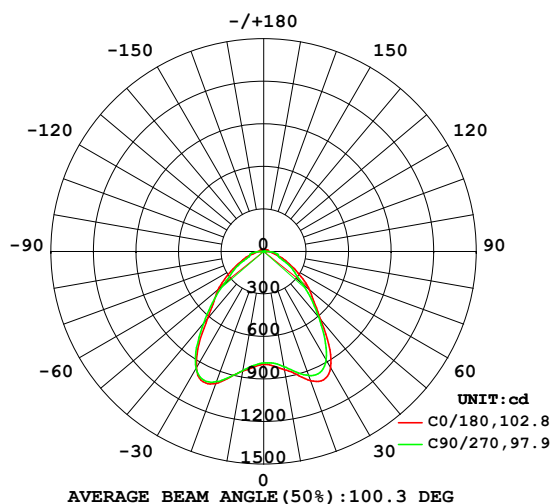


LUMINAIRE PHOTOMETRIC TEST REPORT

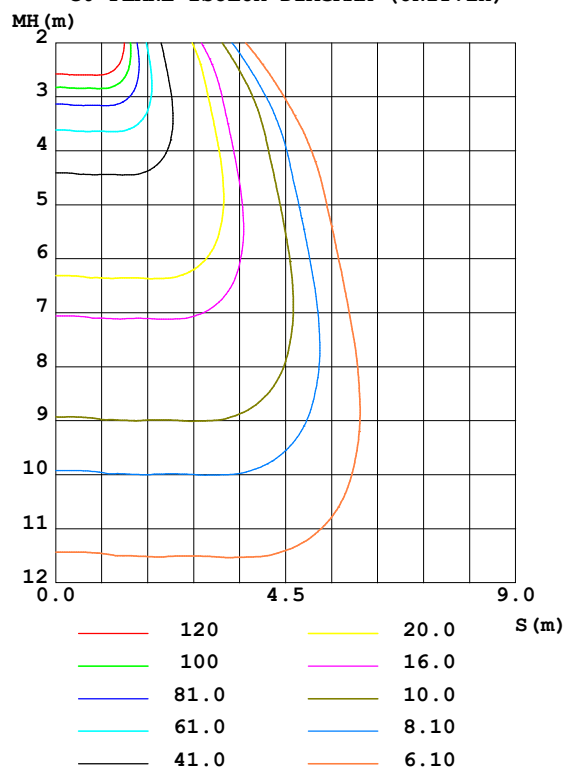
Test:U:224.04V I:0.0697A P:14.477W PF:0.9275 Freq:49.97Hz Lamp Flux:2388.95x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.: 600*60mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 165.02 lm/W			
MODEL	CTLS-0614-40WD-04WH	I _{max} (cd)	1028	S/MH (C0/180)	1.35
NOMINAL POWER (W)	14	LOR (%)	100.0	S/MH (C90/270)	1.38
RATED VOLTAGE (V)	230.0	TOTAL FLUX (lm)	2389.0	η UP, DN (C0-180)	1.7, 47.5
NOMINAL FLUX (lm)	2388.95	CIE CLASS	DIRECT	η UP, DN (C180-360)	1.7, 49.0
LAMPS INSIDE	1	η up (%)	3.5	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230.0	η down (%)	96.5	CIBSE SHR MAX	1.35

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: 2020-06-20

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:

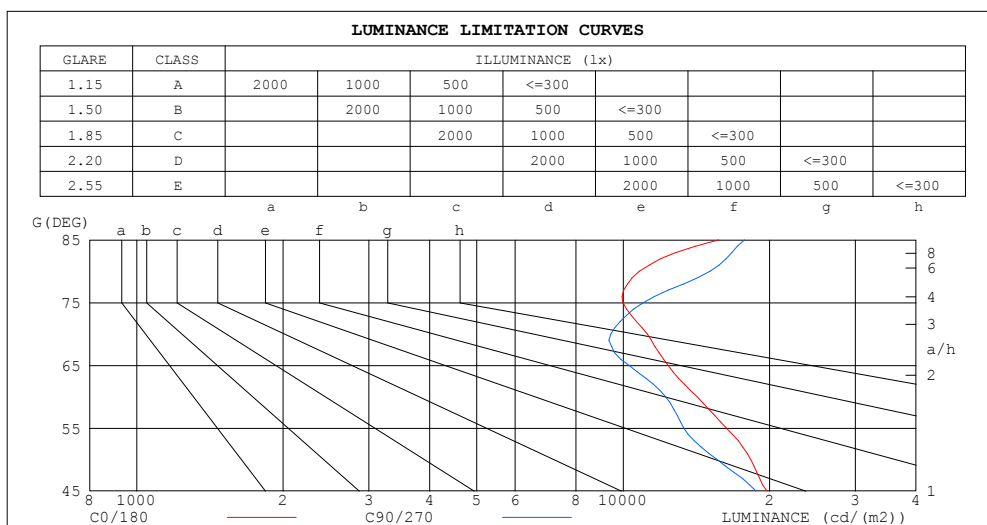
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	848.3	852.9	824.9	837.6	857.9	854.4	852.4	862.9	0- 10	78.44	78.44	3.28,3.28
20	970.8	955.9	929.6	950.7	991.9	985.0	975.1	991.1	10- 20	259.5	337.9	14.1,14.1
30	943.9	919.2	882.5	917.8	948.2	959.9	953.9	975.0	20- 30	454.0	791.9	33.1,33.1
40	627.6	618.0	603.6	607.2	615.0	640.6	659.0	657.5	30- 40	494.5	1286	53.8,53.8
50	423.2	418.4	360.7	410.4	422.0	426.2	380.5	422.0	40- 50	390.4	1677	70.2,70.2
60	255.4	245.2	220.1	249.4	251.6	252.7	224.3	251.0	50- 60	290.7	1968	82.4,82.4
70	138.0	142.4	116.1	144.4	141.2	142.3	112.6	144.0	60- 70	182.5	2150	90,90
80	67.52	67.51	94.36	67.83	66.80	67.81	90.54	67.50	70- 80	104.7	2255	94.4,94.4
90	32.43	24.82	11.72	26.29	34.15	27.84	17.27	26.60	80- 90	51.00	2306	96.5,96.5
100	16.03	14.29	1.330	14.20	15.48	15.00	1.293	14.49	90-100	17.12	2323	97.2,97.2
110	25.91	19.23	1.990	19.61	26.28	19.58	1.854	19.14	100-110	17.41	2340	98,98
120	22.28	15.52	2.767	16.09	22.99	16.31	2.549	15.01	110-120	15.25	2355	98.6,98.6
130	20.34	14.54	3.503	15.11	20.86	15.01	3.218	13.81	120-130	12.36	2368	99.1,99.1
140	17.36	11.60	4.052	12.55	17.58	12.40	3.741	10.72	130-140	9.548	2377	99.5,99.5
150	13.01	7.975	4.389	9.310	13.13	9.032	4.115	7.437	140-150	6.223	2384	99.8,99.8
160	8.263	5.605	4.630	6.271	8.470	5.979	4.423	5.302	150-160	3.353	2387	99.9,99.9
170	5.343	4.967	4.863	4.851	5.335	4.751	4.751	4.826	160-170	1.536	2388	100,100
180	5.241	5.025	4.996	5.029	5.246	5.034	5.000	5.029	170-180	0.4736	2389	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:2020-06-20

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:

LUMINANCE LIMITATION CURVES

Test:U:224.04V I:0.0697A P:14.477W PF:0.9275 Freq:49.97Hz Lamp Flux:2388.95x1 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	15724	17766
80	10801	15095
75	9992	11002
70	11206	9426
65	12363	10280
60	14190	12228
55	16305	13325
50	18291	15589
45	19760	18780

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:zcx
Test Date:2020-06-20

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:224.04V I:0.0697A P:14.477W PF:0.9275 Freq:49.97Hz Lamp Flux:2388.95x1 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	.282	.160	.051	.274	.156	.050	.259	.149	.047	.245	.141	.045	.232	.135	.043		
2.0	.264	.145	.044	.257	.141	.044	.244	.135	.042	.231	.130	.041	.220	.124	.039		
3.0	.245	.131	.039	.239	.128	.039	.227	.123	.037	.217	.119	.036	.206	.114	.035		
4.0	.228	.119	.035	.223	.116	.034	.212	.112	.034	.202	.109	.033	.193	.105	.032		
5.0	.213	.108	.031	.208	.107	.031	.198	.103	.030	.190	.100	.030	.181	.097	.029		
6.0	.199	.100	.028	.194	.098	.028	.186	.095	.028	.178	.092	.027	.171	.090	.027		
7.0	.186	.092	.026	.182	.091	.026	.174	.088	.025	.167	.086	.025	.161	.084	.025		
8.0	.175	.085	.024	.171	.084	.024	.164	.082	.023	.158	.080	.023	.152	.078	.023		
9.0	.165	.080	.022	.161	.079	.022	.155	.077	.022	.149	.075	.021	.144	.073	.021		
10.0	.156	.075	.021	.153	.074	.021	.147	.072	.020	.142	.070	.020	.137	.069	.020		

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	.217	.217	.217	.185	.185	.185	.127	.127	.127	.073	.073	.073	.023	.023	.023		
1.0	.205	.183	.163	.176	.157	.141	.120	.108	.097	.069	.063	.057	.022	.020	.018		
2.0	.195	.159	.128	.167	.137	.111	.115	.095	.077	.066	.055	.045	.021	.018	.015		
3.0	.187	.141	.105	.160	.122	.091	.110	.085	.064	.064	.049	.038	.020	.016	.012		
4.0	.179	.128	.089	.154	.110	.077	.106	.077	.054	.061	.045	.032	.020	.015	.011		
5.0	.171	.117	.077	.147	.101	.067	.101	.071	.047	.059	.042	.028	.019	.014	.009		
6.0	.165	.109	.069	.141	.094	.060	.098	.066	.042	.057	.039	.025	.018	.013	.008		
7.0	.158	.102	.062	.136	.088	.054	.094	.062	.039	.055	.036	.023	.018	.012	.008		
8.0	.152	.096	.058	.131	.083	.050	.091	.058	.036	.053	.034	.021	.017	.011	.007		
9.0	.146	.091	.054	.126	.079	.047	.087	.056	.033	.051	.033	.020	.016	.011	.007		
10.0	.141	.087	.051	.122	.075	.044	.084	.053	.032	.049	.031	.019	.016	.010	.006		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:zcx
 Test Date:2020-06-20

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:224.04V I:0.0697A P:14.477W PF:0.9275 Freq:49.97Hz Lamp Flux:2388.95x1 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		18.8	20.2	19.1	20.4	20.7	18.1	19.5	18.5	19.8	20.0
	3H	19.7	21.0	20.1	21.3	21.6	19.0	20.2	19.3	20.5	20.8
	4H	20.1	21.3	20.5	21.6	21.9	19.5	20.7	19.8	21.0	21.3
	6H	20.5	21.6	20.8	21.9	22.2	20.1	21.3	20.5	21.6	21.9
	8H	20.6	21.7	21.0	22.1	22.4	20.5	21.6	20.9	21.9	22.3
	12H	20.9	21.9	21.3	22.2	22.6	20.8	21.9	21.2	22.2	22.6
4H	2H	19.1	20.3	19.5	20.6	20.9	18.6	19.8	18.9	20.1	20.4
	3H	20.3	21.3	20.7	21.7	22.0	19.7	20.7	20.1	21.0	21.4
	4H	20.8	21.7	21.2	22.1	22.5	20.3	21.2	20.7	21.6	22.0
	6H	21.3	22.1	21.7	22.5	22.9	21.0	21.9	21.5	22.3	22.7
	8H	21.5	22.3	22.0	22.7	23.2	21.5	22.2	21.9	22.7	23.1
	12H	21.9	22.6	22.4	23.0	23.5	21.9	22.6	22.4	23.0	23.5
8H	4H	21.0	21.7	21.4	22.2	22.6	20.5	21.3	20.9	21.7	22.1
	6H	21.6	22.3	22.1	22.7	23.2	21.4	22.0	21.9	22.5	23.0
	8H	22.0	22.6	22.5	23.1	23.6	21.9	22.5	22.4	23.0	23.5
	12H	22.5	23.0	23.0	23.5	24.1	22.5	23.0	23.0	23.5	24.0
12H	4H	21.0	21.7	21.4	22.1	22.6	20.5	21.2	21.0	21.7	22.1
	6H	21.7	22.3	22.2	22.7	23.3	21.5	22.0	22.0	22.5	23.0
	8H	22.2	22.6	22.7	23.2	23.7	22.1	22.5	22.6	23.0	23.6
Variations with the observer position at spacings:											
S = 1.0H		+ 0.3 / - 0.4					+ 0.3 / - 0.4				
1.5H		+ 0.1 / - 0.2					+ 0.1 / - 0.3				
2.0H		+ 0.4 / - 0.4					+ 0.4 / - 0.4				

CIE Pub.117, 2389 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 3.0$)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:zcx
 Test Date:2020-06-20

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:224.04V I:0.0697A P:14.477W PF:0.9275 Freq:49.97Hz Lamp Flux:2388.95x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

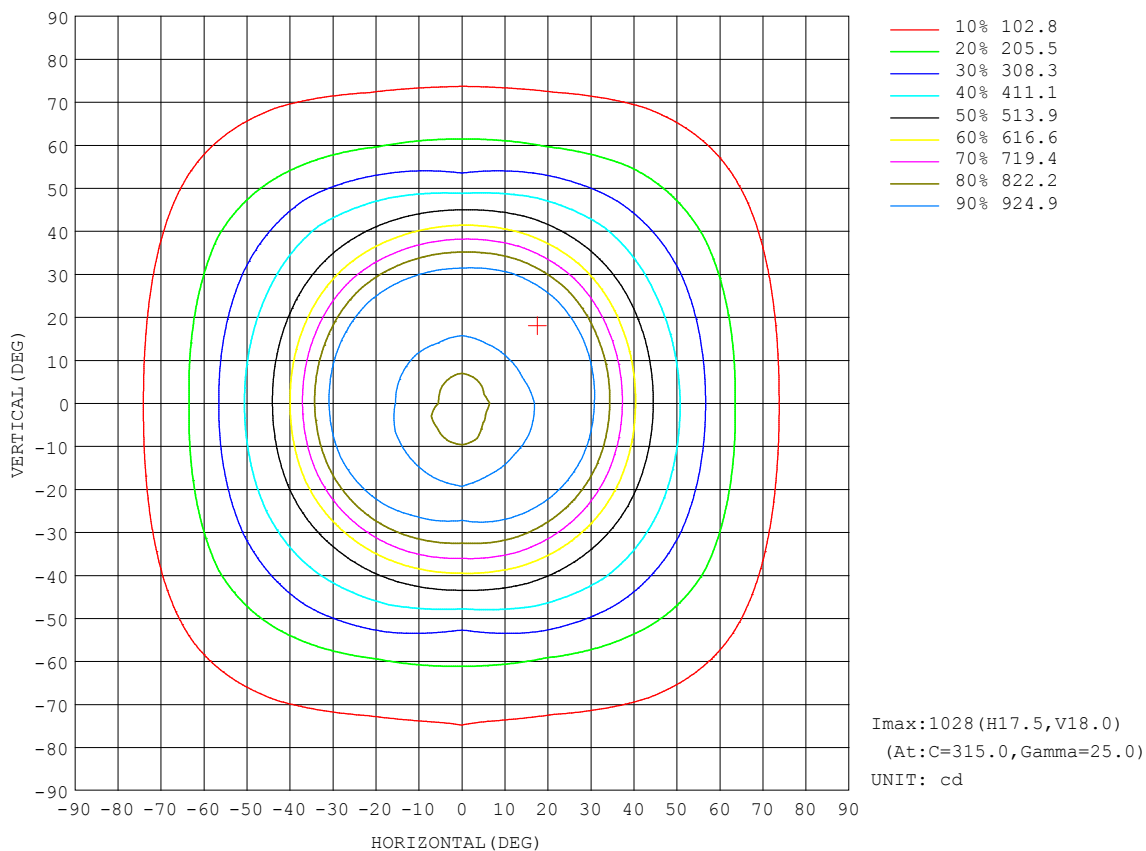
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	63	52	46	62	52	46	61	51	46	40
0.80	72	62	56	71	62	55	70	61	55	48
1.00	80	70	64	79	70	64	77	70	63	56
1.25	87	77	71	85	77	71	82	75	70	63
1.50	91	82	76	89	81	76	86	79	74	67
2.00	97	90	84	95	88	83	91	86	81	73
2.50	100	93	88	98	92	87	94	89	85	76
3.00	103	97	92	101	95	91	97	92	88	79
4.00	107	102	97	104	100	96	100	96	93	83
5.00	109	104	101	106	102	99	101	98	95	85
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:2020-06-20

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:224.04V I:0.0697A P:14.477W PF:0.9275 Freq:49.97Hz Lamp Flux:2388.95x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

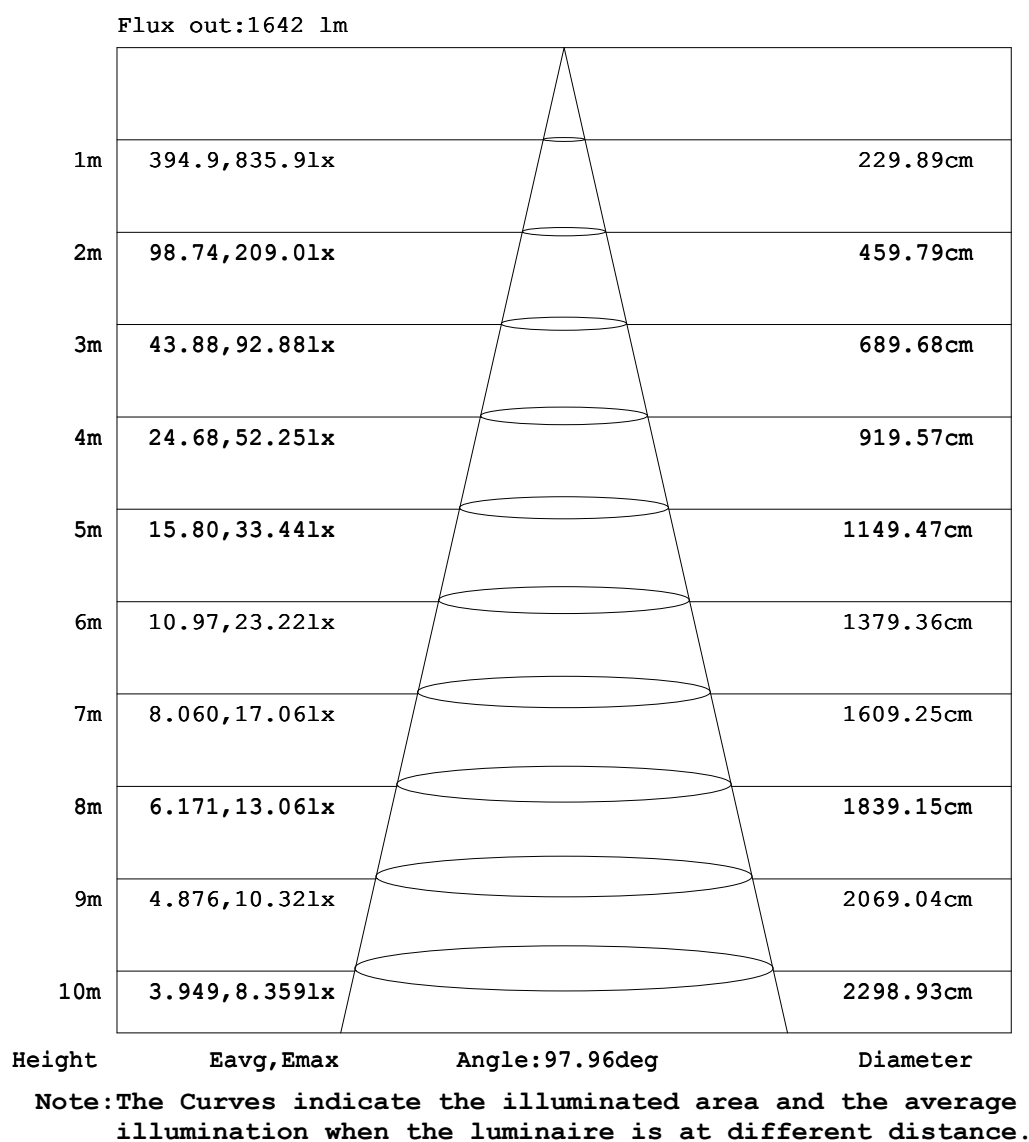


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:zcx
Test Date:2020-06-20

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

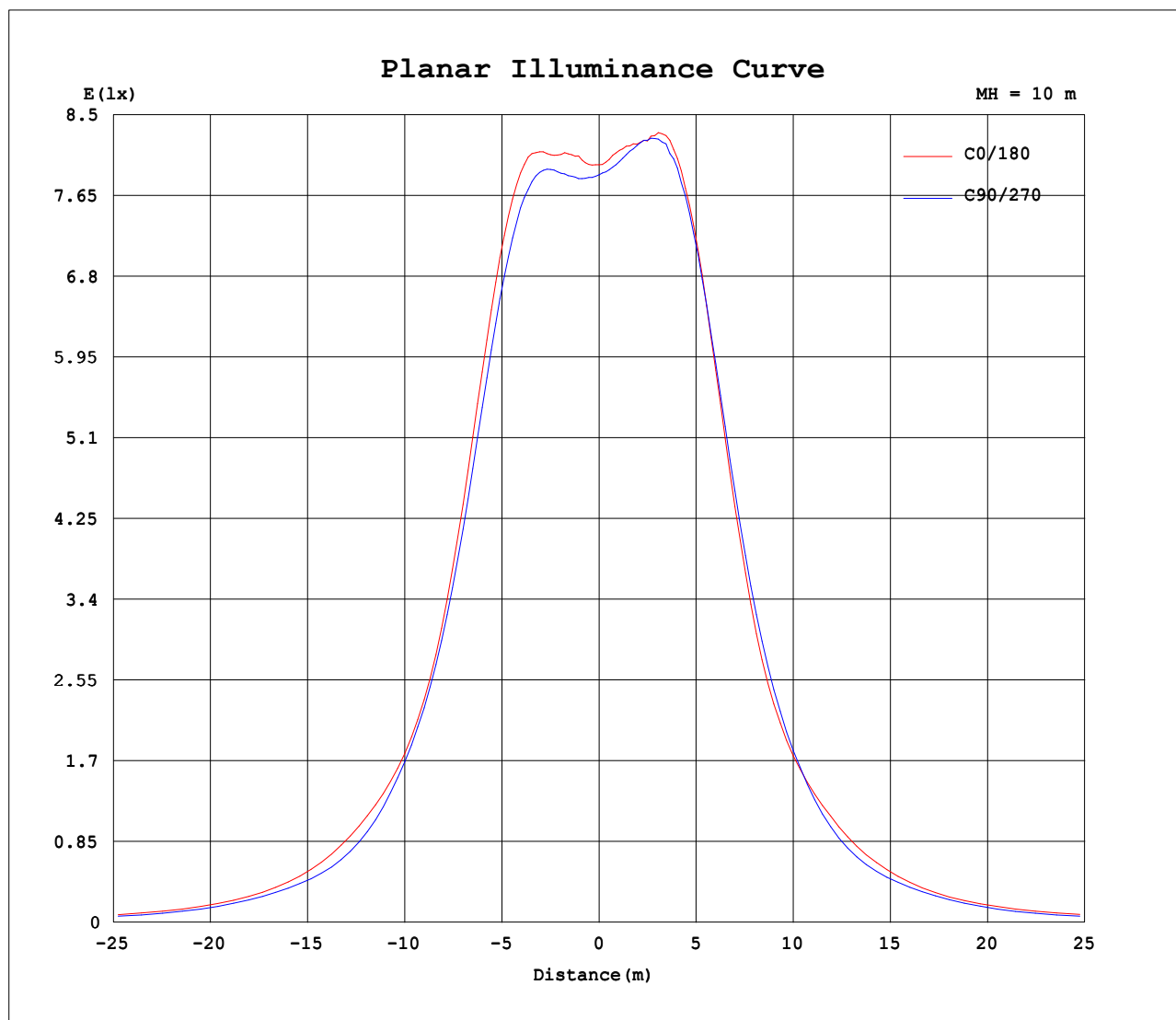
Test:U:224.04V I:0.0697A P:14.477W PF:0.9275 Freq:49.97Hz Lamp Flux:2388.95x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.: 600*60mm	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:zcx
 Test Date:2020-06-20

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: 2020-06-20

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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:224.04V I:0.0697A P:14.477W PF:0.9275 Freq:49.97Hz Lamp Flux:2388.95x1 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	797	800	794	789	787	788	789	792	797	800	794	789	787	788	789	792			
5	812	816	810	796	792	793	799	805	819	818	813	807	807	810	812	817			
10	848	851	853	831	825	829	838	841	858	858	854	858	852	857	863	864			
15	898	898	904	891	880	885	894	898	918	917	918	925	916	926	926	921			
20	971	963	956	947	930	940	951	974	992	994	985	986	975	992	991	997			
25	999	992	976	961	941	955	982	998	1014	1016	1017	1007	1002	1018	1028	1025			
30	944	935	919	903	882	894	918	940	948	957	960	954	954	971	975	963			
35	800	795	781	773	753	765	776	791	796	803	820	821	826	840	835	811			
40	628	626	618	615	604	605	607	619	615	626	641	648	659	666	658	635			
45	503	502	496	495	478	487	487	494	496	500	507	511	512	523	515	507			
50	423	422	418	401	361	396	410	420	422	419	426	409	380	412	422	415			
55	337	337	335	312	275	312	339	338	335	340	347	316	285	315	337	336			
60	255	269	245	221	220	226	249	267	252	269	253	227	224	227	251	267			
65	188	199	184	168	156	170	187	200	188	200	185	170	156	169	190	195			
70	138	139	142	130	116	133	144	143	141	142	142	129	113	129	144	139			
75	93.1	97.7	98.8	91.8	103	93.7	102	101	95.3	99.0	99.4	92.2	101	92.8	97.8	96.4			
80	67.5	67.8	67.5	61.8	94.4	62.2	67.8	68.5	66.8	67.2	67.8	65.7	90.5	65.9	67.5	66.4			
85	49.3	47.2	44.9	38.8	55.7	38.8	44.2	47.1	48.6	46.5	46.4	42.1	59.9	42.3	46.4	46.2			
90	32.4	30.1	24.8	18.1	11.7	17.7	26.3	31.5	34.2	30.7	27.8	20.6	17.3	20.6	26.6	29.5			
95	20.4	19.7	15.7	10.6	1.17	10.5	15.8	20.1	20.7	20.3	16.7	12.2	1.20	12.2	16.3	20.2			
100	16.0	15.6	14.3	9.84	1.33	10.0	14.2	15.4	15.5	15.8	15.0	11.5	1.29	10.7	14.5	16.4			
105	25.3	25.7	18.5	9.10	1.63	8.93	19.2	26.5	25.9	25.8	19.3	9.71	1.54	9.11	18.7	25.3			
110	25.9	25.5	19.2	9.63	1.99	10.1	19.6	25.9	26.3	25.8	19.6	10.3	1.85	9.49	19.1	25.5			
115	23.5	21.8	16.5	8.25	2.38	8.58	16.7	22.4	24.0	22.6	17.0	8.51	2.19	7.58	16.3	21.7			
120	22.3	20.5	15.5	8.01	2.77	8.40	16.1	21.4	23.0	21.3	16.3	8.09	2.55	7.63	15.0	20.4			
125	21.2	19.6	15.1	7.77	3.15	8.08	15.6	20.0	21.4	19.9	15.6	7.79	2.89	7.55	13.6	19.6			
130	20.3	18.9	14.5	7.35	3.50	7.78	15.1	19.5	20.9	19.5	15.0	7.45	3.22	7.10	13.8	18.8			
135	19.1	17.7	13.1	6.58	3.80	7.16	13.9	18.2	19.5	18.3	13.8	6.78	3.50	6.22	12.4	17.5			
140	17.4	16.1	11.6	5.95	4.05	6.55	12.5	16.5	17.6	16.4	12.4	6.16	3.74	5.58	10.7	15.5			
145	15.4	14.3	9.65	5.38	4.24	5.90	11.0	14.6	15.6	14.4	10.8	5.55	3.94	5.03	8.90	13.3			
150	13.0	12.0	7.98	4.97	4.39	5.35	9.31	12.3	13.1	12.1	9.03	5.03	4.12	4.68	7.44	10.3			
155	10.5	9.30	6.60	4.76	4.51	4.92	7.69	10.1	10.7	9.80	7.38	4.67	4.27	4.51	6.15	8.00			
160	8.26	7.17	5.60	4.72	4.63	4.66	6.27	7.99	8.47	7.67	5.98	4.47	4.42	4.51	5.30	6.52			
165	6.47	5.73	5.07	4.78	4.74	4.71	5.30	6.22	6.56	5.96	5.07	4.51	4.58	4.57	4.86	5.50			
170	5.34	5.10	4.97	4.90	4.86	4.86	4.85	5.09	5.34	4.97	4.75	4.70	4.75	4.75	4.83	5.00			
175	5.15	5.08	4.99	5.00	4.97	4.98	4.95	4.98	5.18	4.93	4.93	4.89	4.92	4.91	4.98	5.02			
180	5.24	5.08	5.03	5.01	5.00	5.01	5.03	5.06	5.25	5.08	5.03	5.00	5.00	5.01	5.03	5.08			

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:zcx
Test Date:2020-06-20

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: