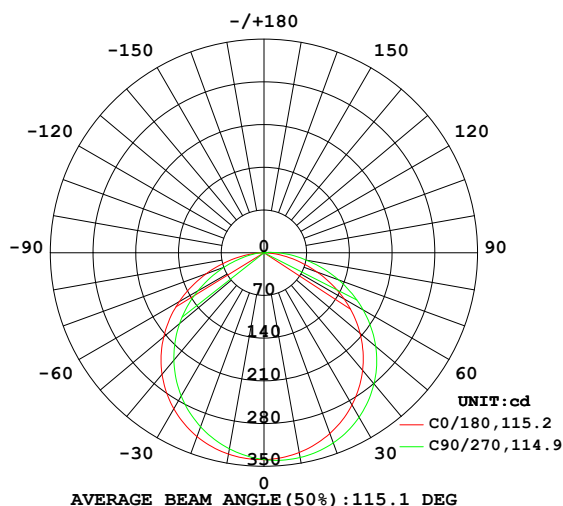


LUMINAIRE PHOTOMETRIC TEST REPORT

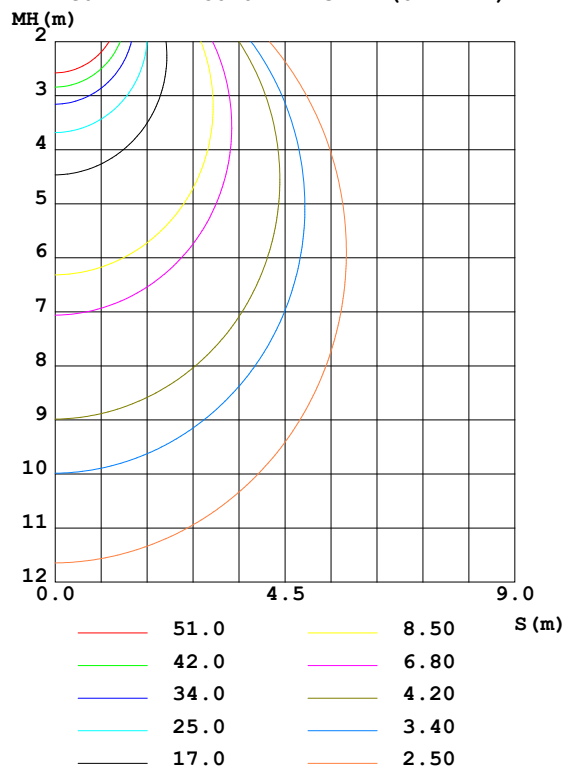
Test:U:24.001V I:0.4773A P:11.456W PF:1.0000 Freq:0Hz Lamp Flux:1016.29x1 lm		
NAME: VL30-50K	TYPE: LED Strip	WEIGHT:
SPEC.: 11.4W	DIM.: 1000*10*2 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs	SUR.: 0.01*1	Shielding Angle: 120

DATA OF LAMP		PHOTOMETRIC DATA Eff: 88.72 lm/W			
MODEL		I _{max} (cd)	341.2	S/MH (C0/180)	1.29
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.20
RATED VOLTAGE (V)		TOTAL FLUX (lm)	1016.3	η UP,DN (C0-180)	0.5,52.8
NOMINAL FLUX (lm)	1016.29	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.3,46.3
LAMPS INSIDE	1	η up (%)	0.9	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)		η down (%)	99.1	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Test Date:2023-11-07

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
Humidity:65.0%
Test Distance:8.700m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

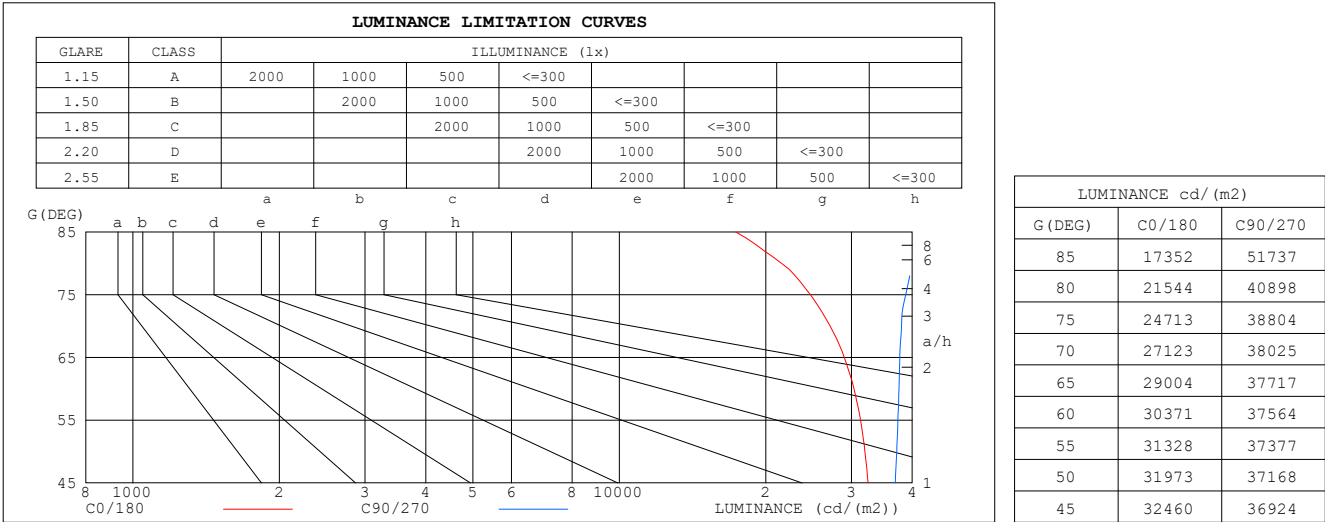
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	332.3	340.7	335.1	326.3					0- 10	32.10	32.10	3.16,3.16
20	315.3	331.6	320.6	303.7					10- 20	92.32	124.4	12.2,12.2
30	288.2	311.5	295.3	271.1					20- 30	141.0	265.5	26.1,26.1
40	251.4	280.5	259.9	229.8					30- 40	171.8	437.3	43,43
50	205.5	238.9	214.5	180.6					40- 50	180.2	617.5	60.8,60.8
60	151.9	187.8	160.4	125.1					50- 60	164.3	781.8	76.9,76.9
70	92.77	130.1	100.8	69.58					60- 70	126.1	907.8	89.3,89.3
80	37.41	71.02	42.68	25.01					70- 80	74.23	982.1	96.6,96.6
90	1.401	23.11	0.3204	4.491					80- 90	25.53	1008	99.1,99.1
100	0.3914	2.753	0.4683	0.6910					90-100	3.679	1011	99.5,99.5
110	0.5466	0.4805	0.6530	0.6279					100-110	0.6610	1012	99.6,99.6
120	0.7592	0.6775	0.8625	0.8373					110-120	0.6809	1013	99.6,99.6
130	0.9605	0.8917	1.096	1.059					120-130	0.8030	1013	99.7,99.7
140	1.145	1.072	1.256	1.195					130-140	0.8425	1014	99.8,99.8
150	1.342	1.269	1.417	1.348					140-150	0.7897	1015	99.9,99.9
160	1.442	1.429	1.503	1.466					150-160	0.6488	1016	99.9,99.9
170	1.525	1.576	1.558	1.540					160-170	0.4278	1016	100,100
180	1.552	1.576	1.564	1.564					170-180	0.1485	1016	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Test Date:2023-11-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:8.700m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:24.001V I:0.4773A P:11.456W PF:1.0000 Freq:0Hz Lamp Flux:1016.29x1 lm		
NAME: VL30-50K	TYPE: LED Strip	WEIGHT:
SPEC.: 11.4W	DIM.: 1000*10*2 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs	SUR.: 0.01*1	Shielding Angle: 120



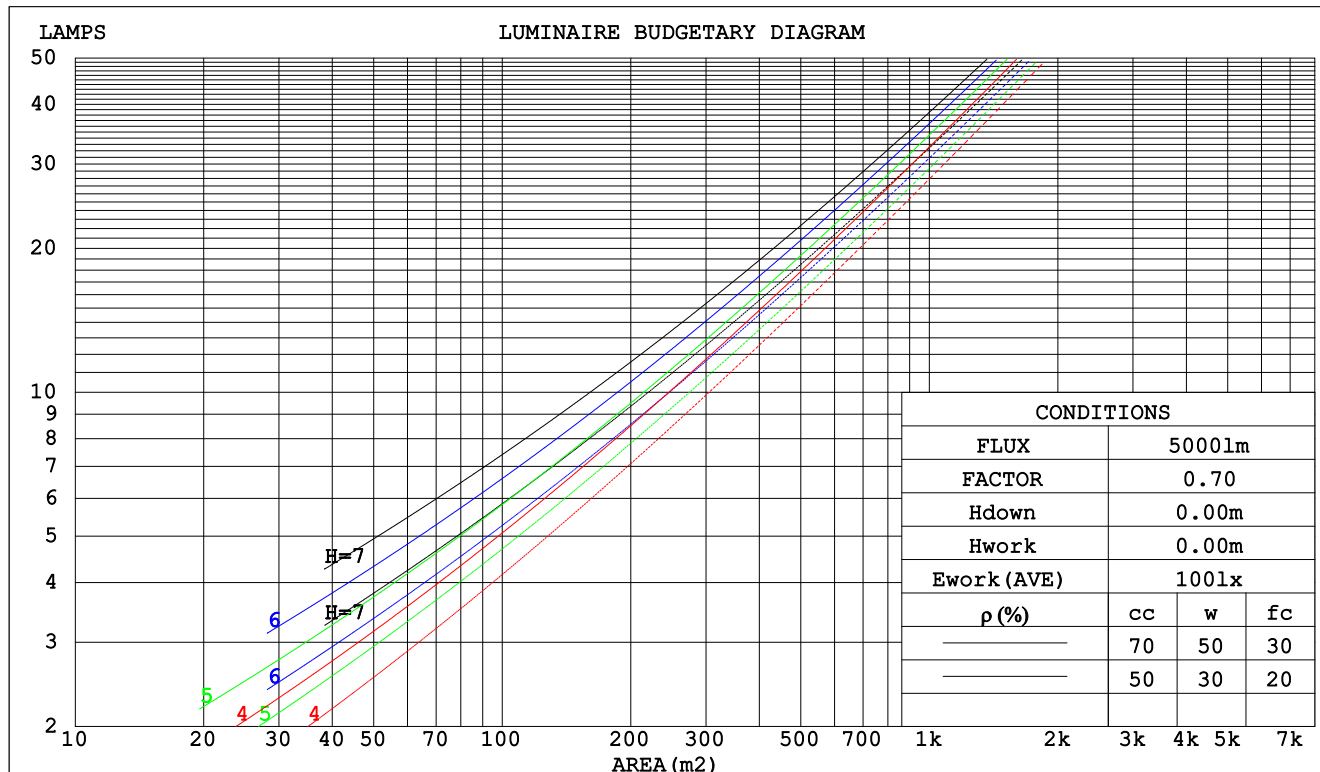
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Test Date:2023-11-07

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
Humidity:65.0%
Test Distance:8.700m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.001V I:0.4773A P:11.456W PF:1.0000 Freq:0Hz Lamp Flux:1016.29x1 lm		
NAME: VL30-50K	TYPE: LED Strip	WEIGHT:
SPEC.: 11.4W	DIM.: 1000*10*2 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs	SUR.: 0.01*1	Shielding Angle: 120

pcc	80%			70%			50%			30%			10%			0														
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0														
p _{fc}	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	1.01	1.01	1.01	.99														
1.0	1.03	.99	.95	1.01	.97	.93	.96	.93	.90	.92	.90	.87	.89	.86	.84	.82														
2.0	.90	.83	.77	.88	.81	.76	.84	.79	.74	.81	.76	.72	.77	.74	.70	.68														
3.0	.79	.70	.64	.77	.69	.63	.74	.67	.62	.71	.65	.60	.68	.63	.59	.57														
4.0	.69	.60	.54	.68	.60	.53	.65	.58	.52	.63	.57	.52	.61	.55	.51	.49														
5.0	.62	.53	.46	.61	.52	.46	.59	.51	.45	.56	.50	.45	.54	.49	.44	.42														
6.0	.56	.47	.40	.55	.46	.40	.53	.45	.39	.51	.44	.39	.49	.43	.39	.36														
7.0	.50	.42	.35	.50	.41	.35	.48	.40	.35	.46	.40	.35	.45	.39	.34	.32														
8.0	.46	.37	.31	.45	.37	.31	.44	.36	.31	.42	.36	.31	.41	.35	.31	.29														
9.0	.42	.34	.28	.42	.34	.28	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26														
10.0	.39	.31	.26	.38	.31	.25	.37	.30	.25	.36	.30	.25	.35	.29	.25	.22														



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Test Date: 2023-11-07

```

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
Humidity:65.0%
Test Distance:8.700m [K=1.0000]
Remarks:

```

WEC AND CCEC

Test:U:24.001V I:0.4773A P:11.456W PF:1.0000 Freq:0Hz Lamp Flux:1016.29x1 lm					
NAME: VL30-50K			TYPE: LED Strip		WEIGHT:
SPEC.: 11.4W			DIM.: 1000*10*2 (MM)		SERIAL No.: 001
MFR.: Flexfire LEDs			SUR.: 0.01*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						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.319	.181	.057	.312	.178	.056	.298	.171	.055	.285	.164	.053	.273	.158	.051		
2.0	.297	.163	.050	.291	.160	.049	.279	.155	.048	.267	.150	.047	.257	.145	.046		
3.0	.274	.146	.044	.268	.144	.043	.257	.139	.042	.247	.136	.042	.238	.132	.041		
4.0	.252	.131	.039	.247	.129	.038	.237	.126	.038	.229	.123	.037	.220	.120	.036		
5.0	.233	.119	.034	.228	.117	.034	.220	.114	.034	.212	.112	.033	.204	.109	.033		
6.0	.215	.108	.031	.211	.107	.031	.204	.104	.030	.197	.102	.030	.190	.100	.030		
7.0	.200	.099	.028	.197	.098	.028	.190	.096	.028	.184	.094	.027	.178	.092	.027		
8.0	.187	.091	.026	.184	.090	.026	.178	.089	.025	.172	.087	.025	.166	.085	.025		
9.0	.175	.085	.024	.172	.084	.024	.167	.082	.023	.161	.081	.023	.157	.080	.023		
10.0	.164	.079	.022	.162	.078	.022	.157	.077	.022	.152	.076	.021	.148	.074	.021		

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	.197	.197	.197	.168	.168	.168	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.188	.163	.140	.160	.140	.121	.110	.096	.083	.063	.056	.049	.020	.018	.016	
2.0	.180	.138	.104	.154	.119	.090	.105	.082	.063	.061	.048	.037	.020	.016	.012	
3.0	.172	.121	.080	.147	.104	.070	.101	.072	.049	.058	.042	.029	.019	.014	.009	
4.0	.164	.108	.065	.141	.093	.056	.097	.065	.039	.056	.038	.023	.018	.012	.008	
5.0	.157	.097	.054	.135	.084	.047	.093	.059	.033	.054	.035	.020	.017	.011	.006	
6.0	.150	.089	.046	.129	.077	.040	.089	.054	.028	.051	.032	.017	.017	.010	.006	
7.0	.143	.082	.040	.123	.071	.035	.085	.050	.025	.049	.029	.015	.016	.010	.005	
8.0	.136	.076	.035	.117	.066	.031	.081	.047	.022	.047	.027	.013	.015	.009	.004	
9.0	.130	.071	.032	.112	.062	.028	.078	.044	.020	.045	.026	.012	.015	.008	.004	
10.0	.124	.067	.029	.107	.058	.025	.074	.041	.018	.043	.024	.011	.014	.008	.004	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Test Date:2023-11-07

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
Humidity:65.0%
Test Distance:8.700m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.001V I:0.4773A P:11.456W PF:1.0000 Freq:0Hz Lamp Flux:1016.29x1 lm											
NAME: VL30-50K					TYPE: LED Strip			WEIGHT:			
SPEC.: 11.4W					DIM.: 1000*10*2 (MM)			SERIAL No.: 001			
MFR.: Flexfire LEDs					SUR.: 0.01*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	24.9	26.5	25.2	26.7	26.9	25.7	27.2	26.0	27.5	27.7	
	3H	26.4	27.8	26.7	28.1	28.3	27.6	29.0	27.9	29.2	
	4H	27.0	28.3	27.3	28.6	28.9	28.4	29.7	28.7	30.0	
	6H	27.4	28.7	27.7	28.9	29.2	29.1	30.4	29.5	30.7	
	8H	27.5	28.7	27.9	29.0	29.3	29.5	30.7	29.8	31.0	
	12H	27.6	28.7	27.9	29.1	29.4	29.8	31.0	30.1	31.3	
4H	2H	25.7	27.0	26.0	27.3	27.6	26.3	27.6	26.6	27.9	
	3H	27.4	28.6	27.7	28.9	29.2	28.3	29.5	28.7	29.8	
	4H	28.1	29.2	28.5	29.5	29.9	29.3	30.4	29.7	30.7	
	6H	28.6	29.6	29.0	29.9	30.3	30.2	31.1	30.6	31.5	
	8H	28.8	29.7	29.2	30.1	30.5	30.6	31.5	31.0	31.9	
	12H	28.9	29.7	29.3	30.1	30.5	31.0	31.8	31.4	32.2	
8H	4H	28.5	29.4	28.9	29.8	30.2	29.5	30.4	30.0	30.8	
	6H	29.2	30.0	29.7	30.4	30.8	30.6	31.4	31.1	31.8	
	8H	29.5	30.1	30.0	30.6	31.1	31.2	31.8	31.6	32.3	
	12H	29.7	30.2	30.2	30.7	31.2	31.7	32.3	32.2	32.7	
12H	4H	28.6	29.4	29.0	29.8	30.2	29.6	30.4	30.0	30.8	
	6H	29.3	30.0	29.8	30.4	30.9	30.7	31.3	31.2	31.8	
	8H	29.7	30.2	30.2	30.7	31.2	31.3	31.8	31.8	32.3	
Variations with the observer position at spacings(CIE Pub.117):											
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.1					
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.2					
2.0H	+ 0.2 / - 0.4					+ 0.1 / - 0.3					

CIE Pub.117, 1016 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 0.1$)
Area: 0.01 m²

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Test Date:2023-11-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
Humidity:65.0%
Test Distance:8.700m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:24.001V I:0.4773A P:11.456W PF:1.0000 Freq:0Hz Lamp Flux:1016.29x1 lm		
NAME: VL30-50K	TYPE: LED Strip	WEIGHT:
SPEC.: 11.4W	DIM.: 1000*10*2 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs	SUR.: 0.01*1	Shielding Angle: 120

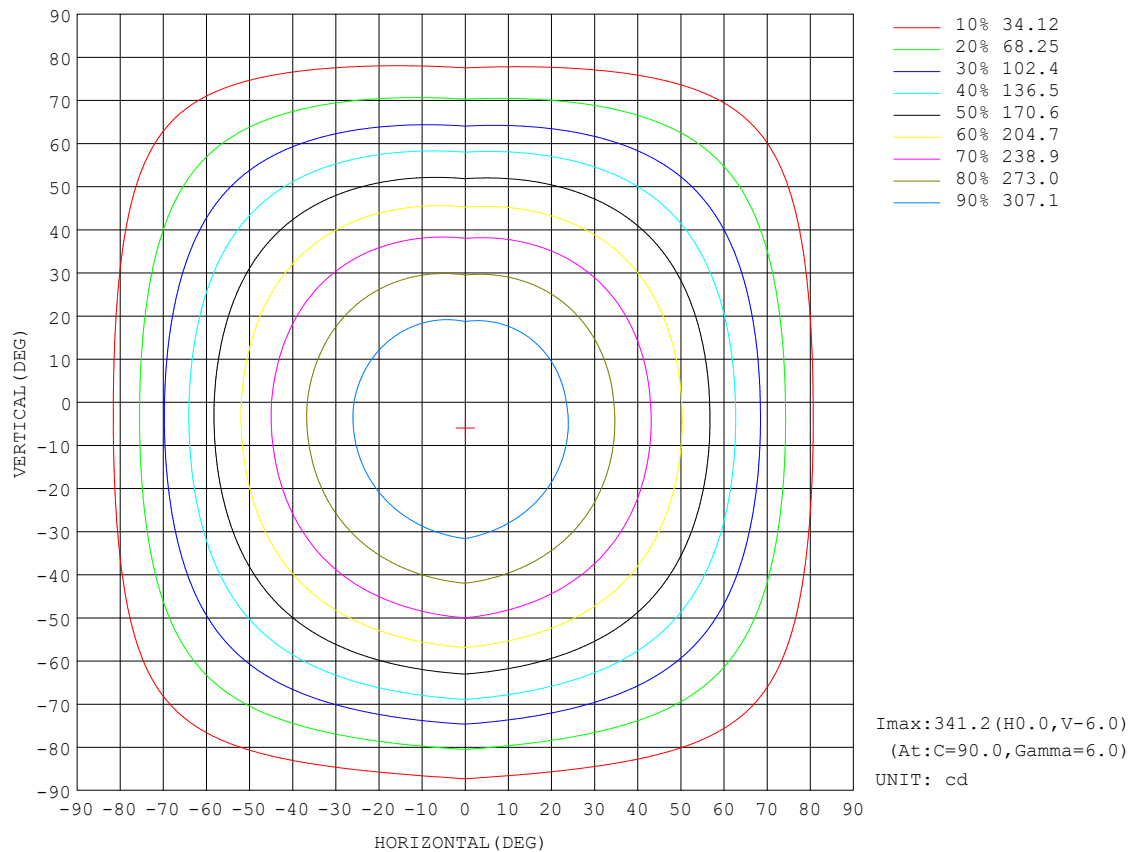
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	57	45	38	56	45	38	55	44	37	31
0.80	67	55	47	66	54	47	64	53	47	40
1.00	75	64	56	74	63	56	71	64	55	48
1.25	82	71	64	81	71	64	78	69	63	55
1.50	87	77	70	85	76	69	82	74	68	60
2.00	94	85	79	92	84	78	89	82	76	68
2.50	98	90	84	96	89	83	92	86	81	72
3.00	101	94	89	99	93	88	95	90	85	76
4.00	106	100	95	103	98	93	99	94	91	81
5.00	108	103	99	105	101	97	101	97	94	84
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: 2023-11-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity: 65.0%
 Test Distance: 8.700m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:24.001V I:0.4773A P:11.456W PF:1.0000 Freq:0Hz Lamp Flux:1016.29x1 lm		
NAME: VL30-50K	TYPE: LED Strip	WEIGHT:
SPEC.: 11.4W	DIM.: 1000*10*2 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs	SUR.: 0.01*1	Shielding Angle: 120

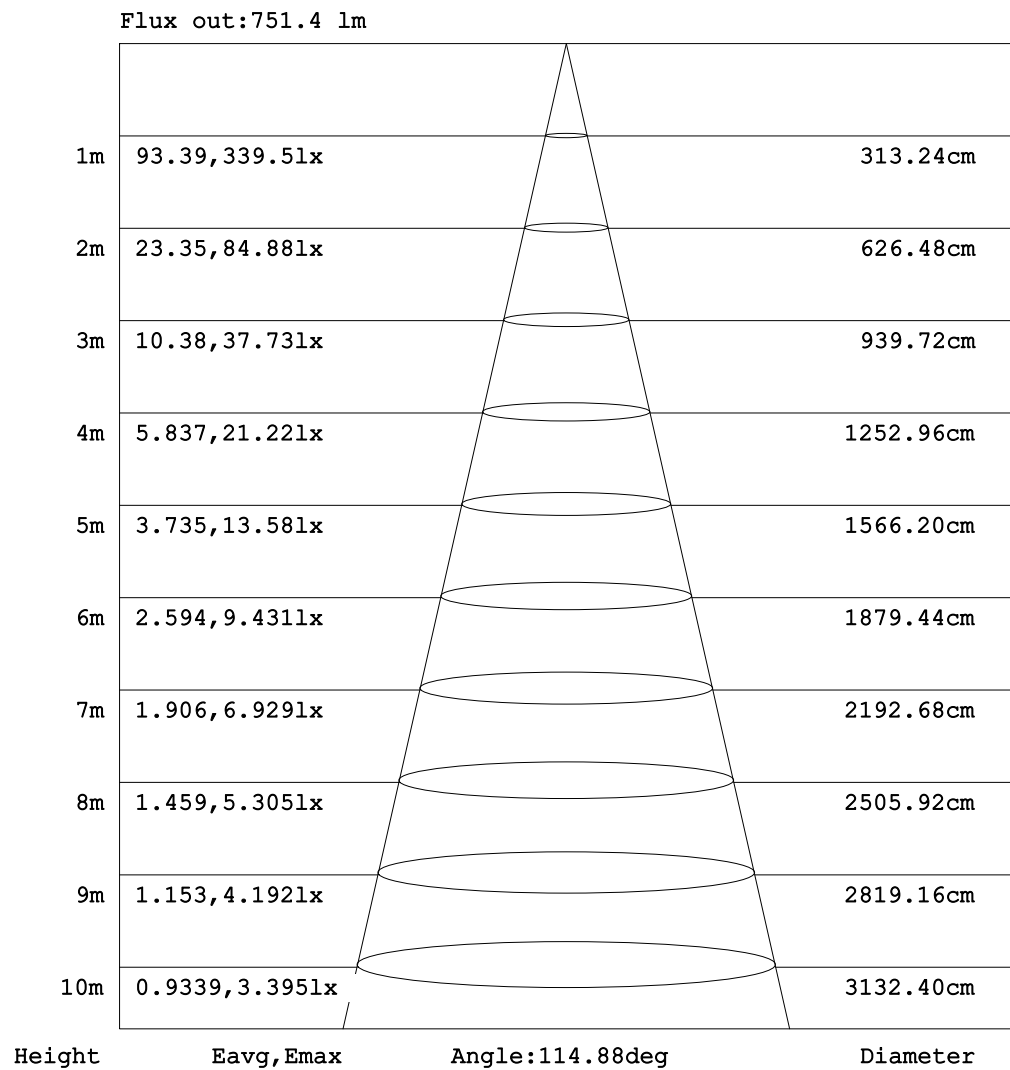


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Test Date: 2023-11-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.444
Humidity: 65.0%
Test Distance: 8.700m [K=1.0000]
Remarks:

AAI Figure

Test:U:24.001V I:0.4773A P:11.456W PF:1.0000 Freq:0Hz Lamp Flux:1016.29x1 lm		
NAME: VL30-50K	TYPE: LED Strip	WEIGHT:
SPEC.: 11.4W	DIM.: 1000*10*2 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs	SUR.: 0.01*1	Shielding Angle: 120



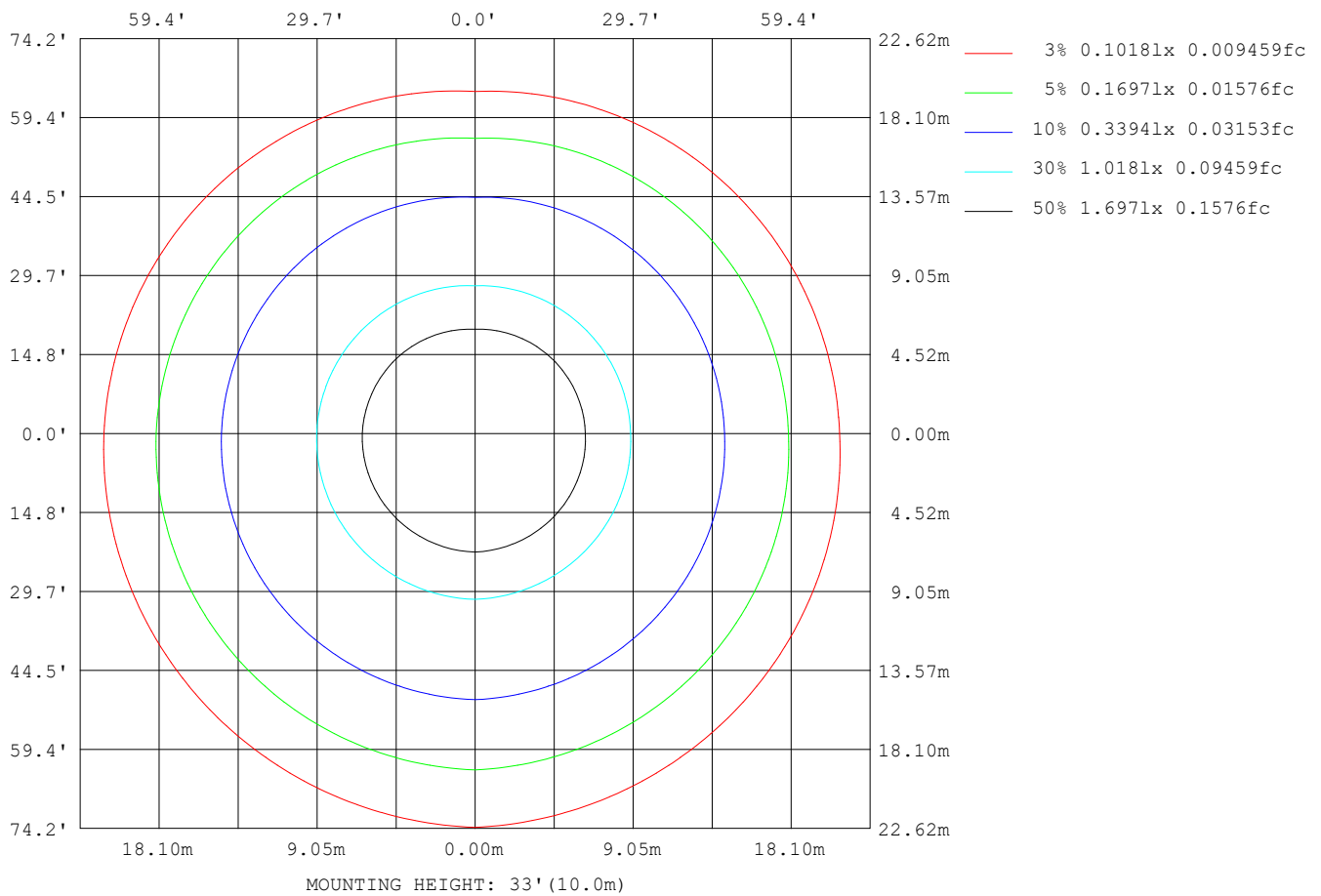
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Test Date: 2023-11-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity: 65.0%
 Test Distance: 8.700m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:24.001V I:0.4773A P:11.456W PF:1.0000 Freq:0Hz Lamp Flux:1016.29x1 lm		
NAME: VL30-50K	TYPE: LED Strip	WEIGHT:
SPEC.: 11.4W	DIM.: 1000*10*2 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs	SUR.: 0.01*1	Shielding Angle: 120



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Test Date: 2023-11-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.444
 Humidity: 65.0%
 Test Distance: 8.700m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:24.001V I:0.4773A P:11.456W PF:1.0000 Freq:0Hz Lamp Flux:1016.29x1 lm		
NAME: VL30-50K	TYPE: LED Strip	WEIGHT:
SPEC.: 11.4W	DIM.: 1000*10*2 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs	SUR.: 0.01*1	Shielding Angle: 120

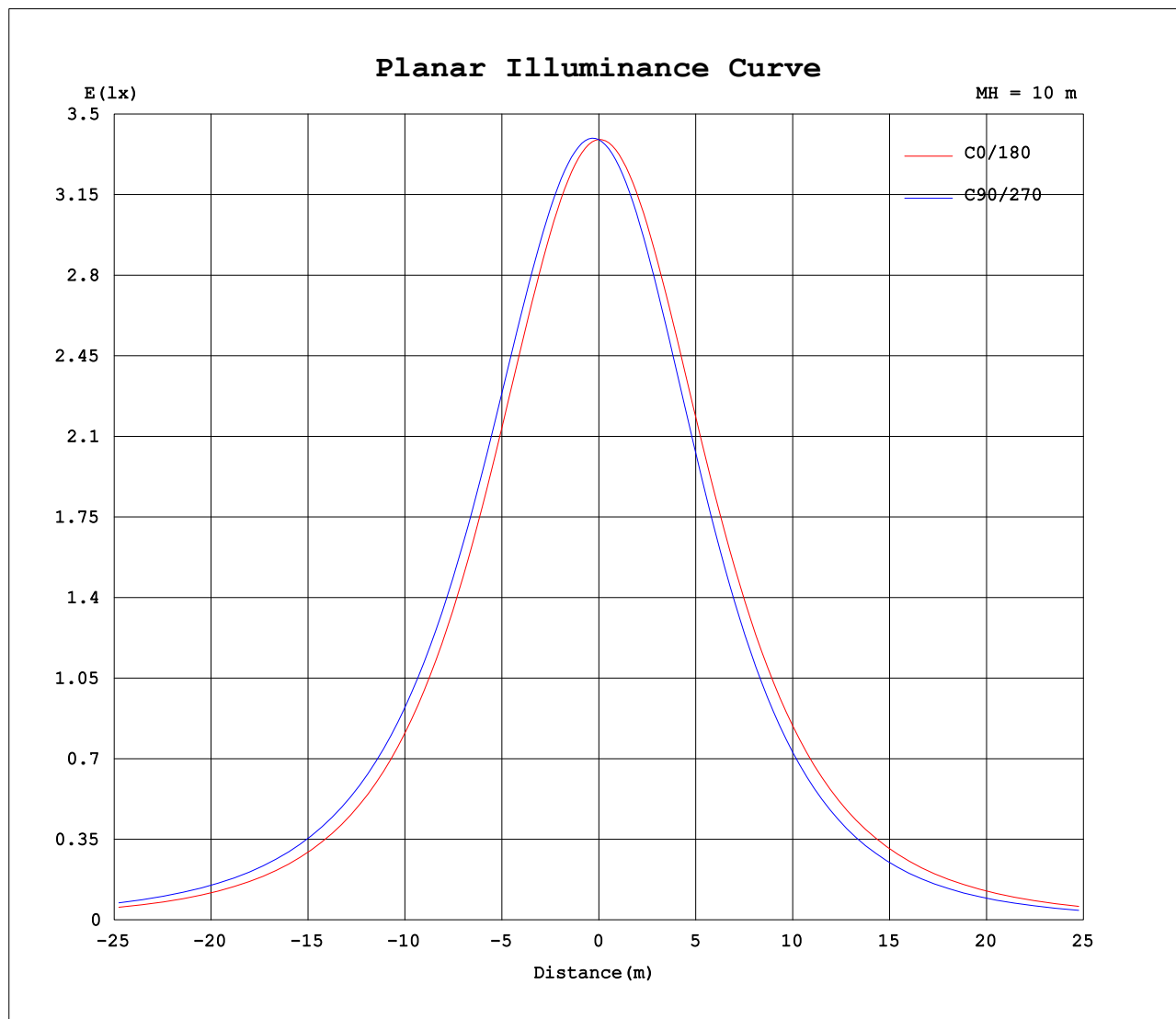
AvgL	cd/m2
L_0~180 (65) av	29967
L_0~180 (75) av	26086
L_0~180 (85) av	18666
L_90~270 (65) av	30306
L_90~270 (75) av	28038
L_90~270 (85) av	32501
L_45 (65) av	30239
L_45 (75) av	27392
L_45 (85) av	27395

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Test Date:2023-11-07

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
Humidity:65.0%
Test Distance:8.700m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Test Date: 2023-11-07

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.444
Humidity: 65.0%
Test Distance: 8.700m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.001V I:0.4773A P:11.456W PF:1.0000 Freq:0Hz Lamp Flux:1016.29x1 lm		
NAME: VL30-50K	TYPE: LED Strip	WEIGHT:
SPEC.: 11.4W	DIM.: 1000*10*2 (MM)	SERIAL No.: 001
MFR.: Flexfire LEDs	SUR.: 0.01*1	Shielding Angle: 120

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	339	339	339	339															
5	337	341	338	334															
10	332	341	335	326															
15	325	338	329	316															
20	315	332	321	304															
25	303	323	309	289															
30	288	311	295	271															
35	271	297	279	252															
40	251	280	260	230															
45	230	261	239	206															
50	206	239	215	181															
55	180	214	189	153															
60	152	188	160	125															
65	123	159	131	96.8															
70	92.8	130	101	69.6															
75	64.0	100	71.1	44.7															
80	37.4	71.0	42.7	25.0															
85	15.1	45.1	17.4	11.6															
90	1.40	23.1	0.32	4.49															
95	0.36	9.45	0.38	1.81															
100	0.39	2.75	0.47	0.69															
105	0.44	0.44	0.54	0.56															
110	0.55	0.48	0.65	0.63															
115	0.68	0.58	0.76	0.75															
120	0.76	0.68	0.86	0.84															
125	0.90	0.79	0.99	0.94															
130	0.96	0.89	1.10	1.06															
135	1.08	1.00	1.17	1.13															
140	1.15	1.07	1.26	1.19															
145	1.23	1.18	1.34	1.32															
150	1.34	1.27	1.42	1.35															
155	1.41	1.35	1.47	1.39															
160	1.44	1.43	1.50	1.47															
165	1.48	1.51	1.55	1.52															
170	1.52	1.58	1.56	1.54															
175	1.54	1.58	1.56	1.56															
180	1.55	1.58	1.56	1.56															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Test Date:2023-11-07

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.444
Humidity:65.0%
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Remarks: