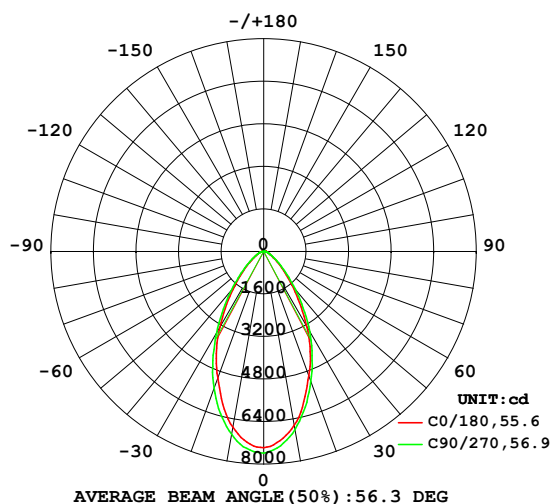


## LUMINAIRE PHOTOMETRIC TEST REPORT

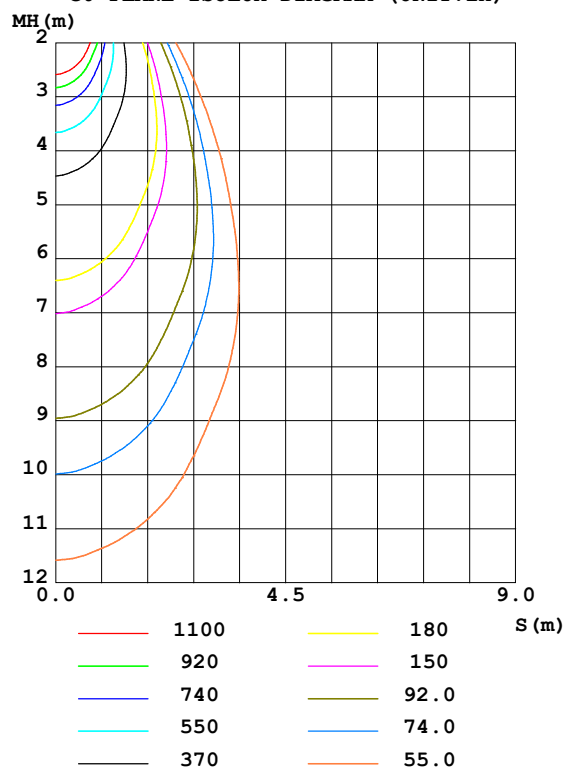
Test:U:225.52V I:0.2272A P:49.667W PF:0.9693 Freq:49.96Hz Lamp Flux:8121.4x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 1500*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:1500*60mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 163.52 lm/W			
MODEL	CTLS-1550-40NR-04WH	I <sub>max</sub> (cd)	7602	S/MH (C0/180)	0.83
NOMINAL POWER (W)	50	LOR (%)	100.0	S/MH (C90/270)	0.86
RATED VOLTAGE (V)	230.0	TOTAL FLUX (lm)	8121.4	η UP, DN (C0-180)	1.2, 48.6
NOMINAL FLUX (lm)	8121.4	CIE CLASS	DIRECT	η UP, DN (C180-360)	1.2, 49.0
LAMPS INSIDE	1	η up (%)	2.3	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	230.0	η down (%)	97.7	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: 2020-06-18

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:

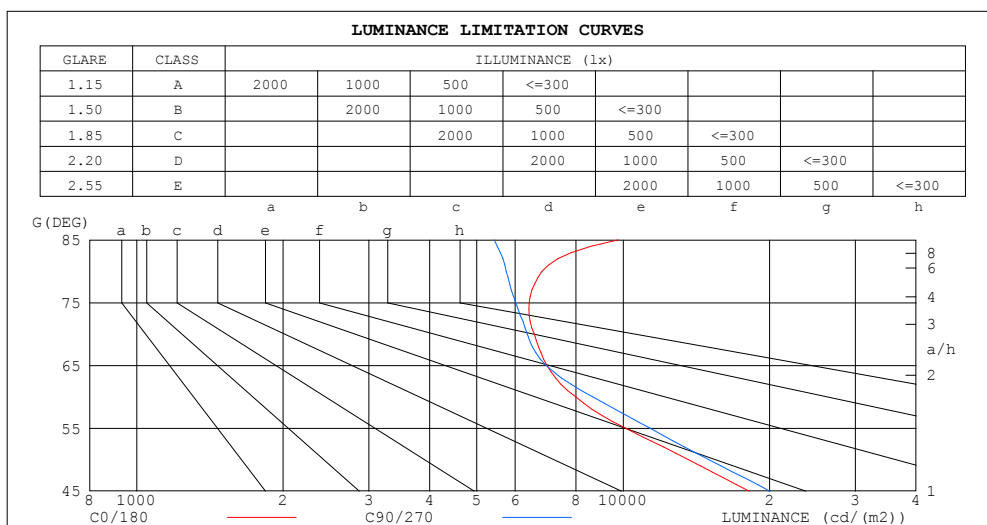
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	6640	6549	6798	6984	6708	6821	6980	6807	0- 10	679.3	679.3	8.36,8.36
20	4970	4956	5202	5407	5063	5299	5472	5165	10- 20	1687	2366	29.1,29.1
30	3243	3204	3478	3518	3312	3496	3552	3318	20- 30	1967	4333	53.3,53.3
40	1674	1724	1854	1891	1720	1902	1872	1788	30- 40	1587	5920	72.9,72.9
50	786.8	816.0	866.8	879.3	806.5	890.9	870.9	847.0	40- 50	973.5	6893	84.9,84.9
60	359.5	385.1	389.2	402.3	366.9	403.7	395.6	388.8	50- 60	519.5	7413	91.3,91.3
70	202.1	213.7	195.6	216.1	200.8	218.4	203.8	214.9	60- 70	282.2	7695	94.7,94.7
80	106.4	110.5	89.80	111.6	105.5	113.8	98.42	112.2	70- 80	163.6	7858	96.8,96.8
90	62.03	40.53	5.606	39.45	55.08	38.94	5.656	40.89	80- 90	72.17	7931	97.7,97.7
100	60.31	41.01	9.578	39.38	59.06	38.63	7.439	40.37	90-100	39.71	7970	98.1,98.1
110	50.88	37.65	11.00	35.79	47.64	35.52	9.958	36.83	100-110	38.73	8009	98.6,98.6
120	39.36	26.18	12.94	29.10	36.29	28.91	12.96	25.69	110-120	29.18	8038	99,99
130	37.16	24.22	15.08	27.97	34.24	28.09	15.85	23.94	120-130	23.56	8062	99.3,99.3
140	35.10	24.13	18.67	27.20	32.76	27.21	19.29	23.46	130-140	20.05	8082	99.5,99.5
150	31.95	25.17	22.74	26.52	29.89	26.36	23.11	24.46	140-150	16.16	8098	99.7,99.7
160	30.84	27.43	26.69	27.38	29.50	27.21	26.66	26.91	150-160	12.33	8110	99.9,99.9
170	31.85	30.13	30.23	29.80	31.11	29.70	30.27	29.94	160-170	8.156	8118	100,100
180	33.62	31.99	32.13	32.00	33.70	32.09	32.20	32.05	170-180	2.971	8121	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:2020-06-18

$\gamma$  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:225.52V I:0.2272A P:49.667W PF:0.9693 Freq:49.96Hz Lamp Flux:8121.4x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 1500*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:1500*60mm	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	9770	5432
80	6808	5746
75	6411	6011
70	6566	6355
65	6966	6951
60	7988	8649
55	10120	11356
50	13600	14984
45	18141	19996

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:zcx  
Test Date:2020-06-18

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:

## WEC AND CCEC

Test:U:225.52V I:0.2272A P:49.667W PF:0.9693 Freq:49.96Hz Lamp Flux:8121.4x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 1500*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:1500*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	.224	.127	.040	.216	.123	.039	.202	.116	.037	.189	.109	.035	.177	.103	.033		
2.0	.212	.116	.036	.205	.113	.035	.193	.107	.033	.182	.102	.032	.172	.097	.031		
3.0	.199	.106	.032	.194	.104	.031	.183	.099	.030	.173	.095	.029	.164	.091	.028		
4.0	.188	.097	.029	.183	.096	.028	.173	.092	.027	.164	.088	.027	.156	.085	.026		
5.0	.177	.090	.026	.172	.088	.026	.164	.085	.025	.156	.082	.025	.149	.080	.024		
6.0	.167	.083	.024	.163	.082	.024	.155	.080	.023	.148	.077	.023	.142	.075	.022		
7.0	.157	.078	.022	.154	.077	.022	.147	.075	.021	.141	.072	.021	.135	.070	.021		
8.0	.149	.073	.020	.146	.072	.020	.140	.070	.020	.135	.068	.020	.129	.066	.019		
9.0	.142	.069	.019	.139	.068	.019	.133	.066	.019	.128	.064	.018	.124	.063	.018		
10.0	.135	.065	.018	.132	.064	.018	.127	.062	.018	.123	.061	.017	.118	.060	.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	.208	.208	.208	.178	.178	.178	.122	.122	.122	.070	.070	.070	.022	.022	.022		
1.0	.192	.175	.159	.165	.150	.137	.113	.103	.095	.065	.060	.055	.021	.019	.018		
2.0	.180	.150	.126	.154	.130	.109	.106	.090	.076	.061	.052	.044	.020	.017	.014		
3.0	.169	.132	.103	.145	.114	.089	.100	.079	.062	.058	.046	.037	.018	.015	.012		
4.0	.160	.118	.086	.137	.102	.075	.094	.071	.053	.055	.042	.031	.018	.014	.010		
5.0	.152	.107	.074	.130	.092	.064	.090	.065	.045	.052	.038	.027	.017	.012	.009		
6.0	.145	.098	.064	.124	.085	.056	.086	.059	.040	.050	.035	.024	.016	.011	.008		
7.0	.138	.091	.057	.119	.079	.050	.082	.055	.035	.048	.032	.021	.015	.011	.007		
8.0	.132	.085	.052	.114	.073	.045	.079	.052	.032	.046	.030	.019	.015	.010	.006		
9.0	.127	.080	.048	.109	.069	.042	.076	.049	.029	.044	.029	.018	.014	.009	.006		
10.0	.122	.075	.044	.105	.065	.039	.073	.046	.027	.043	.027	.016	.014	.009	.005		

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:zcx  
 Test Date:2020-06-18

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:225.52V I:0.2272A P:49.667W PF:0.9693 Freq:49.96Hz Lamp Flux:8121.4x1 lm										
NAME: LED Linear Lighting System					TYPE:			WEIGHT:2kg		
SPEC.:					DIM.: 1500*60*45mm			SERIAL No.:		
MFR.: CoreShine					SUR.:1500*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	11.7	12.8	12.0	13.1	13.3	12.2	13.4	12.5	13.6	13.8
3H	12.2	13.2	12.5	13.5	13.7	12.6	13.7	12.9	13.9	14.2
4H	12.5	13.4	12.8	13.7	14.0	12.8	13.8	13.2	14.1	14.4
6H	12.7	13.7	13.1	13.9	14.3	13.0	13.9	13.4	14.2	14.5
8H	12.9	13.8	13.2	14.1	14.4	13.1	14.0	13.4	14.3	14.6
12H	13.0	13.9	13.4	14.2	14.5	13.1	14.0	13.5	14.3	14.6
4H 2H	11.9	12.8	12.2	13.1	13.4	12.3	13.3	12.6	13.6	13.8
3H	12.5	13.4	12.9	13.7	14.0	12.9	13.8	13.3	14.1	14.4
4H	12.9	13.7	13.3	14.1	14.4	13.2	14.0	13.6	14.4	14.7
6H	13.4	14.0	13.8	14.4	14.8	13.5	14.2	14.0	14.6	15.0
8H	13.6	14.2	14.0	14.6	15.0	13.7	14.3	14.1	14.7	15.1
12H	13.8	14.4	14.3	14.8	15.3	13.8	14.3	14.2	14.8	15.2
8H 4H	13.1	13.7	13.5	14.1	14.5	13.4	14.0	13.8	14.4	14.8
6H	13.7	14.2	14.1	14.6	15.1	13.8	14.3	14.3	14.8	15.2
8H	14.0	14.5	14.5	14.9	15.4	14.0	14.5	14.5	14.9	15.4
12H	14.4	14.8	14.9	15.3	15.8	14.2	14.6	14.7	15.1	15.6
12H 4H	13.1	13.7	13.5	14.1	14.5	13.4	13.9	13.8	14.4	14.8
6H	13.7	14.2	14.2	14.6	15.1	13.9	14.3	14.3	14.8	15.3
8H	14.1	14.5	14.6	15.0	15.5	14.1	14.5	14.6	15.0	15.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.7 / - 0.9					+ 0.8 / - 1.0				
1.5H	+ 0.9 / - 0.6					+ 1.0 / - 0.8				
2.0H	+ 1.4 / - 0.8					+ 1.7 / - 1.0				

CIE Pub.117, 8121 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 7.3$ )

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:zcx  
 Test Date:2020-06-18

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:225.52V I:0.2272A P:49.667W PF:0.9693 Freq:49.96Hz Lamp Flux:8121.4x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 1500*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:1500*60mm	Shielding Angle:

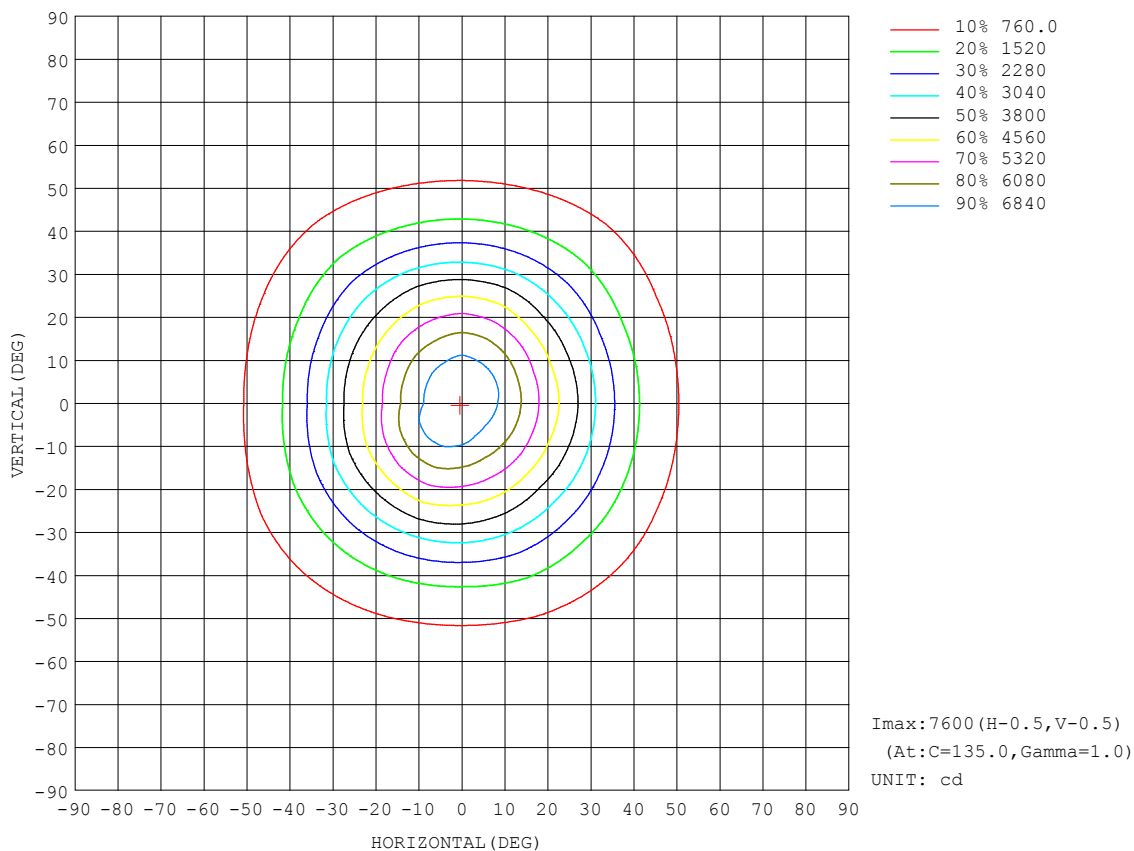
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	75	66	61	74	66	61	73	65	61	56
0.80	83	75	70	82	75	70	81	74	69	64
1.00	90	82	77	89	81	76	87	82	76	71
1.25	95	88	83	94	87	82	91	86	81	76
1.50	99	92	87	97	91	87	94	89	85	79
2.00	103	97	93	101	96	92	98	93	90	83
2.50	105	100	96	103	99	95	100	96	93	85
3.00	108	103	99	105	101	98	101	98	95	88
4.00	110	106	103	108	104	102	104	101	99	90
5.00	112	109	106	109	106	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:2020-06-18

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:225.52V I:0.2272A P:49.667W PF:0.9693 Freq:49.96Hz Lamp Flux:8121.4x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 1500*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:1500*60mm	Shielding Angle:

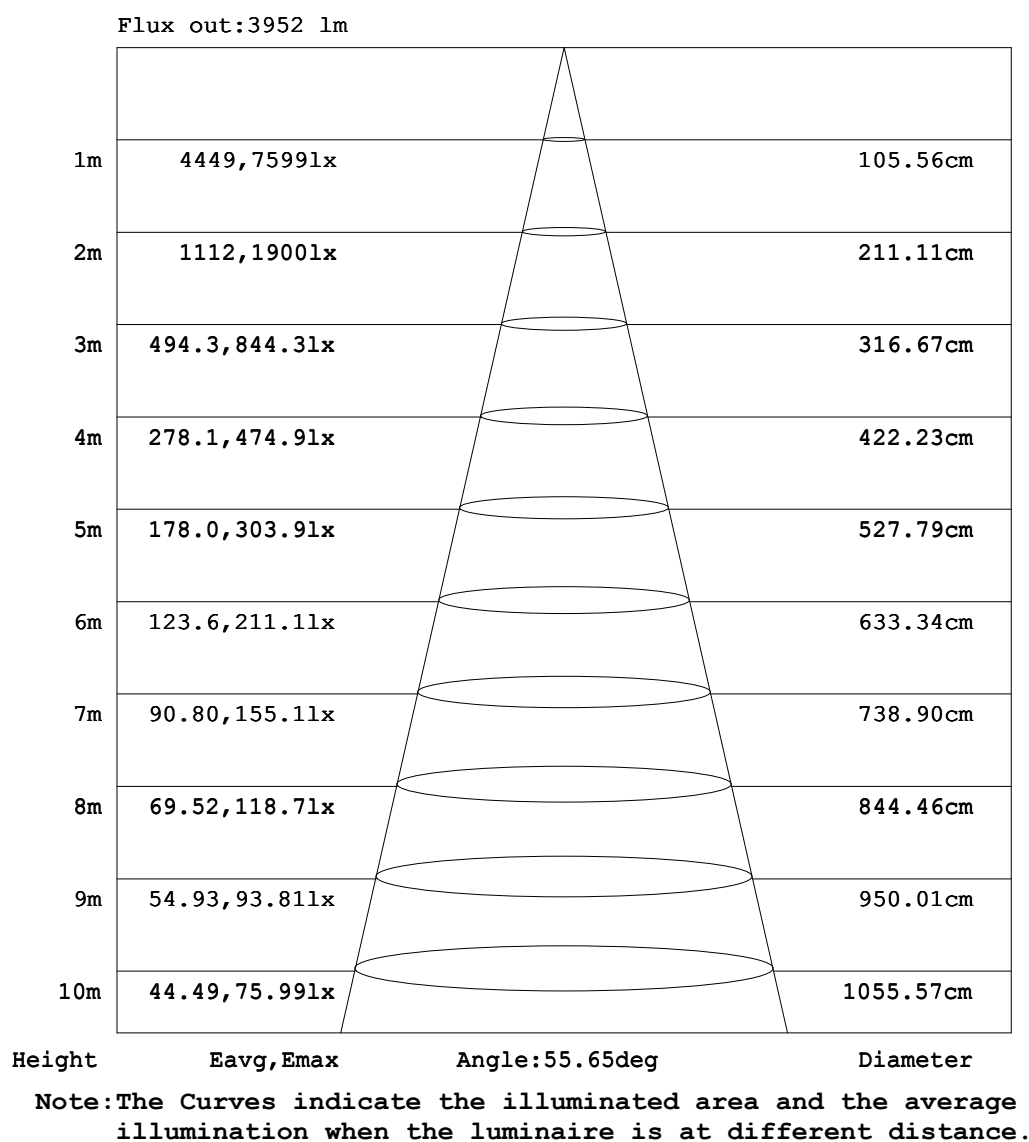


C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:zcx  
Test Date:2020-06-18

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:225.52V I:0.2272A P:49.667W PF:0.9693 Freq:49.96Hz Lamp Flux:8121.4x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 1500*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:1500*60mm	Shielding Angle:

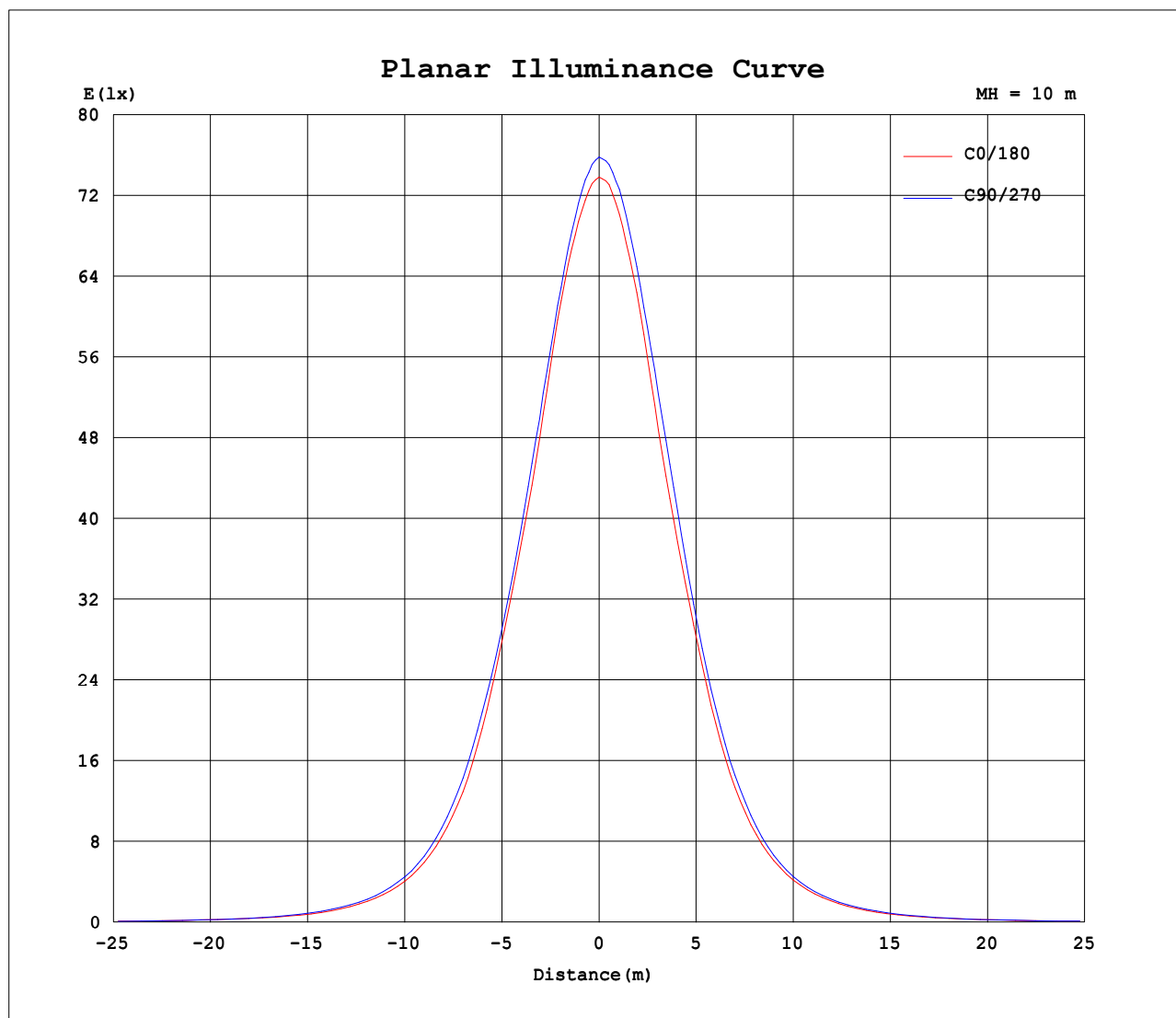


C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:zcx  
 Test Date:2020-06-18

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: 2020-06-18

$\gamma$  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:225.52V I:0.2272A P:49.667W PF:0.9693 Freq:49.96Hz Lamp Flux:8121.4x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 1500*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:1500*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	7382	7358	7360	7422	7582	7594	7595	7531	7382	7358	7360	7422	7582	7594	7595	7531			
5	7137	7096	7095	7171	7334	7421	7435	7396	7205	7213	7249	7314	7427	7409	7355	7251			
10	6640	6589	6549	6593	6798	6955	6984	6934	6708	6742	6821	6871	6980	6899	6807	6721			
15	5847	5831	5838	5893	6061	6261	6279	6202	5950	6013	6140	6196	6304	6225	6085	5904			
20	4970	4903	4956	5064	5202	5404	5407	5265	5063	5117	5299	5397	5472	5363	5165	4972			
25	4156	4078	4044	4205	4326	4508	4442	4408	4237	4294	4371	4524	4531	4474	4216	4127			
30	3243	3215	3204	3350	3478	3535	3518	3517	3312	3406	3496	3589	3552	3505	3318	3231			
35	2357	2374	2413	2555	2600	2645	2644	2612	2434	2504	2648	2666	2652	2596	2495	2352			
40	1674	1676	1724	1877	1854	1885	1891	1860	1720	1767	1902	1889	1872	1837	1788	1655			
45	1155	1152	1196	1291	1273	1303	1298	1289	1185	1212	1316	1292	1285	1258	1236	1136			
50	787	779	816	873	867	879	879	877	807	829	891	881	871	859	847	771			
55	522	537	553	579	586	584	584	597	533	567	592	582	593	571	568	534			
60	359	363	385	390	389	395	402	402	367	383	404	396	396	388	389	362			
65	265	262	289	285	264	287	296	288	268	274	297	290	271	287	290	262			
70	202	201	214	210	196	209	216	220	201	210	218	214	204	213	215	203			
75	149	153	159	150	140	149	161	165	148	158	163	153	149	153	161	154			
80	106	108	111	97.5	89.8	97.2	112	117	106	111	114	101	98.4	100.0	112	108			
85	76.6	72.4	66.4	53.6	42.6	53.5	66.8	76.7	74.2	73.3	68.2	55.2	48.9	55.2	67.8	72.7			
90	62.0	54.9	40.5	17.5	5.61	17.2	39.4	53.7	55.1	51.9	38.9	17.2	5.66	18.0	40.9	56.4			
95	63.0	50.6	45.0	24.3	7.95	22.6	42.1	50.2	57.0	49.5	41.0	21.4	6.23	22.7	42.7	51.8			
100	60.3	52.8	41.0	22.5	9.58	21.5	39.4	53.2	59.1	53.8	38.6	20.3	7.44	21.3	40.4	54.1			
105	58.4	53.7	43.6	20.1	10.1	20.3	39.6	52.5	54.4	52.1	38.4	19.0	8.72	18.3	39.2	54.3			
110	50.9	47.6	37.7	21.5	11.0	21.5	35.8	48.0	47.6	46.4	35.5	20.3	9.96	19.9	36.8	47.9			
115	43.2	39.7	31.3	18.7	12.0	19.6	31.0	39.3	39.9	38.3	30.6	19.1	11.5	18.0	30.1	39.8			
120	39.4	36.8	26.2	18.2	12.9	19.1	29.1	36.0	36.3	35.1	28.9	19.1	13.0	18.1	25.7	36.8			
125	37.8	35.1	24.5	17.9	13.8	18.8	28.2	34.1	34.9	33.2	28.3	19.2	14.3	18.2	24.2	34.7			
130	37.2	34.4	24.2	18.2	15.1	19.0	28.0	33.2	34.2	32.4	28.1	19.6	15.8	18.5	23.9	34.2			
135	36.4	32.8	24.3	18.9	16.8	19.7	27.8	32.6	33.5	31.7	28.0	20.2	17.5	19.2	23.7	32.0			
140	35.1	29.7	24.1	20.0	18.7	20.4	27.2	31.9	32.8	30.9	27.2	21.0	19.3	20.3	23.5	27.7			
145	34.3	28.8	24.3	21.1	20.7	21.5	26.5	31.8	31.9	30.6	26.6	22.0	21.1	21.5	23.5	27.0			
150	31.9	27.7	25.2	22.6	22.7	23.0	26.5	29.5	29.9	28.6	26.4	23.4	23.1	22.4	24.5	26.1			
155	31.1	28.5	26.3	24.5	24.6	24.6	26.8	29.2	29.5	28.3	26.6	24.9	25.1	24.3	25.6	27.1			
160	30.8	29.2	27.4	26.5	26.7	26.4	27.4	29.0	29.5	28.2	27.2	26.7	26.7	26.3	26.9	28.1			
165	31.1	29.9	28.7	28.5	28.6	28.4	28.4	29.1	29.9	28.5	28.3	28.5	28.6	28.4	28.4	29.0			
170	31.8	30.8	30.1	30.2	30.2	30.1	29.8	29.9	31.1	29.6	29.7	30.1	30.3	30.1	29.9	30.2			
175	33.0	31.8	31.4	31.5	31.5	31.4	31.2	31.1	32.8	31.2	31.3	31.4	31.5	31.5	31.3	31.4			
180	33.6	32.3	32.0	32.1	32.1	32.2	32.0	32.0	33.7	32.2	32.1	32.1	32.2	32.1	32.0	32.0			

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:zcx  
 Test Date:2020-06-18

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: