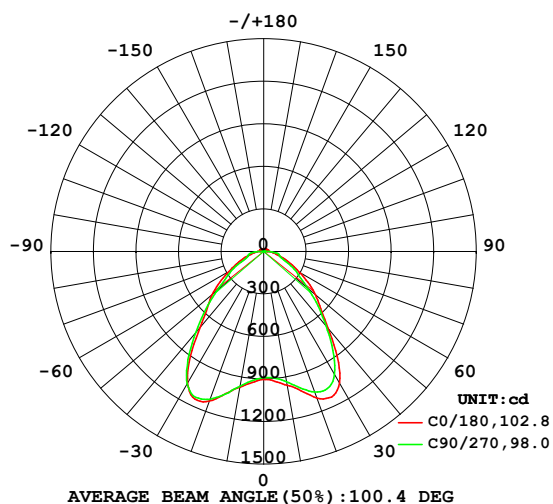


LUMINAIRE PHOTOMETRIC TEST REPORT

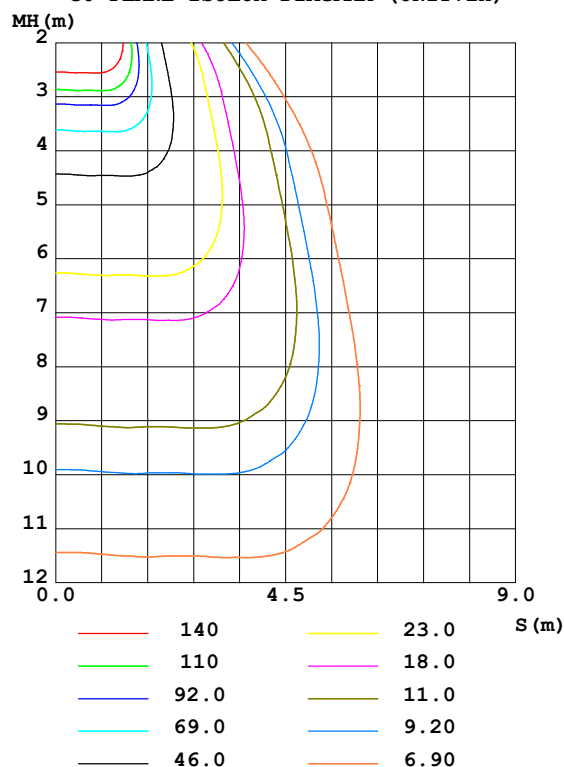
Test:U:224.55V I:0.0784A P:16.530W PF:0.9390 Freq:50.04Hz Lamp Flux:2705.68x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.: 600*60mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 163.69 lm/W			
MODEL	CTLS-0616-40WD-04WH	I _{max} (cd)	1162	S/MH (C0/180)	1.35
NOMINAL POWER (W)	16	LOR (%)	100.0	S/MH (C90/270)	1.38
RATED VOLTAGE (V)	230.0	TOTAL FLUX (lm)	2705.7	η UP, DN (C0-180)	1.7, 47.5
NOMINAL FLUX (lm)	2705.68	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:

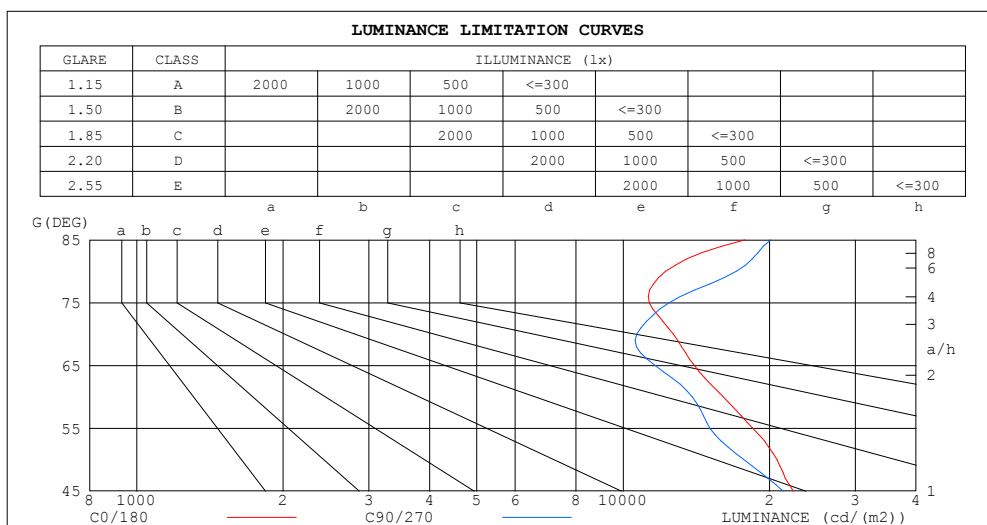
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	957.6	965.4	933.8	947.0	972.2	971.4	965.3	977.0	0- 10	88.84	88.84	3.28,3.28
20	1099	1083	1055	1081	1122	1116	1110	1123	10- 20	293.9	382.7	14.1,14.1
30	1070	1041	999.2	1039	1075	1089	1079	1103	20- 30	514.1	896.8	33.1,33.1
40	708.2	699.3	684.4	686.6	697.5	724.5	745.7	743.4	30- 40	560.0	1457	53.8,53.8
50	479.0	473.6	409.1	465.9	476.6	482.5	430.7	478.4	40- 50	442.2	1899	70.2,70.2
60	289.0	277.4	249.3	282.4	284.5	285.3	253.7	283.8	50- 60	329.3	2228	82.4,82.4
70	156.1	161.6	131.4	163.4	160.1	161.2	127.5	163.1	60- 70	206.7	2435	90,90
80	76.41	76.46	106.9	76.71	75.65	76.72	102.6	76.49	70- 80	118.6	2554	94.4,94.4
90	36.72	28.09	13.28	29.77	38.70	31.54	19.58	30.13	80- 90	57.75	2611	96.5,96.5
100	18.22	16.24	1.512	16.09	17.58	17.02	1.472	16.40	90-100	19.39	2631	97.2,97.2
110	29.39	21.79	2.273	22.24	29.79	22.20	2.108	21.72	100-110	19.73	2650	98,98
120	25.25	17.57	3.145	18.25	26.08	18.49	2.898	17.06	110-120	17.28	2668	98.6,98.6
130	23.05	16.47	3.981	17.11	23.63	17.02	3.659	15.63	120-130	14.01	2682	99.1,99.1
140	19.67	13.17	4.601	14.23	19.91	14.07	4.253	12.18	130-140	10.83	2693	99.5,99.5
150	14.74	9.065	5.000	10.55	14.87	10.25	4.672	8.438	140-150	7.053	2700	99.8,99.8
160	9.357	6.353	5.254	7.115	9.609	6.789	5.026	6.009	150-160	3.800	2703	99.9,99.9
170	6.045	5.621	5.524	5.503	6.050	5.391	5.396	5.487	160-170	1.741	2705	100,100
180	5.952	5.711	5.665	5.695	5.944	5.711	5.670	5.699	170-180	0.5374	2706	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:224.55V I:0.0784A P:16.530W PF:0.9390 Freq:50.04Hz Lamp Flux:2705.68x1 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	17807	20118
80	12223	17097
75	11312	12448
70	12679	10671
65	14009	11629
60	16057	13853
55	18461	15068
50	20702	17680
45	22381	21307

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:224.55V I:0.0784A P:16.530W PF:0.9390 Freq:50.04Hz Lamp Flux:2705.68x1 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	.113	.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	.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	.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	.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:224.55V I:0.0784A P:16.530W PF:0.9390 Freq:50.04Hz Lamp Flux:2705.68x1 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	20.4	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	22.0	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	21.9	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	22.3	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	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, 2706 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 3.5$)

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:224.55V I:0.0784A P:16.530W PF:0.9390 Freq:50.04Hz Lamp Flux:2705.68x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

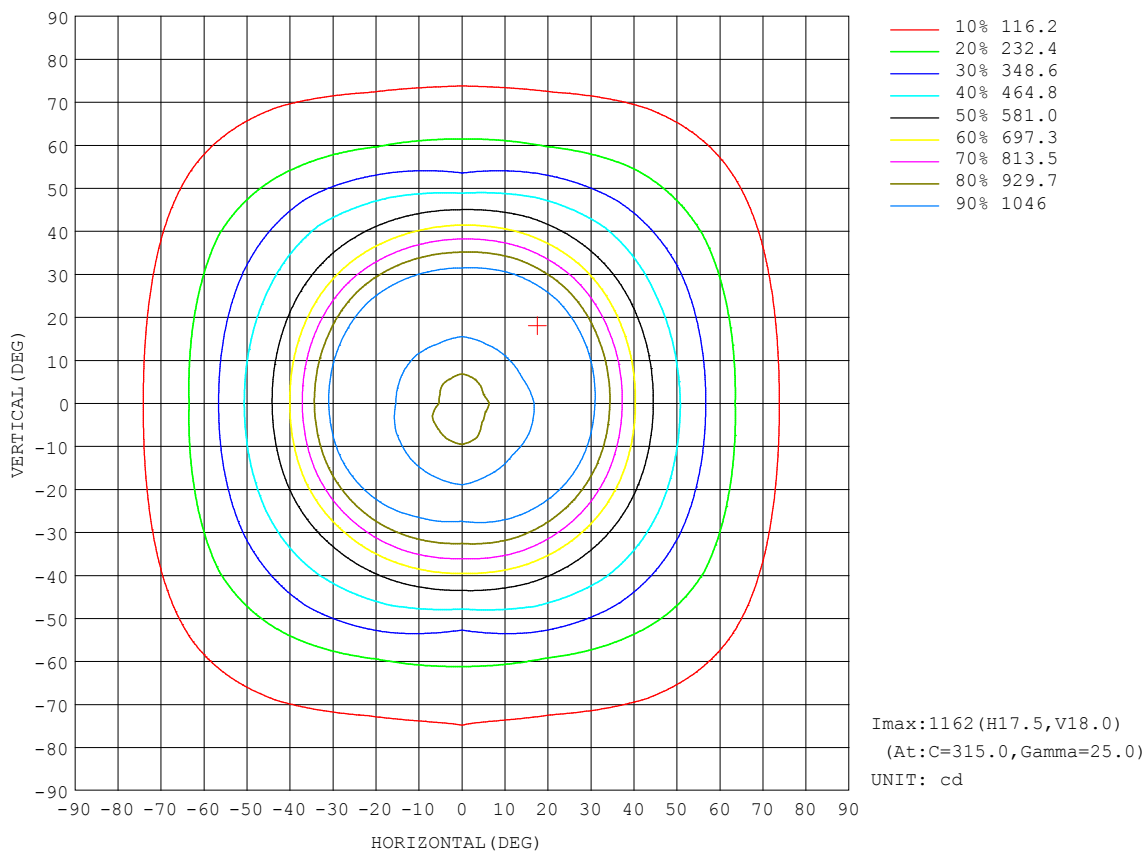
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	63	52	46	62	52	46	61	51	46	40
0.80	72	62	56	71	62	55	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:224.55V I:0.0784A P:16.530W PF:0.9390 Freq:50.04Hz Lamp Flux:2705.68x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

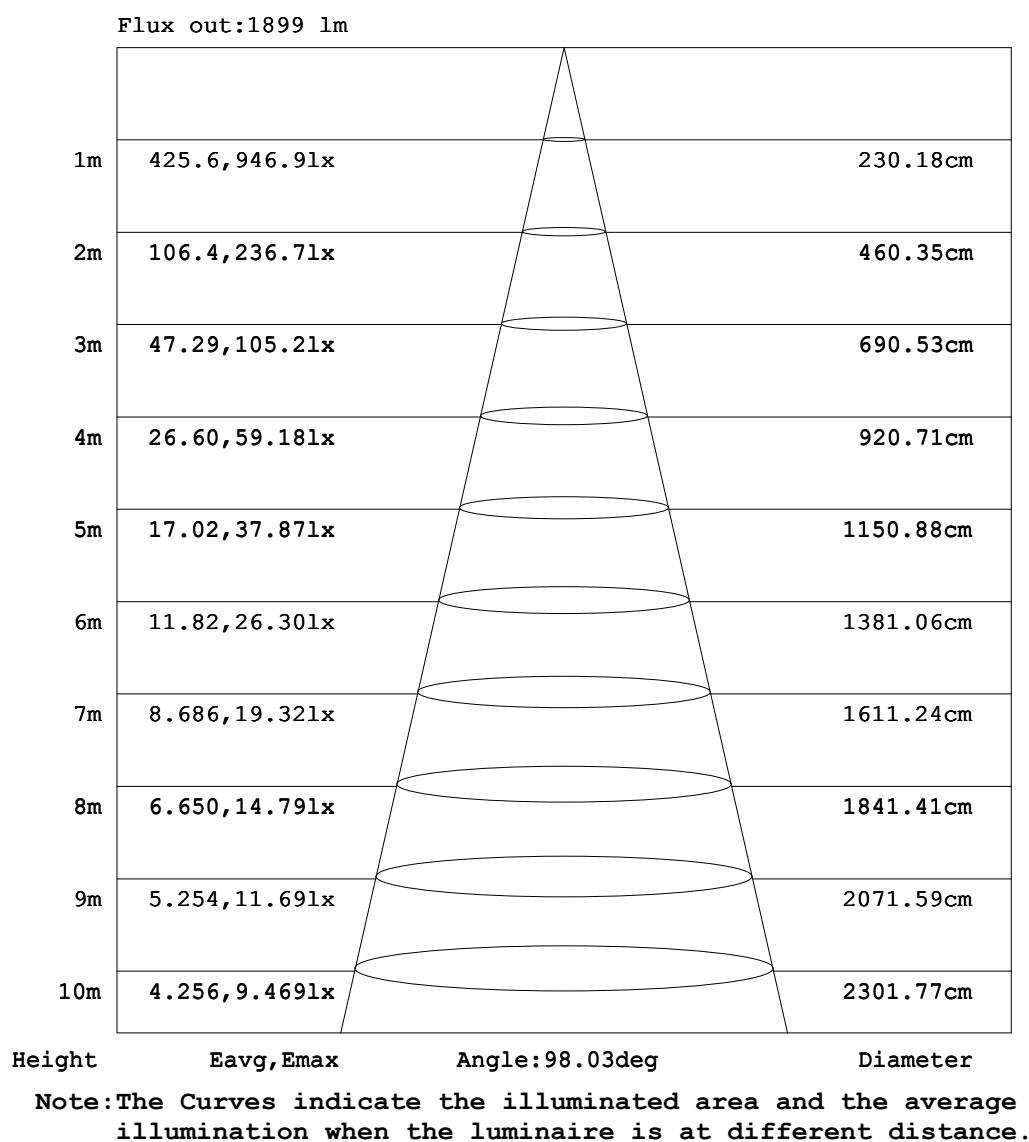


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:zcx
Test Date:2020-06-20

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

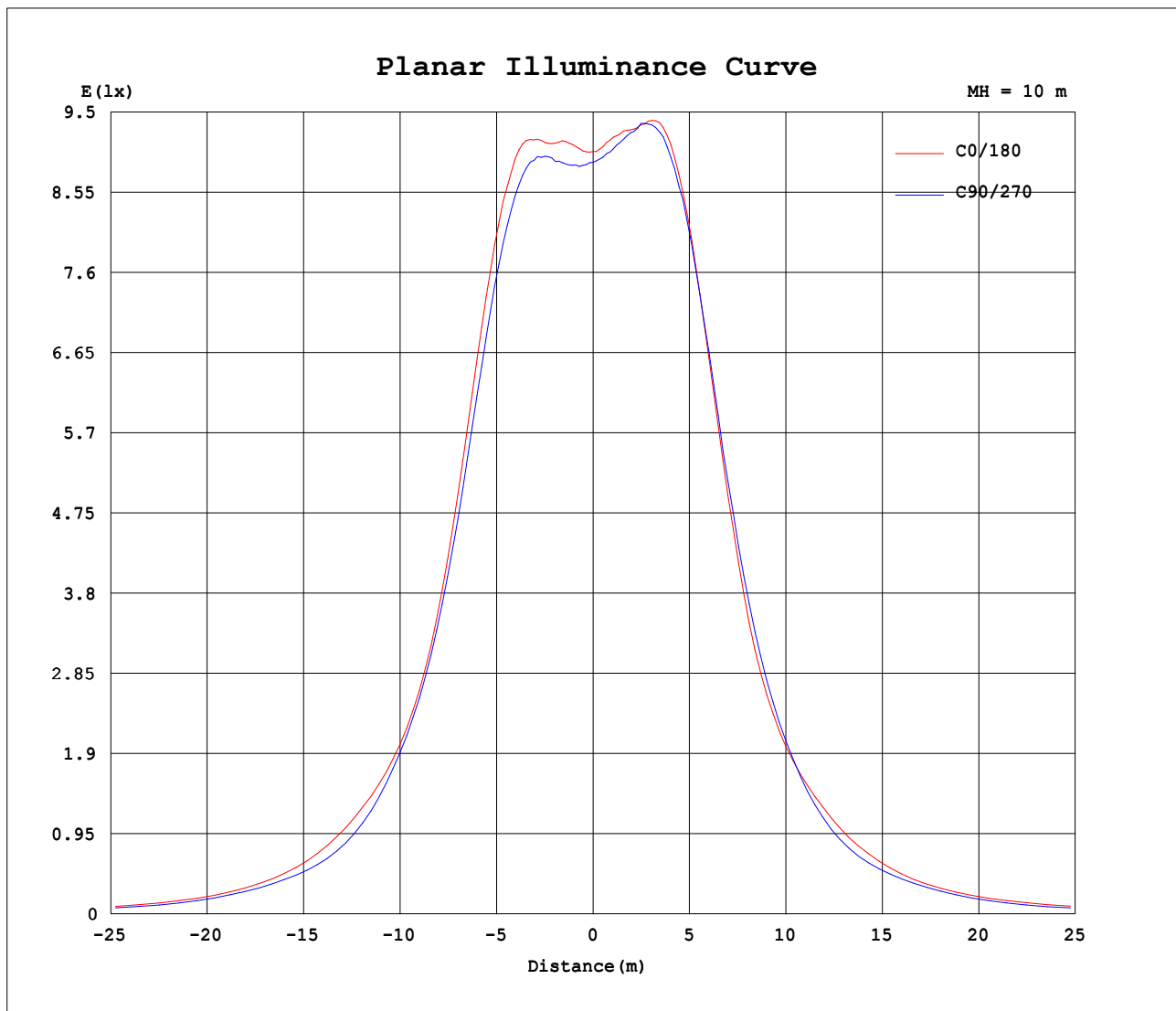
Test:U:224.55V I:0.0784A P:16.530W PF:0.9390 Freq:50.04Hz Lamp Flux:2705.68x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
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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:224.55V I:0.0784A P:16.530W PF:0.9390 Freq:50.04Hz Lamp Flux:2705.68x1 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	903	905	898	895	891	893	895	897	903	905	898	895	891	893	895	897			
5	919	924	916	903	898	899	904	912	927	926	919	917	913	918	920	926			
10	958	965	965	941	934	940	947	952	972	971	971	973	965	973	977	978			
15	1017	1014	1023	1009	995	1004	1010	1016	1039	1039	1041	1049	1039	1049	1049	1043			
20	1099	1090	1083	1070	1055	1066	1081	1102	1122	1124	1116	1117	1110	1124	1123	1129			
25	1134	1122	1105	1086	1067	1081	1109	1127	1148	1151	1152	1142	1137	1155	1162	1161			
30	1070	1060	1041	1021	999	1014	1039	1065	1075	1084	1089	1081	1079	1100	1103	1091			
35	907	897	884	875	852	867	877	896	902	912	928	930	933	953	946	920			
40	708	708	699	696	684	686	687	701	697	710	724	734	746	753	743	720			
45	570	568	562	561	542	552	551	560	562	568	575	580	580	591	583	574			
50	479	477	474	455	409	449	466	477	477	476	483	464	431	467	478	470			
55	381	382	379	353	311	354	384	383	379	385	393	358	323	358	382	381			
60	289	304	277	252	249	257	282	303	284	305	285	257	254	257	284	303			
65	213	225	208	190	177	192	211	227	212	227	210	192	176	192	215	221			
70	156	158	162	147	131	150	163	162	160	160	161	147	128	146	163	157			
75	105	111	112	104	116	106	115	115	108	112	113	104	114	105	111	109			
80	76.4	76.7	76.5	69.9	107	70.4	76.7	77.6	75.7	76.2	76.7	74.5	103	74.6	76.5	75.2			
85	55.9	53.4	50.9	43.9	63.1	43.8	50.1	53.3	55.0	52.7	52.6	47.7	67.9	47.9	52.5	52.3			
90	36.7	34.1	28.1	20.6	13.3	20.0	29.8	35.7	38.7	34.8	31.5	23.3	19.6	23.3	30.1	33.4			
95	23.1	22.3	17.8	12.0	1.33	11.9	17.9	22.8	23.5	23.0	18.9	13.8	1.36	13.8	18.4	22.9			
100	18.2	17.7	16.2	11.1	1.51	11.3	16.1	17.5	17.6	17.8	17.0	13.0	1.47	12.1	16.4	18.6			
105	28.7	29.1	21.0	10.3	1.87	10.1	21.8	30.0	29.4	29.2	21.9	11.0	1.75	10.3	21.2	28.7			
110	29.4	29.0	21.8	10.9	2.27	11.4	22.2	29.3	29.8	29.2	22.2	11.7	2.11	10.7	21.7	28.9			
115	26.6	24.7	18.7	9.37	2.70	9.75	19.0	25.3	27.1	25.6	19.2	9.66	2.50	8.60	18.5	24.5			
120	25.3	23.2	17.6	9.09	3.15	9.53	18.2	24.2	26.1	24.1	18.5	9.19	2.90	8.66	17.1	23.2			
125	24.0	22.2	17.2	8.82	3.59	9.18	17.6	22.7	24.3	22.6	17.6	8.84	3.29	8.56	15.3	22.2			
130	23.1	21.4	16.5	8.33	3.98	8.83	17.1	22.1	23.6	22.1	17.0	8.45	3.66	8.05	15.6	21.3			
135	21.7	20.1	14.8	7.49	4.33	8.13	15.7	20.7	22.1	20.7	15.6	7.70	3.98	7.06	14.1	19.8			
140	19.7	18.3	13.2	6.75	4.60	7.44	14.2	18.6	19.9	18.5	14.1	6.99	4.25	6.31	12.2	17.5			
145	17.4	16.1	11.0	6.09	4.82	6.70	12.5	16.5	17.7	16.3	12.3	6.29	4.48	5.70	10.1	15.0			
150	14.7	13.6	9.06	5.63	5.00	6.06	10.5	14.0	14.9	13.7	10.3	5.69	4.67	5.31	8.44	11.6			
155	11.8	10.5	7.49	5.38	5.13	5.59	8.73	11.5	12.2	11.1	8.38	5.30	4.85	5.11	6.98	9.08			
160	9.36	8.12	6.35	5.37	5.25	5.28	7.11	9.08	9.61	8.69	6.79	5.08	5.03	5.10	6.01	7.39			
165	7.28	6.50	5.73	5.37	5.38	5.35	6.00	7.05	7.44	6.76	5.74	5.12	5.20	5.19	5.52	6.24			
170	6.05	5.82	5.62	5.56	5.52	5.51	5.50	5.78	6.05	5.65	5.39	5.34	5.40	5.39	5.49	5.68			
175	5.84	5.73	5.66	5.67	5.63	5.65	5.60	5.64	5.86	5.60	5.60	5.55	5.58	5.58	5.64	5.68			
180	5.95	5.77	5.71	5.69	5.67	5.67	5.69	5.73	5.94	5.77	5.71	5.67	5.67	5.68	5.70	5.73			

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: