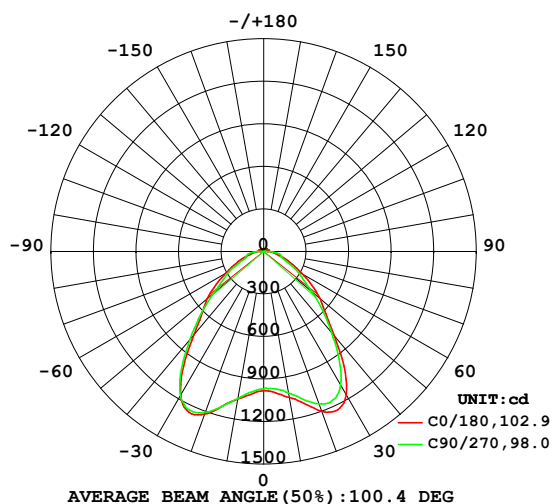


LUMINAIRE PHOTOMETRIC TEST REPORT

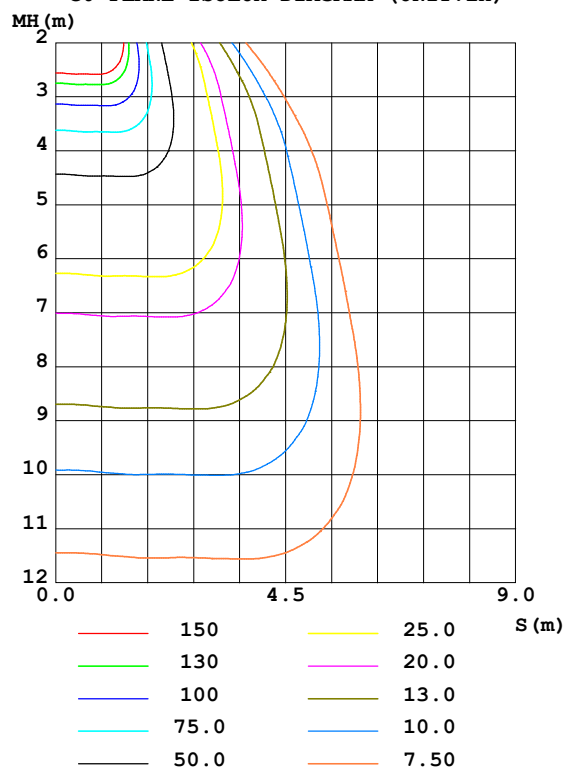
Test:U:224.17V I:0.0852A P:18.087W PF:0.9465 Freq:49.99Hz Lamp Flux:2942.66x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 162.69 lm/W			
MODEL	CTLS-0618-40WD-04WH	I _{max} (cd)	1262	S/MH (C0/180)	1.35
NOMINAL POWER (W)	18	LOR (%)	100.0	S/MH (C90/270)	1.38
RATED VOLTAGE (V)	230.0	TOTAL FLUX (lm)	2942.7	η UP, DN (C0-180)	1.7, 47.5
NOMINAL FLUX (lm)	2942.66	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:

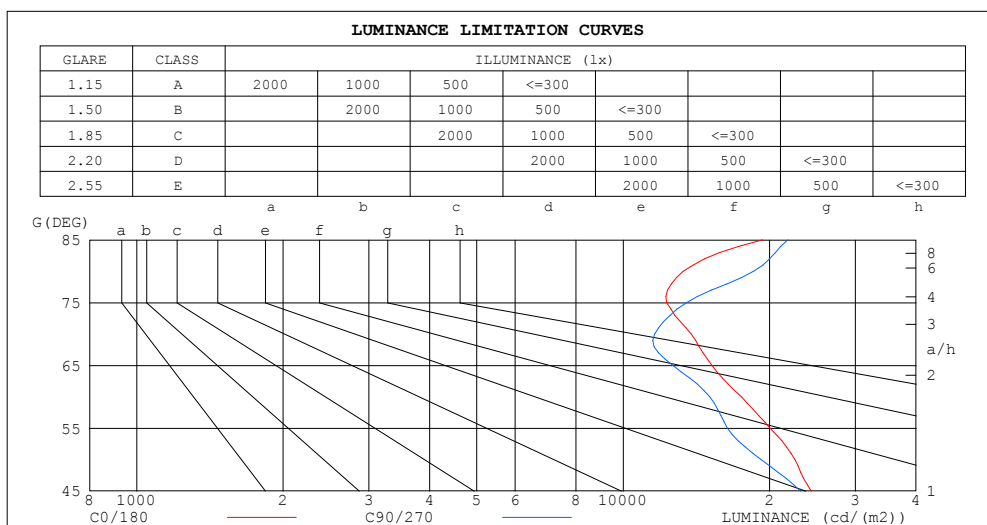
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1046	1049	1012	1028	1057	1059	1054	1061	0- 10	96.57	96.57	3.28,3.28
20	1199	1177	1143	1172	1221	1216	1207	1220	10- 20	319.5	416.1	14.1,14.1
30	1165	1130	1087	1128	1172	1184	1174	1198	20- 30	559.1	975.2	33.1,33.1
40	772.6	762.9	745.8	747.6	762.1	787.3	809.1	804.8	30- 40	609.2	1584	53.8,53.8
50	521.7	515.8	444.3	505.7	521.2	524.9	467.0	519.1	40- 50	480.9	2065	70.2,70.2
60	315.0	302.1	271.1	306.7	310.8	310.8	276.8	307.7	50- 60	358.0	2423	82.4,82.4
70	169.8	175.2	142.9	177.8	175.1	175.6	138.5	177.0	60- 70	224.8	2648	90,90
80	83.08	83.07	115.9	83.45	82.70	83.52	111.7	83.01	70- 80	128.9	2777	94.4,94.4
90	39.77	30.53	14.38	32.38	42.53	34.44	21.27	32.70	80- 90	62.79	2840	96.5,96.5
100	20.02	17.65	1.654	17.51	19.02	18.52	1.605	17.83	90-100	21.11	2861	97.2,97.2
110	32.00	23.70	2.476	24.12	32.48	24.14	2.299	23.56	100-110	21.50	2883	98,98
120	27.52	19.13	3.440	19.83	28.44	20.13	3.160	18.45	110-120	18.81	2901	98.6,98.6
130	25.14	17.94	4.334	18.60	25.82	18.52	3.987	16.99	120-130	15.25	2917	99.1,99.1
140	21.44	14.31	5.016	15.47	21.75	15.31	4.623	13.23	130-140	11.79	2928	99.5,99.5
150	15.99	9.855	5.441	11.49	16.27	11.18	5.088	9.140	140-150	7.679	2936	99.8,99.8
160	10.17	6.902	5.719	7.743	10.51	7.408	5.470	6.541	150-160	4.136	2940	99.9,99.9
170	6.594	6.110	6.002	5.977	6.632	5.941	5.865	5.961	160-170	1.896	2942	100,100
180	6.509	6.210	6.173	6.197	6.505	6.218	6.173	6.197	170-180	0.5845	2943	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:224.17V I:0.0852A P:18.087W PF:0.9465 Freq:49.99Hz Lamp Flux:2942.66x1 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	19330	21817
80	13291	18545
75	12278	13503
70	13794	11607
65	15224	12649
60	17498	15061
55	20032	16380
50	22544	19199
45	24369	23167

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:224.17V I:0.0852A P:18.087W PF:0.9465 Freq:49.99Hz Lamp Flux:2942.66x1 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	.186	.186	.186	.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	.196	.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	.172	.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	.059	.036	.053	.035	.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	.076	.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:224.17V I:0.0852A P:18.087W PF:0.9465 Freq:49.99Hz Lamp Flux:2942.66x1 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	18.2	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	21.2	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	21.6	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	21.8	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	22.3	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	22.9	23.0	23.4	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	23.1	23.7	22.0	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, 2943 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:2020-06-20

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:224.17V I:0.0852A P:18.087W PF:0.9465 Freq:49.99Hz Lamp Flux:2942.66x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

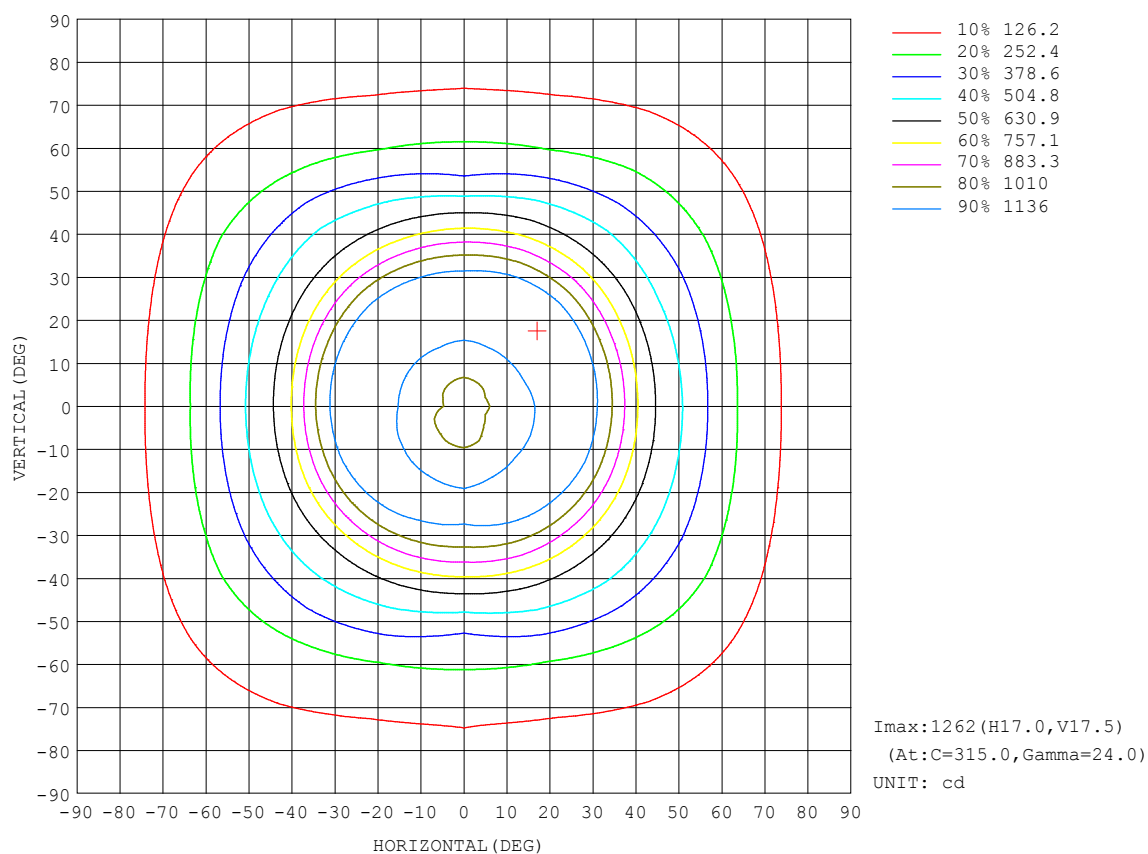
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	63	52	46	62	52	46	61	51	46	40
0.80	72	62	56	71	62	55	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:224.17V I:0.0852A P:18.087W PF:0.9465 Freq:49.99Hz Lamp Flux:2942.66x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

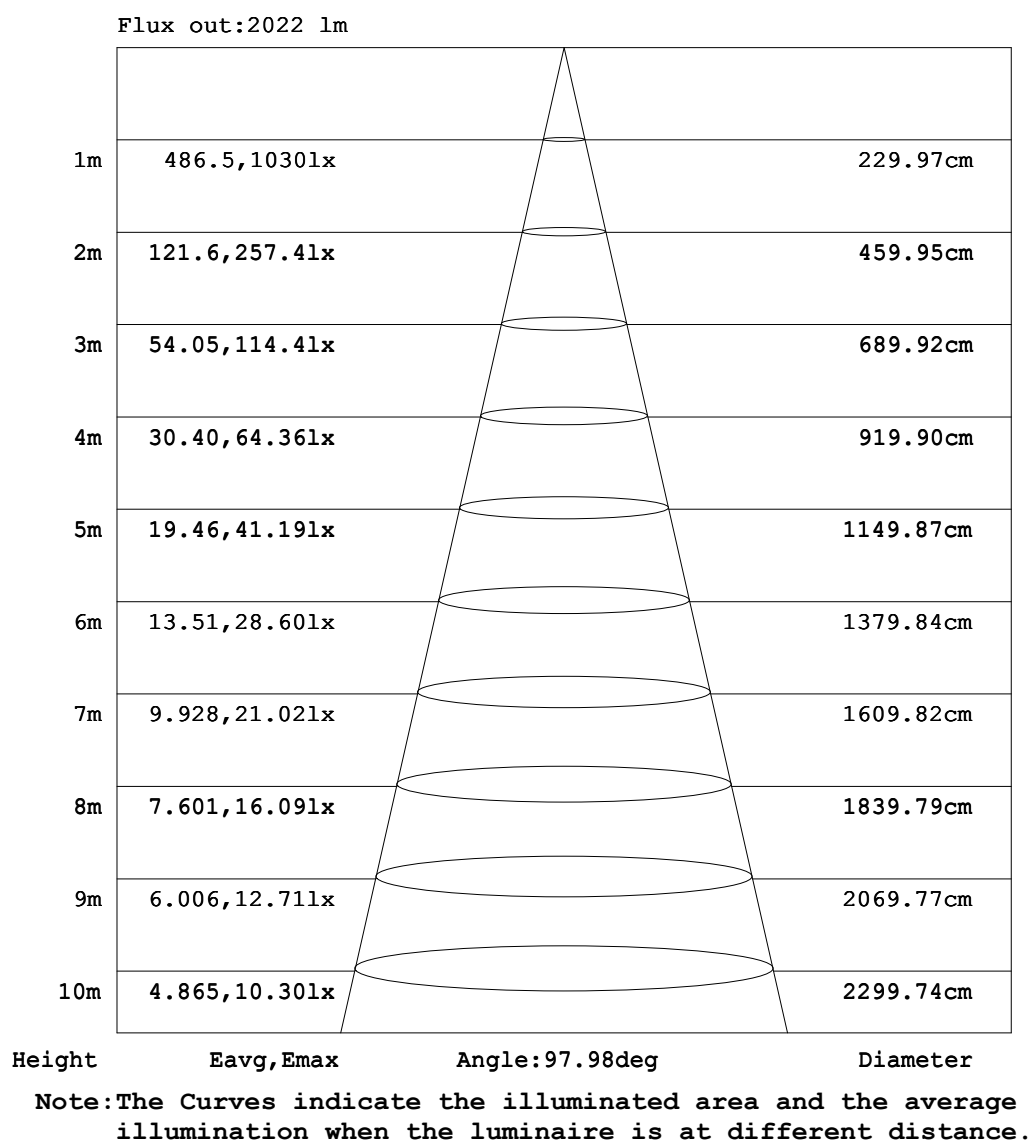


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:zcx
Test Date:2020-06-20

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

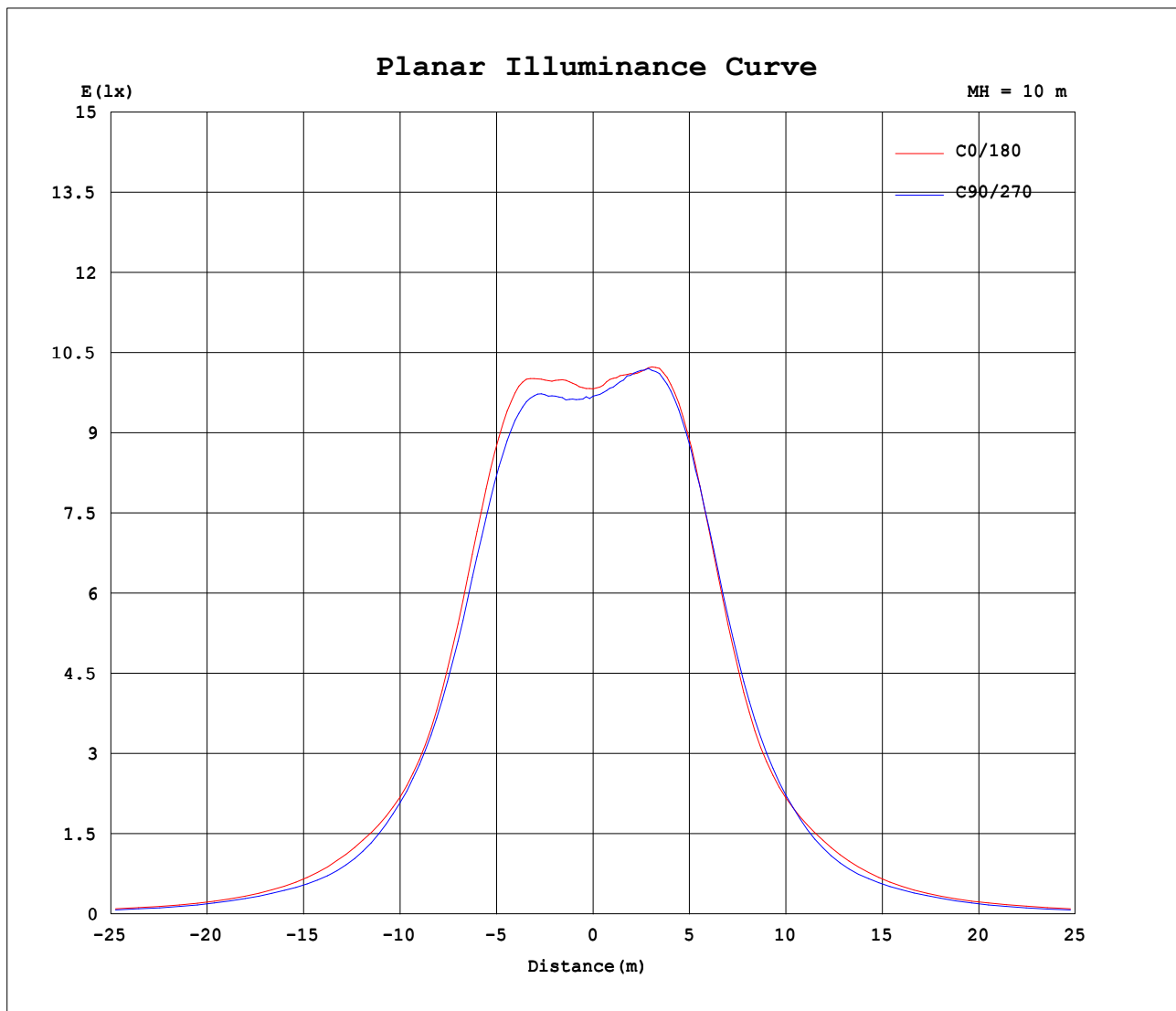
Test:U:224.17V I:0.0852A P:18.087W PF:0.9465 Freq:49.99Hz Lamp Flux:2942.66x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.: 600*60mm	Shielding Angle:



C Range: 0 - 360DEG
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 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:224.17V I:0.0852A P:18.087W PF:0.9465 Freq:49.99Hz Lamp Flux:2942.66x1 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	982	986	978	973	969	970	971	975	982	986	978	973	969	970	971	975			
5	1002	1007	997	981	974	974	981	989	1012	1008	1002	997	995	996	999	1006			
10	1046	1050	1049	1022	1012	1020	1028	1033	1057	1057	1059	1058	1054	1058	1061	1063			
15	1111	1107	1112	1094	1080	1088	1097	1105	1130	1132	1135	1140	1129	1141	1141	1134			
20	1199	1188	1177	1163	1143	1156	1172	1198	1221	1224	1216	1216	1207	1224	1220	1225			
25	1234	1224	1204	1184	1156	1172	1204	1227	1251	1254	1255	1242	1235	1255	1261	1261			
30	1165	1154	1130	1114	1087	1101	1128	1156	1172	1182	1184	1174	1174	1195	1198	1185			
35	987	977	964	954	928	944	953	974	987	993	1011	1010	1014	1033	1026	998			
40	773	771	763	759	746	747	748	761	762	773	787	795	809	817	805	780			
45	620	621	613	612	590	601	598	608	615	618	625	629	629	643	632	622			
50	522	521	516	495	444	488	506	517	521	518	525	504	467	505	519	510			
55	414	416	412	384	338	385	416	417	414	420	428	389	351	387	415	414			
60	315	330	302	273	271	278	307	329	311	332	311	279	277	279	308	328			
65	232	246	227	207	192	209	229	247	232	247	228	209	192	208	234	240			
70	170	172	175	160	143	163	178	176	175	175	176	160	139	159	177	170			
75	114	120	121	113	126	115	125	125	118	122	123	114	124	114	120	118			
80	83.1	83.4	83.1	76.0	116	76.5	83.4	84.3	82.7	83.1	83.5	81.1	112	81.0	83.0	81.5			
85	60.6	58.0	55.4	47.7	68.5	47.7	54.4	57.9	60.2	57.5	57.3	51.9	73.9	51.9	57.0	56.7			
90	39.8	37.1	30.5	22.3	14.4	21.8	32.4	38.7	42.5	37.9	34.4	25.5	21.3	25.4	32.7	36.2			
95	25.2	24.3	19.4	13.0	1.44	12.9	19.5	24.8	25.7	25.0	20.6	15.0	1.49	14.9	20.0	24.8			
100	20.0	19.4	17.7	12.1	1.65	12.3	17.5	19.0	19.0	19.4	18.5	14.2	1.60	13.2	17.8	20.4			
105	31.4	31.8	22.9	11.2	2.04	11.0	23.7	32.6	32.0	31.8	23.8	12.0	1.91	11.2	23.1	31.2			
110	32.0	31.5	23.7	11.9	2.48	12.5	24.1	31.9	32.5	31.8	24.1	12.7	2.30	11.6	23.6	31.4			
115	29.0	26.9	20.3	10.2	2.95	10.6	20.6	27.5	29.6	27.9	21.0	10.5	2.72	9.34	20.1	26.7			
120	27.5	25.3	19.1	9.86	3.44	10.4	19.8	26.3	28.4	26.3	20.1	9.99	3.16	9.31	18.4	25.2			
125	26.2	24.2	18.7	9.60	3.91	9.97	19.2	24.7	26.5	24.7	19.2	9.62	3.58	9.31	16.8	24.1			
130	25.1	23.3	17.9	9.07	4.33	9.62	18.6	24.0	25.8	24.1	18.5	9.21	3.99	8.75	17.0	23.2			
135	23.6	21.9	16.4	8.16	4.72	8.84	17.1	22.5	24.1	22.6	17.0	8.39	4.34	7.67	15.3	21.6			
140	21.4	19.9	14.3	7.34	5.02	8.09	15.5	20.3	21.7	20.2	15.3	7.61	4.62	6.87	13.2	19.1			
145	19.0	17.6	11.9	6.64	5.25	7.29	13.6	18.0	19.3	17.8	13.4	6.85	4.87	6.19	10.9	16.3			
150	16.0	14.8	9.85	6.13	5.44	6.60	11.5	15.2	16.3	14.9	11.2	6.20	5.09	5.78	9.14	12.7			
155	12.8	11.5	8.13	5.86	5.59	6.09	9.49	12.5	13.3	12.1	9.13	5.77	5.28	5.55	7.59	9.84			
160	10.2	8.85	6.90	5.83	5.72	5.79	7.74	9.87	10.5	9.49	7.41	5.53	5.47	5.51	6.54	8.01			
165	7.92	7.09	6.26	5.90	5.85	5.80	6.52	7.67	8.14	7.37	6.26	5.58	5.66	5.64	6.00	6.78			
170	6.59	6.29	6.11	6.05	6.00	5.99	5.98	6.28	6.63	6.15	5.94	5.81	5.87	5.86	5.96	6.17			
175	6.36	6.27	6.16	6.16	6.11	6.14	6.11	6.12	6.41	6.10	6.08	6.03	6.06	6.05	6.14	6.18			
180	6.51	6.29	6.21	6.18	6.17	6.18	6.20	6.25	6.51	6.27	6.22	6.17	6.17	6.18	6.20	6.24			

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: