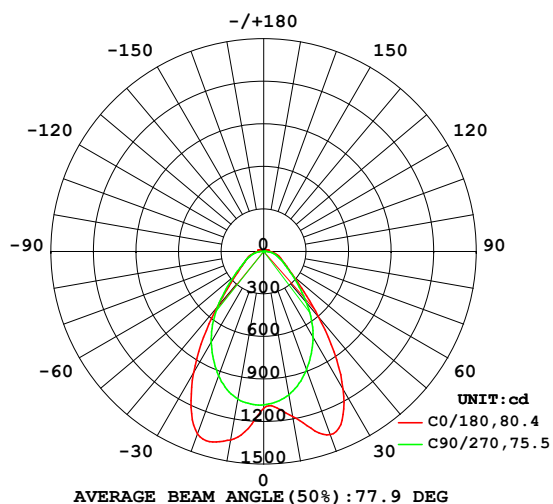


## LUMINAIRE PHOTOMETRIC TEST REPORT

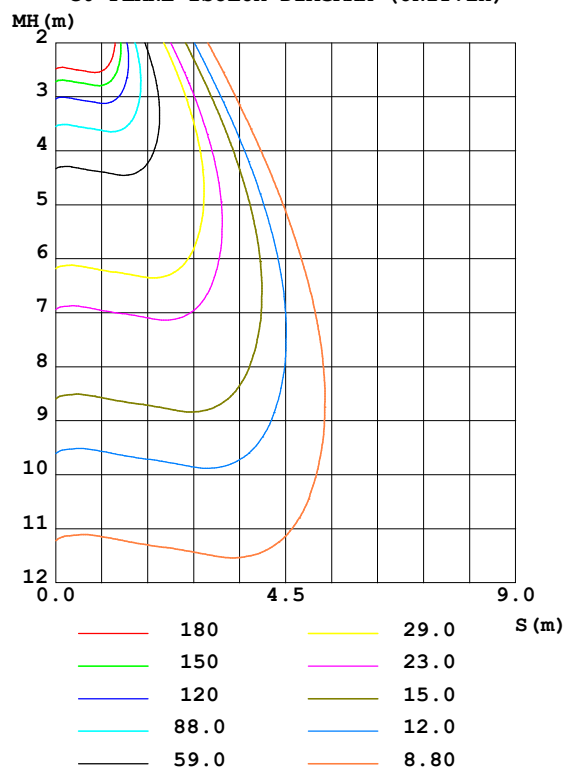
Test:U:223.95V I:0.0687A P:14.243W PF:0.9262 Freq:50.04Hz Lamp Flux:2315.13x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 162.55 lm/W			
MODEL	CTLS-0614-40DS-04WH	I <sub>max</sub> (cd)	1395	S/MH (C0/180)	1.12
NOMINAL POWER (W)	14	LOR (%)	100.0	S/MH (C90/270)	1.06
RATED VOLTAGE (V)	230.0	TOTAL FLUX (lm)	2315.1	η UP, DN (C0-180)	1.9, 47.5
NOMINAL FLUX (lm)	2315.13	CIE CLASS	DIRECT	η UP, DN (C180-360)	1.9, 48.7
LAMPS INSIDE	1	η up (%)	3.8	CIBSE SHR NOM	1.00
TEST VOLTAGE (V)	230.0	η down (%)	96.2	CIBSE SHR MAX	1.05

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: 2020-07-03

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:

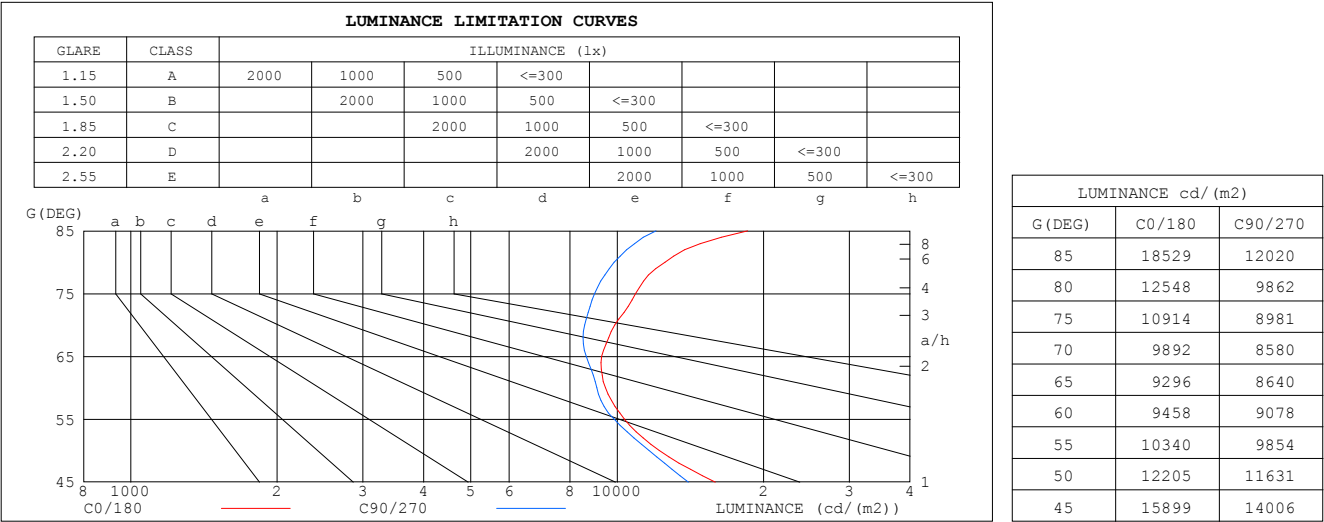
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	1183	1117	1027	1235	1350	1279	1058	1114	0- 10	109.1	109.1	4.71,4.71
20	1375	1150	886.0	1248	1370	1311	932.5	1176	10- 20	336.9	446.0	19.3,19.3
30	1123	1029	698.5	1048	989.1	1101	740.4	1119	20- 30	509.0	955.0	41.3,41.3
40	603.3	609.9	469.8	589.6	507.1	629.2	503.7	690.3	30- 40	486.7	1442	62.3,62.3
50	282.4	293.3	269.1	279.2	255.3	298.1	277.8	315.9	40- 50	322.2	1764	76.2,76.2
60	170.2	160.8	163.4	152.4	159.3	160.4	163.6	168.8	50- 60	195.3	1959	84.6,84.6
70	121.8	100.7	105.6	95.59	114.9	98.97	105.6	103.8	60- 70	131.6	2091	90.3,90.3
80	78.44	59.63	61.65	54.85	66.50	56.30	60.33	60.48	70- 80	88.76	2180	94.1,94.1
90	39.83	29.31	13.51	25.86	36.45	25.91	11.68	29.30	80- 90	47.93	2227	96.2,96.2
100	28.97	24.85	1.068	20.43	32.12	20.21	1.010	22.97	90-100	22.69	2250	97.2,97.2
110	30.36	17.80	1.641	16.38	27.77	16.10	1.497	18.04	100-110	20.21	2270	98.1,98.1
120	21.56	14.41	2.410	13.02	19.54	12.98	2.166	13.97	110-120	14.47	2285	98.7,98.7
130	18.54	12.61	3.278	11.22	16.57	10.82	2.960	11.27	120-130	10.69	2296	99.2,99.2
140	15.66	11.03	4.147	10.24	13.92	9.887	3.783	10.58	130-140	8.197	2304	99.5,99.5
150	12.57	8.620	4.879	8.312	10.74	7.874	4.544	8.073	140-150	5.642	2309	99.8,99.8
160	9.419	6.436	5.436	6.273	7.856	5.918	5.176	6.126	150-160	3.422	2313	99.9,99.9
170	6.469	5.972	5.827	5.786	6.181	5.695	5.666	5.753	160-170	1.733	2315	100,100
180	6.434	6.156	6.039	6.131	6.443	6.156	6.048	6.123	170-180	0.5705	2315	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:2020-07-03

$\gamma$  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:223.95V I:0.0687A P:14.243W PF:0.9262 Freq:50.04Hz Lamp Flux:2315.13x1 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:2020-07-03

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:223.95V I:0.0687A P:14.243W PF:0.9262 Freq:50.04Hz Lamp Flux:2315.13x1 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	.264	.150	.048	.256	.146	.046	.241	.138	.044	.227	.131	.042	.214	.124	.040		
2.0	.245	.134	.041	.238	.131	.040	.225	.125	.039	.213	.119	.037	.201	.114	.036		
3.0	.228	.121	.036	.222	.119	.036	.210	.114	.035	.199	.109	.033	.189	.105	.032		
4.0	.212	.110	.032	.207	.108	.032	.196	.104	.031	.187	.100	.030	.178	.097	.029		
5.0	.198	.101	.029	.193	.099	.029	.184	.096	.028	.175	.093	.028	.167	.089	.027		
6.0	.186	.093	.027	.181	.092	.026	.173	.089	.026	.165	.086	.025	.158	.083	.025		
7.0	.174	.086	.024	.171	.085	.024	.163	.082	.024	.156	.080	.023	.150	.078	.023		
8.0	.164	.080	.023	.161	.079	.022	.154	.077	.022	.148	.075	.022	.142	.073	.021		
9.0	.155	.075	.021	.152	.074	.021	.146	.072	.020	.140	.070	.020	.135	.068	.020		
10.0	.147	.071	.020	.144	.070	.019	.139	.068	.019	.133	.066	.019	.128	.065	.019		

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	.219	.219	.219	.187	.187	.187	.128	.128	.128	.073	.073	.073	.023	.023	.023	
1.0	.206	.186	.167	.176	.159	.144	.121	.110	.099	.069	.063	.058	.022	.020	.019	
2.0	.195	.161	.133	.167	.139	.115	.115	.096	.080	.066	.056	.047	.021	.018	.015	
3.0	.186	.143	.110	.159	.124	.095	.109	.086	.067	.063	.050	.039	.020	.016	.013	
4.0	.177	.130	.093	.152	.112	.081	.105	.078	.057	.061	.046	.034	.019	.015	.011	
5.0	.170	.119	.082	.146	.103	.071	.100	.072	.050	.058	.042	.030	.019	.014	.010	
6.0	.163	.110	.073	.140	.096	.064	.096	.067	.045	.056	.039	.027	.018	.013	.009	
7.0	.156	.103	.066	.134	.090	.058	.093	.063	.041	.054	.037	.024	.017	.012	.008	
8.0	.150	.097	.061	.129	.085	.053	.089	.059	.038	.052	.035	.023	.017	.011	.007	
9.0	.145	.092	.057	.125	.080	.050	.086	.056	.036	.050	.033	.021	.016	.011	.007	
10.0	.139	.088	.054	.120	.077	.047	.083	.054	.034	.049	.032	.020	.016	.010	.007	

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:zcx  
 Test Date:2020-07-03

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:223.95V I:0.0687A P:14.243W PF:0.9262 Freq:50.04Hz Lamp Flux:2315.13x1 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	16.9	18.2	17.3	18.5	18.7	16.6	17.9	17.0	18.2	18.4
3H	18.0	19.2	18.3	19.4	19.7	17.6	18.8	18.0	19.1	19.4
4H	18.7	19.8	19.0	20.1	20.4	18.2	19.3	18.6	19.6	19.9
6H	19.4	20.4	19.8	20.8	21.1	18.8	19.8	19.2	20.1	20.5
8H	19.8	20.8	20.2	21.1	21.5	19.1	20.0	19.4	20.4	20.7
12H	20.2	21.2	20.6	21.5	21.9	19.3	20.3	19.7	20.6	21.0
4H 2H	17.2	18.3	17.5	18.6	18.9	16.9	18.0	17.3	18.3	18.6
3H	18.5	19.4	18.9	19.8	20.1	18.2	19.1	18.6	19.5	19.8
4H	19.3	20.2	19.7	20.6	21.0	18.9	19.8	19.3	20.2	20.6
6H	20.3	21.0	20.7	21.4	21.9	19.7	20.5	20.1	20.9	21.3
8H	20.8	21.5	21.2	21.9	22.4	20.1	20.8	20.5	21.2	21.7
12H	21.4	22.0	21.8	22.5	22.9	20.4	21.1	20.9	21.5	22.0
8H 4H	19.5	20.3	20.0	20.7	21.1	19.2	19.9	19.7	20.3	20.8
6H	20.7	21.3	21.2	21.8	22.3	20.2	20.8	20.7	21.2	21.7
8H	21.4	21.9	21.9	22.4	22.9	20.7	21.2	21.2	21.7	22.2
12H	22.1	22.6	22.7	23.1	23.7	21.2	21.7	21.7	22.2	22.7
12H 4H	19.6	20.2	20.1	20.7	21.2	19.2	19.9	19.7	20.3	20.8
6H	20.8	21.3	21.3	21.8	22.3	20.3	20.8	20.8	21.3	21.8
8H	21.5	22.0	22.1	22.5	23.0	20.9	21.3	21.4	21.8	22.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.4					+ 0.4 / - 0.4				
1.5H	+ 0.5 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.5 / - 0.3					+ 0.5 / - 0.4				

CIE Pub.117, 2315 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 2.9$ )

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:zcx  
 Test Date:2020-07-03

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:223.95V I:0.0687A P:14.243W PF:0.9262 Freq:50.04Hz Lamp Flux:2315.13x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

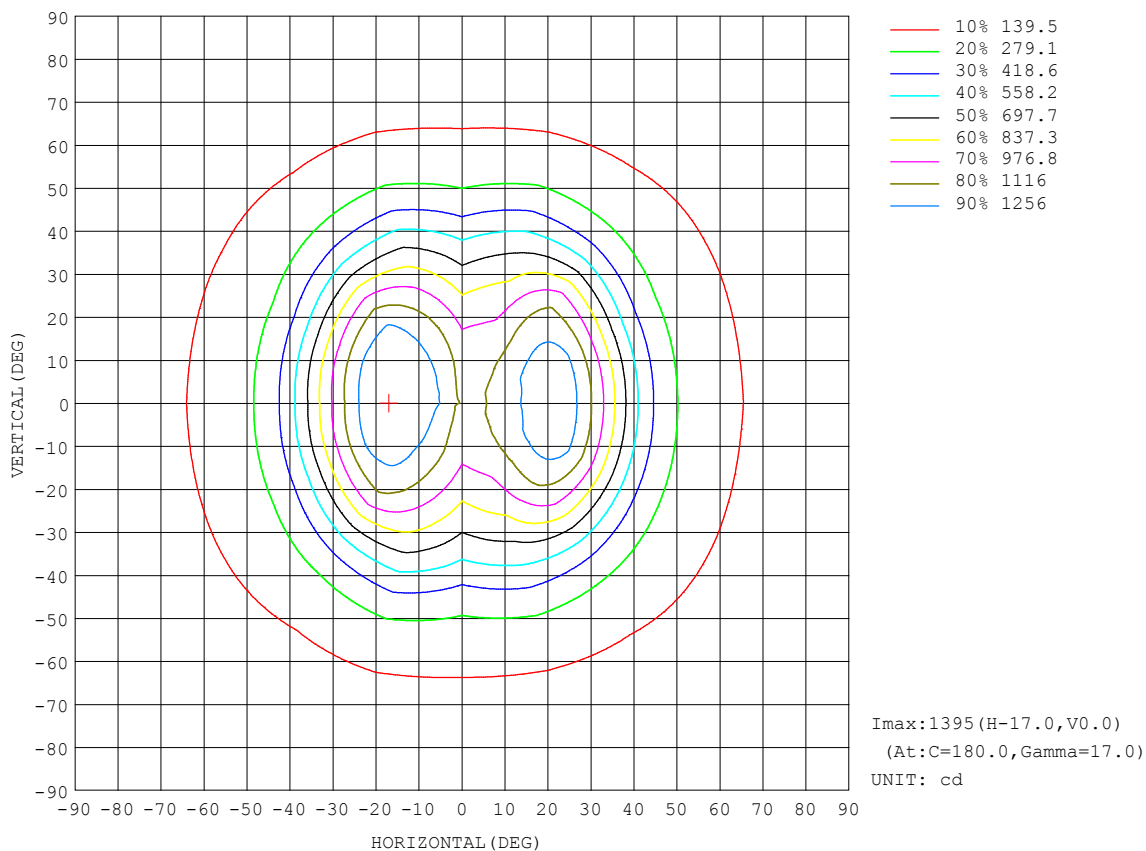
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	68	59	53	67	58	53	66	58	53	47
0.80	77	68	62	76	67	62	74	66	61	55
1.00	84	75	69	83	74	69	81	75	68	62
1.25	90	81	76	88	81	75	86	79	74	68
1.50	94	86	80	92	85	80	89	83	78	72
2.00	99	92	87	97	91	86	94	88	84	77
2.50	102	96	91	100	94	90	96	91	87	79
3.00	105	99	94	102	97	93	98	94	90	82
4.00	108	103	99	105	101	98	101	97	94	85
5.00	110	106	102	107	103	100	102	99	97	87
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:2020-07-03

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:223.95V I:0.0687A P:14.243W PF:0.9262 Freq:50.04Hz Lamp Flux:2315.13x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

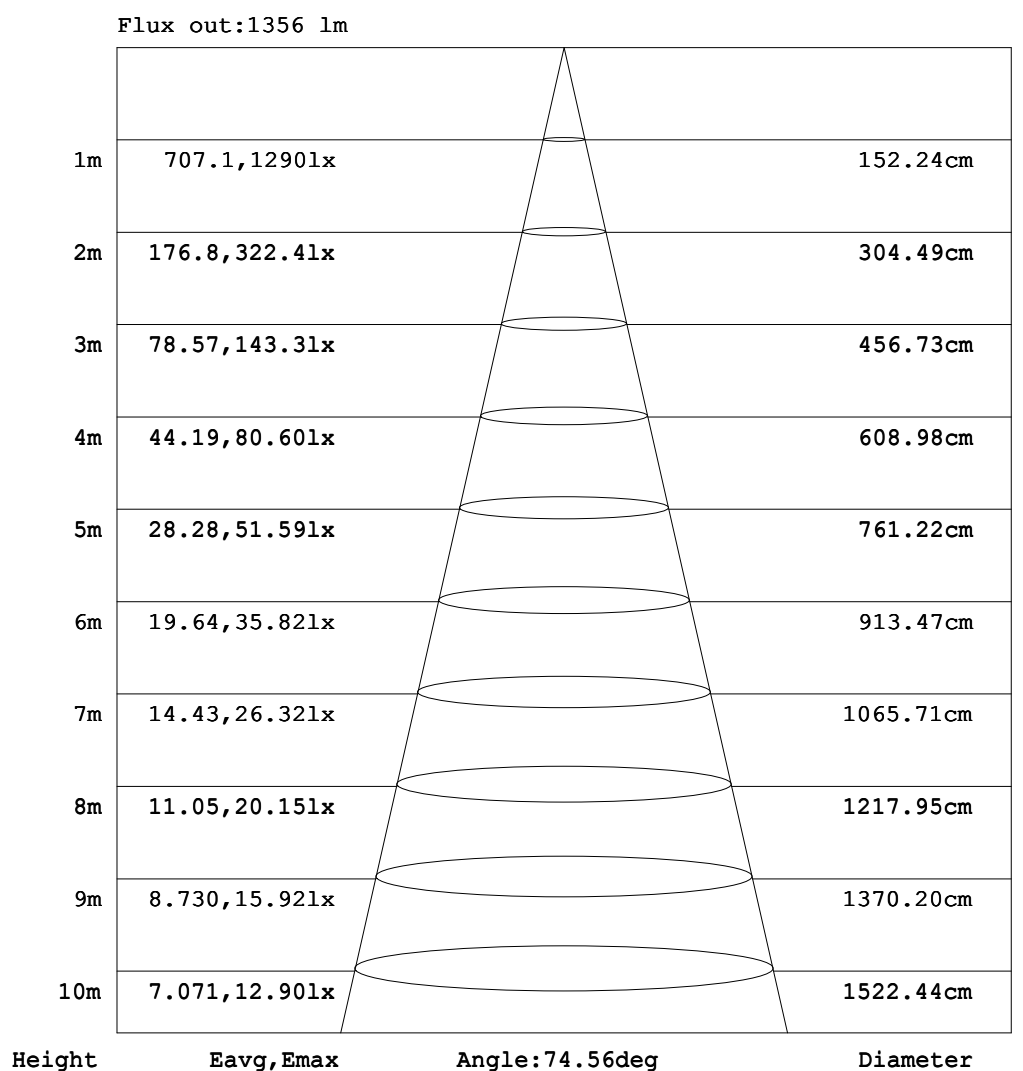


C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:zcx  
Test Date:2020-07-03

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:223.95V I:0.0687A P:14.243W PF:0.9262 Freq:50.04Hz Lamp Flux:2315.13x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:



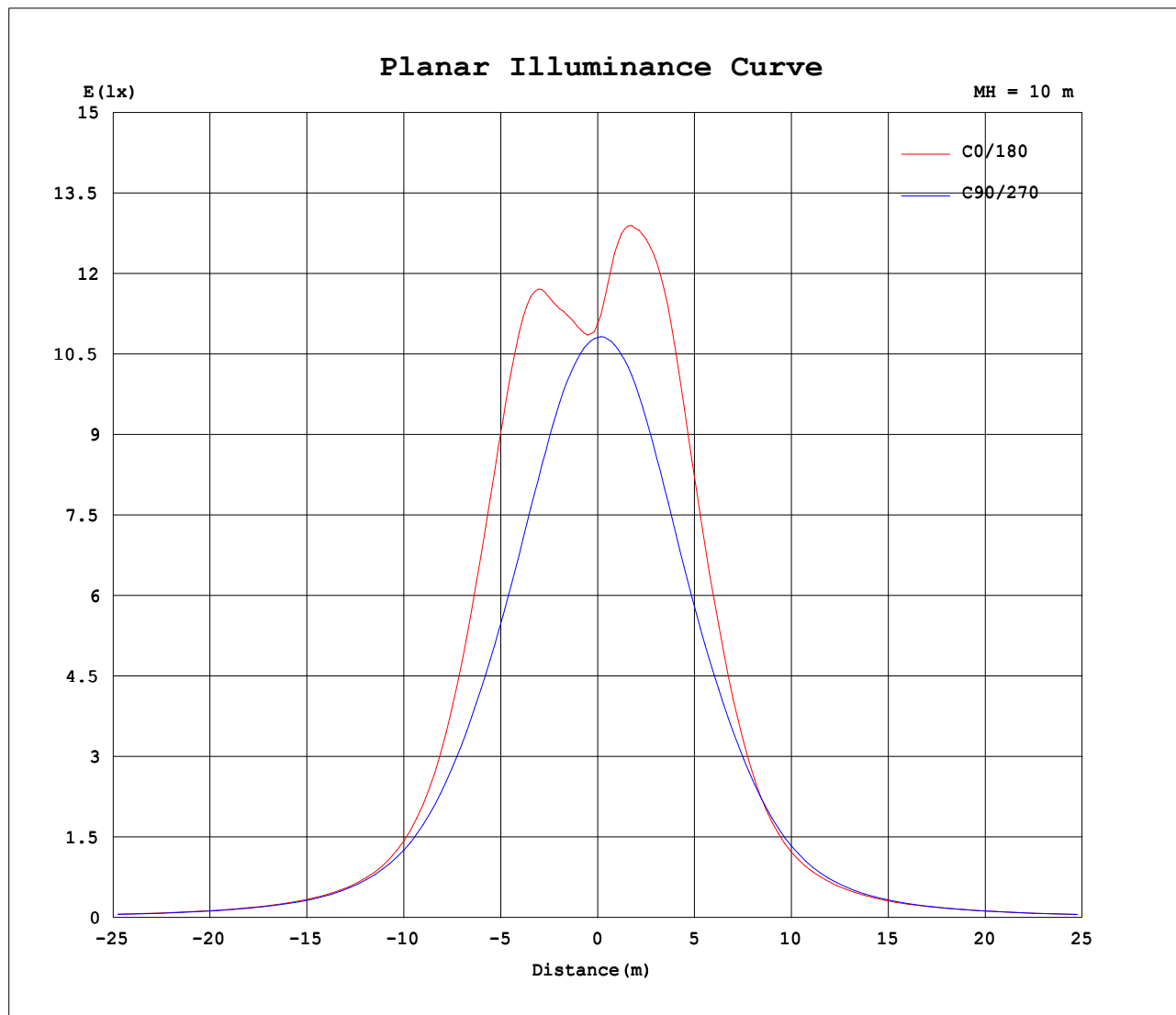
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: zcx  
 Test Date: 2020-07-03

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: 2020-07-03

$\gamma$  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:223.95V I:0.0687A P:14.243W PF:0.9262 Freq:50.04Hz Lamp Flux:2315.13x1 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	1107	1110	1098	1089	1081	1083	1087	1091	1107	1110	1098	1089	1081	1083	1087	1091			
5	1108	1106	1086	1060	1063	1105	1163	1206	1252	1237	1189	1130	1080	1070	1085	1107			
10	1183	1169	1117	1040	1027	1122	1235	1300	1350	1334	1279	1173	1058	1060	1114	1175			
15	1291	1249	1137	1011	964	1114	1252	1339	1390	1377	1313	1177	1007	1034	1141	1263			
20	1375	1339	1150	959	886	1068	1248	1343	1370	1375	1311	1138	933	985	1176	1350			
25	1313	1312	1134	890	796	989	1196	1233	1212	1255	1256	1057	841	922	1190	1310			
30	1123	1135	1029	793	698	883	1048	1012	989	1036	1101	939	740	843	1119	1134			
35	867	876	830	680	589	754	818	758	741	783	867	803	630	746	936	878			
40	603	610	610	553	470	603	590	524	507	539	629	644	504	620	690	612			
45	405	410	425	421	357	452	407	356	346	361	435	481	379	474	470	407			
50	282	284	293	307	269	326	279	256	255	256	298	340	278	339	316	280			
55	214	209	211	225	203	235	201	195	196	196	213	244	208	244	225	207			
60	170	163	161	170	163	174	152	155	159	156	160	182	164	181	169	165			
65	141	131	125	133	131	135	120	128	135	128	125	138	132	138	131	134			
70	122	107	101	105	106	105	95.6	105	115	105	99.0	108	106	106	104	111			
75	102	87.1	79.5	83.2	83.7	81.9	73.9	83.2	89.5	82.5	76.1	82.9	82.7	82.0	81.1	90.5			
80	78.4	68.6	59.6	62.1	61.6	59.9	54.8	62.9	66.5	62.3	56.3	60.2	60.3	60.9	60.5	71.0			
85	58.1	51.1	43.2	40.3	37.7	38.0	38.3	47.8	51.2	47.0	39.1	37.5	36.2	38.8	43.4	52.2			
90	39.8	35.9	29.3	20.7	13.5	18.4	25.9	31.8	36.5	30.7	25.9	17.3	11.7	19.9	29.3	35.8			
95	29.6	25.0	25.7	16.6	0.97	15.1	25.7	26.6	33.6	26.3	24.5	12.9	1.03	14.3	24.3	24.3			
100	29.0	25.2	24.8	11.4	1.07	11.1	20.4	26.4	32.1	25.7	20.2	9.53	1.01	10.4	23.0	23.7			
105	34.9	31.2	19.6	7.80	1.34	7.63	21.9	35.0	41.5	33.4	20.3	7.08	1.24	7.36	19.3	30.0			
110	30.4	26.4	17.8	9.11	1.64	7.85	16.4	24.8	27.8	24.4	16.1	7.76	1.50	9.05	18.0	26.4			
115	26.1	23.3	16.0	8.15	2.01	7.13	14.2	21.4	23.6	20.6	13.9	6.79	1.80	7.62	16.0	23.2			
120	21.6	19.8	14.4	7.93	2.41	7.01	13.0	18.3	19.5	17.9	13.0	6.75	2.17	7.57	14.0	19.5			
125	19.3	18.0	13.4	7.68	2.84	6.86	11.9	16.5	17.7	16.4	11.8	6.46	2.54	7.56	12.8	18.0			
130	18.5	17.2	12.6	7.43	3.28	6.62	11.2	15.4	16.6	15.2	10.8	6.14	2.96	7.34	11.3	17.1			
135	17.4	16.1	12.1	6.83	3.73	6.33	11.1	14.2	15.4	13.9	10.6	5.79	3.37	6.76	11.6	15.9			
140	15.7	14.6	11.0	6.11	4.15	5.86	10.2	12.7	13.9	12.4	9.89	5.36	3.78	6.01	10.6	13.9			
145	14.0	13.6	10.1	5.64	4.53	5.54	9.57	11.2	12.6	10.7	9.14	5.10	4.18	5.44	9.50	12.5			
150	12.6	12.2	8.62	5.46	4.88	5.37	8.31	10.6	10.7	10.2	7.87	5.00	4.54	5.20	8.07	11.1			
155	11.6	10.1	7.25	5.48	5.18	5.37	7.09	9.13	9.56	8.72	6.67	5.01	4.88	5.18	6.79	9.30			
160	9.42	8.06	6.44	5.56	5.44	5.45	6.27	7.50	7.86	7.13	5.92	5.15	5.18	5.26	6.13	7.58			
165	7.49	6.70	6.05	5.66	5.64	5.60	5.87	6.36	6.61	6.15	5.60	5.32	5.44	5.42	5.83	6.50			
170	6.47	6.13	5.97	5.86	5.83	5.81	5.79	5.91	6.18	5.83	5.70	5.62	5.67	5.68	5.75	6.04			
175	6.18	6.16	6.07	6.02	5.96	5.98	5.97	6.04	6.31	6.03	5.96	5.89	5.91	5.92	6.02	6.07			
180	6.43	6.26	6.16	6.08	6.04	6.06	6.13	6.22	6.44	6.25	6.16	6.06	6.05	6.06	6.12	6.21			

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:zcx  
Test Date:2020-07-03

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: