.0%
 Test Distance: 8.270m [K=1.0000]
 Remarks: