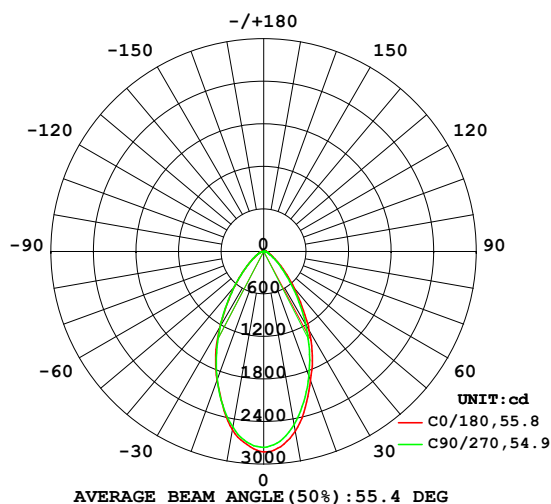


## LUMINAIRE PHOTOMETRIC TEST REPORT

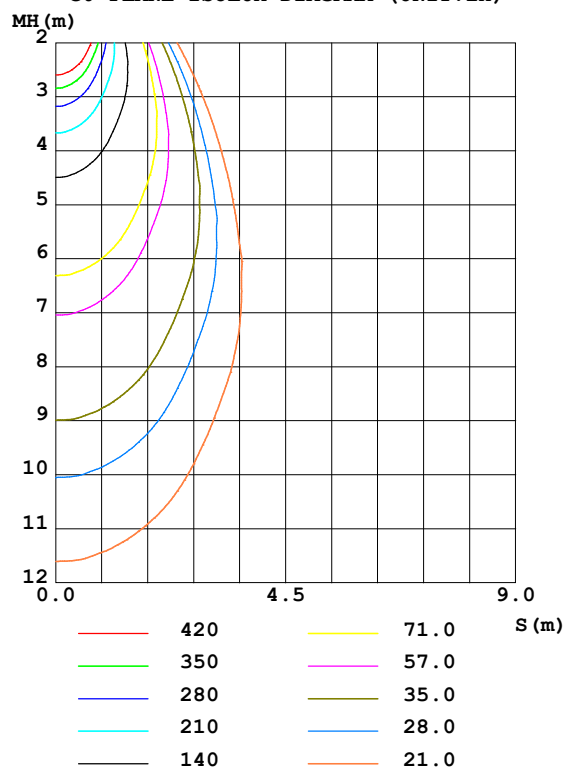
Test:U:228.80V I:0.0840A P:18.146W PF:0.9438 Freq:49.97Hz Lamp Flux:2918.73x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.: 600*60mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 160.85 lm/W			
MODEL	CTLS-0618-40NR-04WH	I <sub>max</sub> (cd)	2828	S/MH (C0/180)	0.82
NOMINAL POWER (W)	18	LOR (%)	100.0	S/MH (C90/270)	0.83
RATED VOLTAGE (V)	230.0	TOTAL FLUX (lm)	2918.7	η UP, DN (C0-180)	1.1, 48.7
NOMINAL FLUX (lm)	2918.73	CIE CLASS	DIRECT	η UP, DN (C180-360)	1.1, 49.2
LAMPS INSIDE	1	η up (%)	2.2	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	230.0	η down (%)	97.8	CIBSE SHR MAX	0.90

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: zcx  
 Test Date: 2020-06-19

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.366  
 Humidity: 65.0%  
 Test Distance: 8.330m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

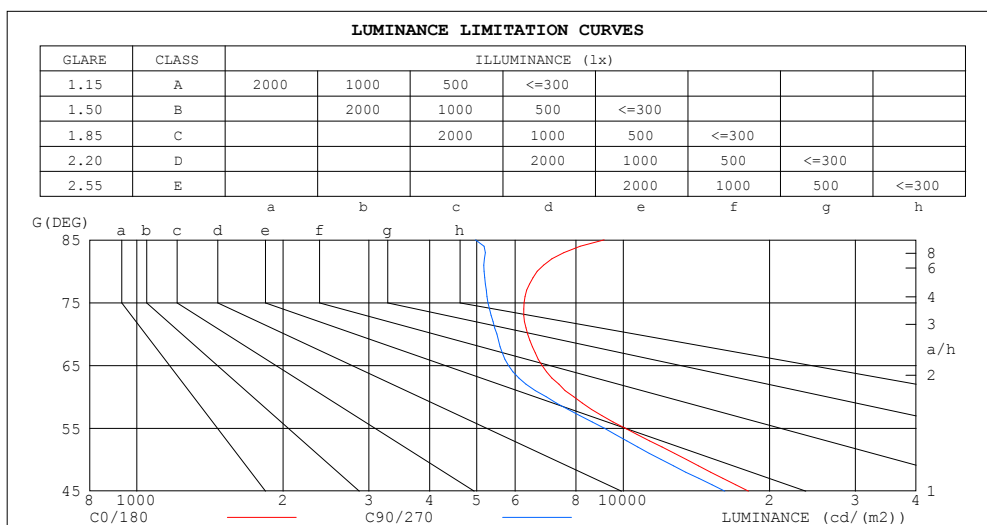
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	2574	2518	2481	2469	2549	2533	2514	2513	0- 10	252.3	252.3	8.65,8.65
20	1936	1901	1870	1864	1928	1943	1919	1919	10- 20	621.8	874.1	29.9,29.9
30	1280	1217	1188	1188	1241	1269	1233	1237	20- 30	717.8	1592	54.5,54.5
40	667.5	636.5	608.7	611.4	634.9	665.3	639.8	658.8	30- 40	570.0	2162	74.1,74.1
50	312.2	291.0	276.8	277.6	288.0	296.1	287.1	300.0	40- 50	340.3	2502	85.7,85.7
60	142.4	133.0	125.1	127.1	128.6	130.5	126.1	134.8	50- 60	177.3	2680	91.8,91.8
70	78.37	74.06	67.70	69.41	69.69	69.49	64.74	73.12	60- 70	95.87	2775	95.1,95.1
80	41.63	39.05	32.35	35.30	36.45	35.60	29.97	38.42	70- 80	55.86	2831	97,97
90	20.53	13.17	2.506	13.76	21.13	12.99	0.8213	12.56	80- 90	24.29	2856	97.8,97.8
100	18.86	12.90	0.4486	13.13	25.57	12.13	0.4742	11.79	90-100	13.18	2869	98.3,98.3
110	17.32	11.40	1.017	11.34	17.96	11.23	0.9776	10.60	100-110	12.18	2881	98.7,98.7
120	12.95	9.000	2.089	9.187	13.86	8.870	1.942	7.469	110-120	8.957	2890	99,99
130	12.51	9.031	3.772	9.044	12.99	8.634	3.506	7.973	120-130	7.406	2897	99.3,99.3
140	12.51	9.490	5.908	9.161	12.30	8.696	5.560	8.400	130-140	6.705	2904	99.5,99.5
150	12.14	9.717	8.194	9.626	11.22	9.204	7.755	8.963	140-150	5.806	2910	99.7,99.7
160	11.96	10.70	10.28	10.63	11.31	10.25	9.849	10.19	150-160	4.637	2914	99.9,99.9
170	12.49	11.97	11.89	11.77	12.31	11.58	11.60	11.67	160-170	3.163	2918	100,100
180	13.37	12.72	12.67	12.66	13.44	12.76	12.68	12.68	170-180	1.171	2919	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:zcx  
 Test Date:2020-06-19

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.366  
 Humidity:65.0%  
 Test Distance:8.330m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:228.80V I:0.0840A P:18.146W PF:0.9438 Freq:49.97Hz Lamp Flux:2918.73x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	9141	4970
80	6659	5175
75	6261	5273
70	6365	5498
65	6811	5809
60	7910	6950
55	10086	9137
50	13492	11962
45	18104	16165

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:zcx  
Test Date:2020-06-19

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:8.330m [K=1.0000]  
Remarks:

## WEC AND CCEC

Test:U:228.80V I:0.0840A P:18.146W PF:0.9438 Freq:49.97Hz Lamp Flux:2918.73x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding 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	.221	.126	.040	.213	.122	.039	.199	.114	.037	.186	.107	.034	.174	.101	.033		
2.0	.209	.115	.035	.203	.112	.034	.191	.106	.033	.180	.101	.032	.169	.096	.030		
3.0	.197	.105	.031	.191	.103	.031	.181	.098	.030	.171	.094	.029	.162	.090	.028		
4.0	.185	.096	.028	.180	.094	.028	.171	.091	.027	.163	.087	.026	.155	.084	.026		
5.0	.175	.089	.026	.170	.087	.025	.162	.084	.025	.155	.082	.024	.147	.079	.024		
6.0	.165	.083	.024	.161	.081	.023	.154	.079	.023	.147	.076	.022	.141	.074	.022		
7.0	.156	.077	.022	.153	.076	.022	.146	.074	.021	.140	.072	.021	.134	.070	.020		
8.0	.148	.072	.020	.145	.071	.020	.139	.069	.020	.133	.068	.019	.128	.066	.019		
9.0	.140	.068	.019	.138	.067	.019	.132	.065	.019	.127	.064	.018	.123	.062	.018		
10.0	.134	.064	.018	.131	.063	.018	.126	.062	.017	.122	.060	.017	.117	.059	.017		

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	.207	.207	.207	.177	.177	.177	.121	.121	.121	.069	.069	.069	.022	.022	.022	
1.0	.191	.174	.158	.163	.149	.136	.112	.102	.094	.064	.059	.055	.021	.019	.018	
2.0	.178	.149	.125	.152	.128	.108	.104	.089	.075	.060	.052	.044	.019	.017	.014	
3.0	.167	.131	.101	.143	.113	.088	.098	.078	.062	.057	.046	.036	.018	.015	.012	
4.0	.158	.116	.085	.136	.101	.074	.093	.070	.052	.054	.041	.031	.017	.013	.010	
5.0	.150	.105	.072	.129	.091	.063	.089	.064	.044	.051	.037	.026	.017	.012	.009	
6.0	.143	.096	.063	.123	.084	.055	.085	.058	.039	.049	.034	.023	.016	.011	.008	
7.0	.136	.089	.056	.117	.077	.049	.081	.054	.035	.047	.032	.021	.015	.010	.007	
8.0	.130	.083	.051	.112	.072	.044	.078	.051	.031	.045	.030	.019	.015	.010	.006	
9.0	.125	.078	.046	.108	.068	.040	.075	.048	.029	.043	.028	.017	.014	.009	.006	
10.0	.120	.074	.043	.104	.064	.037	.072	.045	.027	.042	.027	.016	.014	.009	.005	

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:zcx  
 Test Date:2020-06-19

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.366  
 Humidity:65.0%  
 Test Distance:8.330m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:228.80V I:0.0840A P:18.146W PF:0.9438 Freq:49.97Hz Lamp Flux:2918.73x1 lm											
NAME: LED Linear Lighting System					TYPE:			WEIGHT:2kg			
SPEC.:					DIM.: 600*60*45mm			SERIAL No.:			
MFR.: CoreShine					SUR.:600*60mm			Shielding 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		15.4	16.5	15.7	16.7	16.9	15.0	16.1	15.2	16.3	16.5
	3H	15.9	16.9	16.2	17.2	17.4	15.4	16.4	15.7	16.7	16.9
	4H	16.2	17.1	16.5	17.4	17.7	15.6	16.6	15.9	16.9	17.1
	6H	16.4	17.4	16.8	17.6	17.9	15.8	16.7	16.2	17.0	17.3
	8H	16.6	17.5	16.9	17.8	18.1	15.9	16.8	16.3	17.1	17.4
	12H	16.7	17.6	17.1	17.9	18.2	16.0	16.8	16.3	17.1	17.4
4H	2H	15.5	16.4	15.8	16.7	17.0	15.1	16.1	15.4	16.3	16.6
	3H	16.1	17.0	16.5	17.3	17.6	15.7	16.6	16.1	16.9	17.2
	4H	16.6	17.3	17.0	17.7	18.0	16.1	16.8	16.5	17.2	17.5
	6H	17.0	17.7	17.4	18.1	18.5	16.4	17.1	16.8	17.4	17.8
	8H	17.2	17.9	17.7	18.3	18.7	16.5	17.2	17.0	17.6	18.0
	12H	17.5	18.1	17.9	18.5	18.9	16.6	17.2	17.1	17.6	18.1
8H	4H	16.7	17.3	17.1	17.7	18.1	16.2	16.8	16.6	17.2	17.6
	6H	17.3	17.8	17.7	18.2	18.7	16.7	17.2	17.1	17.6	18.1
	8H	17.6	18.1	18.1	18.5	19.0	16.9	17.4	17.4	17.8	18.3
	12H	18.0	18.4	18.5	18.9	19.4	17.1	17.5	17.6	18.0	18.5
12H	4H	16.7	17.2	17.1	17.7	18.1	16.2	16.8	16.7	17.2	17.6
	6H	17.3	17.8	17.8	18.2	18.7	16.7	17.2	17.2	17.7	18.1
	8H	17.7	18.1	18.2	18.6	19.1	17.0	17.4	17.5	17.9	18.4
Variations with the observer position at spacings:											
S = 1.0H		+ 0.7 / - 0.9					+ 0.8 / - 1.0				
1.5H		+ 1.0 / - 0.7					+ 1.0 / - 0.8				
2.0H		+ 1.5 / - 0.8					+ 1.6 / - 1.0				

CIE Pub.117, 2919 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 3.7$ )

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:zcx  
 Test Date:2020-06-19

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.366  
 Humidity:65.0%  
 Test Distance:8.330m [K=1.0000]  
 Remarks:

## UTILIZATION FACTORS TABLE

Test:U:228.80V I:0.0840A P:18.146W PF:0.9438 Freq:49.97Hz Lamp Flux:2918.73x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

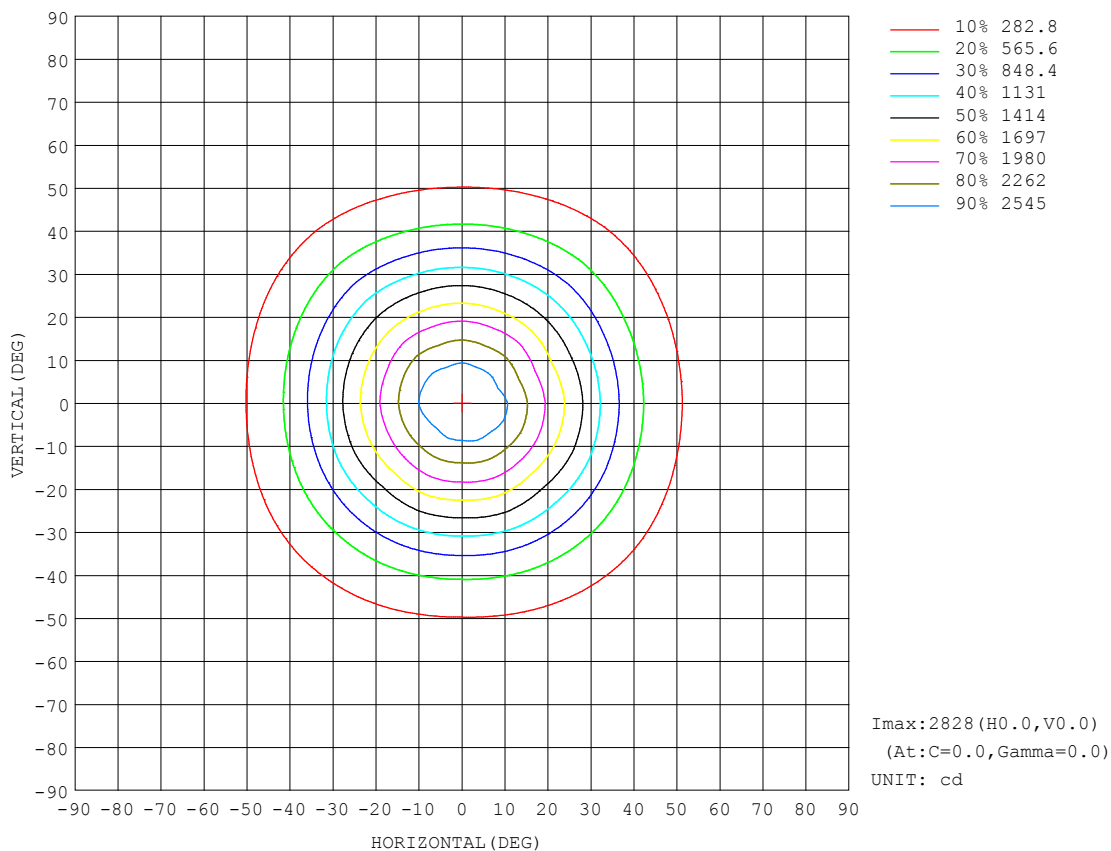
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	75	67	62	75	67	62	74	66	62	57
0.80	84	76	71	83	76	71	82	75	70	65
1.00	90	83	78	89	82	77	87	82	77	71
1.25	95	88	84	94	88	83	92	86	82	77
1.50	99	92	88	97	91	87	95	90	86	80
2.00	103	97	93	102	96	92	98	94	91	84
2.50	106	100	96	104	99	95	100	96	93	86
3.00	108	103	99	106	102	98	102	98	96	88
4.00	110	107	103	108	105	102	104	101	99	91
5.00	112	109	106	110	107	104	105	103	101	92
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:zcx  
 Test Date:2020-06-19

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.366  
 Humidity:65.0%  
 Test Distance:8.330m [K=1.0000]  
 Remarks:

## ISOCANDELA DIAGRAM

Test:U:228.80V I:0.0840A P:18.146W PF:0.9438 Freq:49.97Hz Lamp Flux:2918.73x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

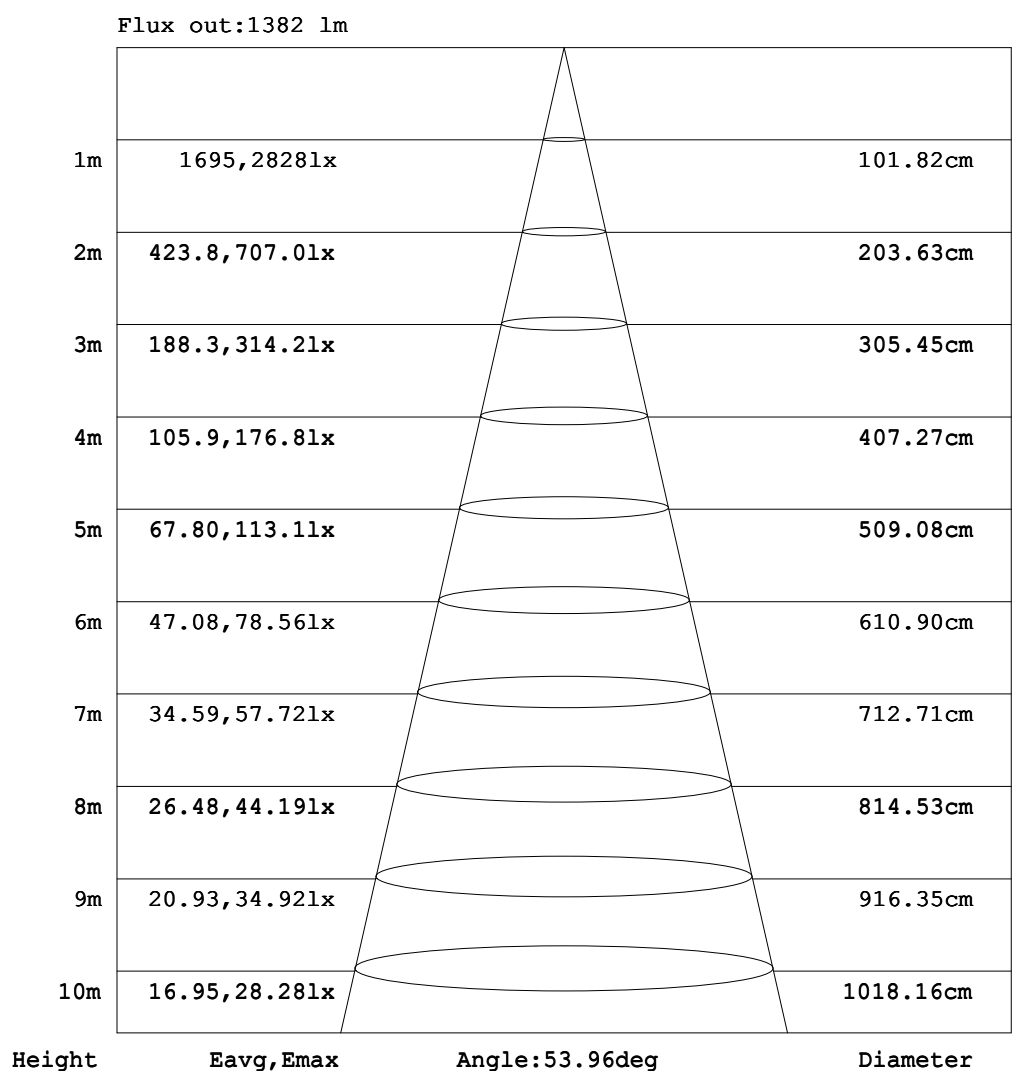


C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:zcx  
Test Date:2020-06-19

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.366  
Humidity:65.0%  
Test Distance:8.330m [K=1.0000]  
Remarks:

## AAI Figure

Test:U:228.80V I:0.0840A P:18.146W PF:0.9438 Freq:49.97Hz Lamp Flux:2918.73x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:



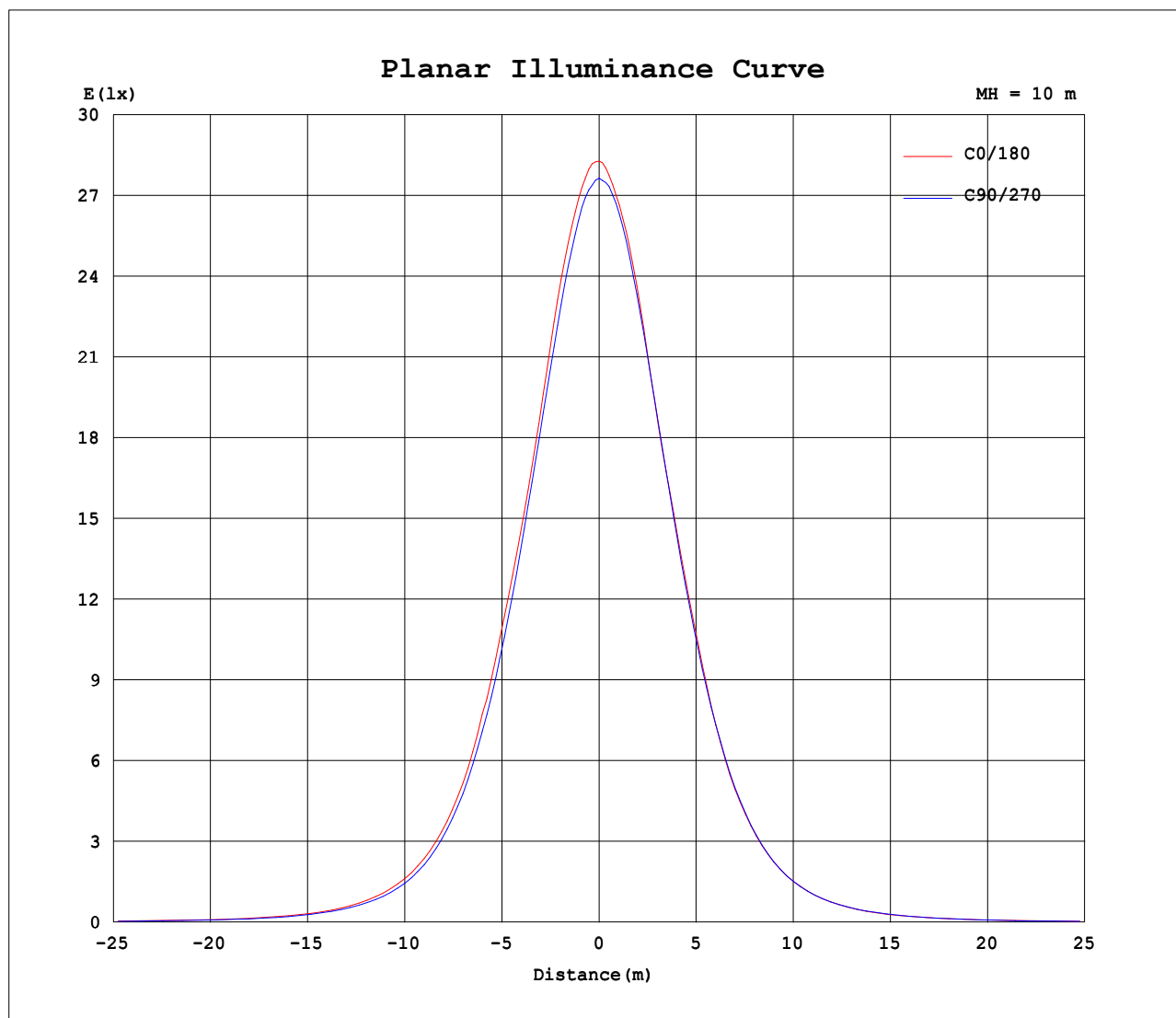
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:zcx  
 Test Date:2020-06-19

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.366  
 Humidity:65.0%  
 Test Distance:8.330m [K=1.0000]  
 Remarks:



## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: zcx  
Test Date: 2020-06-19

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.366  
Humidity: 65.0%  
Test Distance: 8.330m [K=1.0000]  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:228.80V I:0.0840A P:18.146W PF:0.9438 Freq:49.97Hz Lamp Flux:2918.73x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.: 600*60mm	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	2828	2819	2795	2772	2765	2760	2761	2765	2828	2819	2795	2772	2765	2760	2761	2765			
5	2763	2746	2717	2707	2688	2687	2669	2681	2734	2727	2717	2698	2702	2693	2695	2692			
10	2574	2566	2518	2513	2481	2483	2469	2502	2549	2538	2533	2498	2514	2499	2513	2501			
15	2279	2282	2240	2227	2195	2201	2196	2215	2246	2252	2272	2230	2244	2221	2247	2213			
20	1936	1932	1901	1905	1870	1886	1864	1880	1928	1921	1943	1911	1919	1902	1919	1876			
25	1626	1607	1549	1562	1527	1544	1517	1571	1604	1606	1601	1579	1578	1562	1568	1561			
30	1280	1274	1217	1219	1188	1198	1188	1228	1241	1256	1269	1237	1233	1223	1237	1239			
35	942	935	905	895	872	879	878	889	901	921	951	919	912	914	930	921			
40	668	655	636	626	609	612	611	624	635	646	665	644	640	642	659	650			
45	461	447	433	426	412	417	413	423	431	437	447	434	431	436	448	445			
50	312	301	291	286	277	280	278	284	288	292	296	289	287	292	300	299			
55	208	207	193	188	189	183	183	193	188	195	193	189	193	190	197	204			
60	142	140	133	129	125	127	127	129	129	130	131	128	126	129	135	138			
65	104	100	99.3	96.4	88.4	93.7	93.4	92.2	93.2	92.7	94.8	93.2	85.9	93.6	99.2	97.8			
70	78.4	77.9	74.1	72.2	67.7	69.6	69.4	71.8	69.7	70.8	69.5	68.7	64.7	69.1	73.1	75.5			
75	58.3	59.2	56.0	51.8	49.1	49.7	51.9	53.5	51.8	52.4	51.8	48.5	46.5	49.4	54.9	57.0			
80	41.6	41.6	39.0	34.0	32.4	32.4	35.3	37.0	36.4	36.1	35.6	31.1	30.0	32.3	38.4	40.0			
85	28.7	27.0	23.4	18.5	15.6	17.1	20.6	25.0	26.2	24.3	20.9	16.2	14.0	17.3	23.3	26.0			
90	20.5	18.5	13.2	6.10	2.51	6.57	13.8	19.4	21.1	18.5	13.0	5.43	0.82	4.95	12.6	17.6			
95	19.8	16.6	13.7	7.62	0.38	8.19	15.1	18.7	22.8	18.7	14.5	7.25	0.44	5.67	12.5	16.1			
100	18.9	16.9	12.9	6.23	0.45	6.14	13.1	21.2	25.6	22.0	12.1	5.89	0.47	5.08	11.8	16.4			
105	18.1	16.9	12.4	5.30	0.68	4.96	14.3	21.0	22.7	20.8	13.8	4.92	0.67	4.45	11.4	16.5			
110	17.3	16.3	11.4	5.24	1.02	5.02	11.3	16.9	18.0	16.3	11.2	5.09	0.98	4.45	10.6	15.5			
115	14.3	13.2	9.60	4.67	1.47	4.58	9.79	14.0	15.1	13.6	9.62	4.45	1.40	4.16	8.29	12.6			
120	13.0	12.1	9.00	4.77	2.09	4.63	9.19	12.8	13.9	12.4	8.87	4.44	1.94	4.24	7.47	11.5			
125	12.5	11.6	8.85	5.06	2.87	4.85	8.99	12.2	13.3	11.8	8.59	4.56	2.65	4.52	7.86	11.0			
130	12.5	11.5	9.03	5.52	3.77	5.25	9.04	12.1	13.0	11.7	8.63	4.92	3.51	4.87	7.97	10.8			
135	12.6	11.7	9.25	6.03	4.80	5.82	9.22	11.9	12.7	11.4	8.78	5.49	4.49	5.43	8.12	10.8			
140	12.5	11.8	9.49	6.72	5.91	6.58	9.16	11.7	12.3	11.2	8.70	6.20	5.56	6.15	8.40	10.8			
145	12.3	11.9	9.44	7.52	7.05	7.45	9.26	11.6	12.1	11.1	8.85	7.07	6.64	6.99	8.55	10.6			
150	12.1	11.5	9.72	8.41	8.19	8.42	9.63	11.0	11.2	10.5	9.20	8.00	7.75	7.92	8.96	10.3			
155	11.9	11.5	10.2	9.37	9.29	9.37	10.1	11.0	11.1	10.6	9.68	8.93	8.83	8.88	9.56	10.4			
160	12.0	11.6	10.7	10.3	10.3	10.2	10.6	11.2	11.3	10.8	10.2	9.83	9.85	9.82	10.2	10.8			
165	12.1	11.8	11.3	11.2	11.2	11.1	11.2	11.4	11.7	11.2	10.9	10.7	10.8	10.7	10.9	11.3			
170	12.5	12.3	12.0	11.9	11.9	11.9	11.8	11.9	12.3	11.7	11.6	11.6	11.6	11.6	11.7	11.8			
175	13.0	12.8	12.5	12.5	12.4	12.4	12.4	12.3	13.0	12.4	12.3	12.3	12.3	12.2	12.3	12.4			
180	13.4	13.0	12.7	12.7	12.7	12.7	12.7	12.7	13.4	12.9	12.8	12.7	12.7	12.7	12.7	12.7			

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:zcx  
 Test Date:2020-06-19

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.366  
 Humidity:65.0%  
 Test Distance:8.330m [K=1.0000]  
 Remarks: