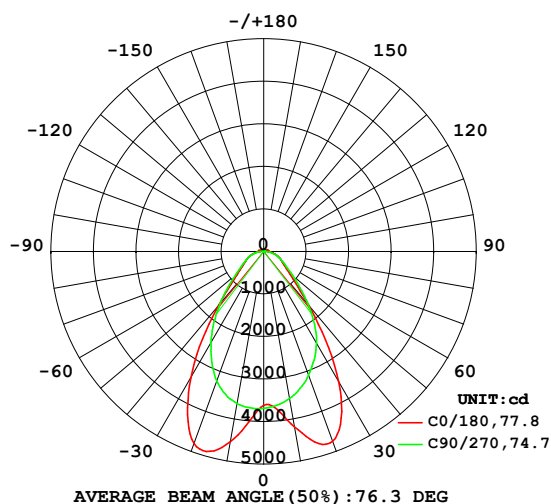


LUMINAIRE PHOTOMETRIC TEST REPORT

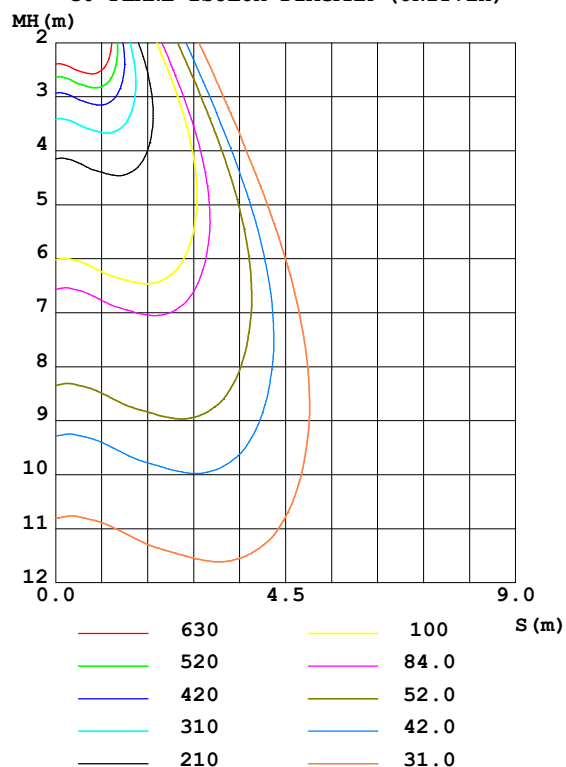
Test:U:222.49V I:0.2297A P:49.599W PF:0.9703 Freq:49.97Hz Lamp Flux:7798.05x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 1500*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:1500*60mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 157.22 lm/W			
MODEL	CTLS-1550-40DS-04WH	I _{max} (cd)	4932	S/MH (C0/180)	1.12
NOMINAL POWER (W)	50	LOR (%)	100.0	S/MH (C90/270)	1.06
RATED VOLTAGE (V)	230.0	TOTAL FLUX (lm)	7798.0	η UP, DN (C0-180)	1.8, 48.2
NOMINAL FLUX (lm)	7798.05	CIE CLASS	DIRECT	η UP, DN (C180-360)	1.8, 48.2
LAMPS INSIDE	1	η up (%)	3.6	CIBSE SHR NOM	1.00
TEST VOLTAGE (V)	230.0	η down (%)	96.4	CIBSE SHR MAX	1.10

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:

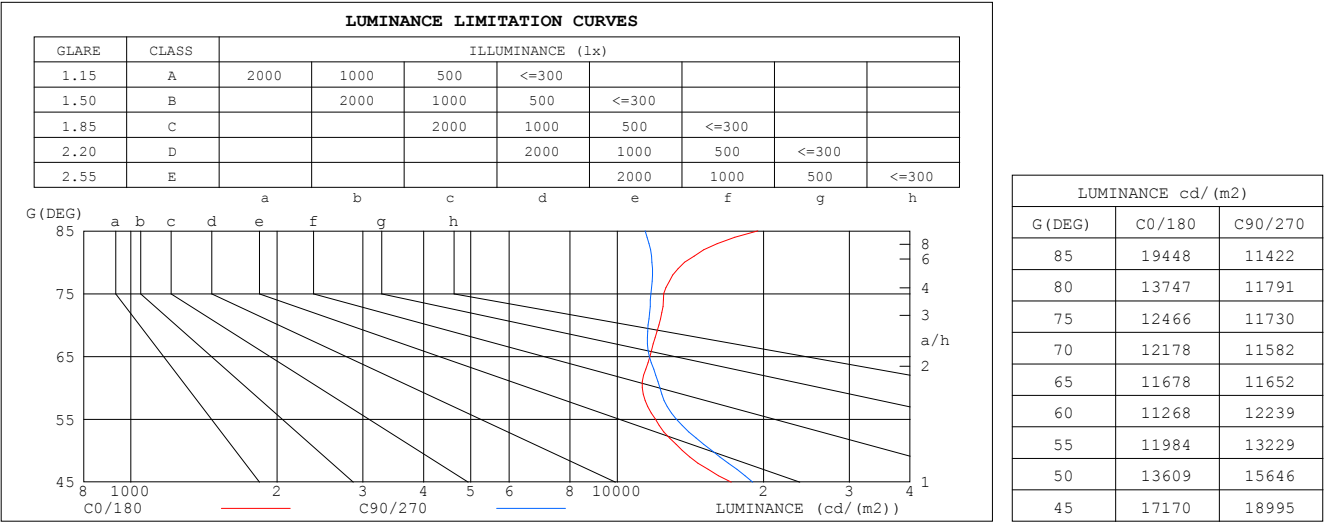
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	4186	3774	3511	4246	4541	4244	3632	3991	0- 10	369.2	369.2	4.73,4.73
20	4747	4147	3089	4647	4795	4614	3240	4358	10- 20	1186	1555	19.9,19.9
30	3533	3588	2488	4025	3428	3879	2487	3782	20- 30	1789	3344	42.9,42.9
40	1649	2020	1629	2188	1648	2136	1591	2086	30- 40	1644	4989	64,64
50	787.3	917.5	905.1	972.1	791.6	975.8	870.9	929.8	40- 50	1037	6026	77.3,77.3
60	507.0	516.9	550.8	534.2	516.6	538.9	541.9	516.1	50- 60	631.6	6657	85.4,85.4
70	374.9	328.6	356.5	332.9	374.4	336.3	360.7	325.9	60- 70	434.5	7092	90.9,90.9
80	214.8	178.3	184.3	181.8	211.3	185.7	192.0	178.1	70- 80	285.3	7377	94.6,94.6
90	100.6	78.08	8.530	82.20	104.8	81.60	11.23	78.83	80- 90	137.3	7514	96.4,96.4
100	115.4	69.93	10.05	69.08	127.0	64.93	9.957	68.82	90-100	74.26	7589	97.3,97.3
110	85.42	55.71	12.90	53.84	83.51	51.93	12.37	53.93	100-110	64.94	7654	98.1,98.1
120	60.42	40.77	14.10	43.93	57.95	43.95	14.40	39.36	110-120	45.47	7699	98.7,98.7
130	53.37	31.38	16.23	38.02	49.16	38.35	16.67	31.21	120-130	33.93	7733	99.2,99.2
140	46.30	29.15	18.11	35.22	41.74	35.15	18.63	29.32	130-140	25.85	7759	99.5,99.5
150	39.18	25.06	20.05	29.02	34.74	28.29	20.70	25.19	140-150	18.15	7777	99.7,99.7
160	30.59	23.48	21.91	23.68	27.92	23.13	22.33	23.60	150-160	11.89	7789	99.9,99.9
170	25.61	24.46	24.37	23.40	25.25	23.47	24.62	24.51	160-170	6.812	7796	100,100
180	27.47	25.92	25.74	25.92	27.57	25.97	25.81	25.96	170-180	2.398	7798	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

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:222.49V I:0.2297A P:49.599W PF:0.9703 Freq:49.97Hz Lamp Flux:7798.05x1 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:2020-07-03

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:222.49V I:0.2297A P:49.599W PF:0.9703 Freq:49.97Hz Lamp Flux:7798.05x1 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	.258	.147	.046	.250	.143	.045	.235	.135	.043	.221	.127	.041	.208	.121	.039		
2.0	.241	.132	.041	.234	.129	.040	.221	.123	.038	.209	.117	.037	.197	.112	.035		
3.0	.224	.119	.036	.218	.117	.035	.207	.112	.034	.196	.107	.033	.186	.103	.032		
4.0	.209	.109	.032	.204	.107	.032	.194	.103	.031	.184	.099	.030	.175	.095	.029		
5.0	.196	.100	.029	.191	.098	.029	.182	.095	.028	.173	.091	.027	.165	.088	.027		
6.0	.184	.092	.026	.179	.091	.026	.171	.088	.025	.163	.085	.025	.156	.082	.024		
7.0	.173	.085	.024	.169	.084	.024	.161	.082	.023	.154	.079	.023	.148	.077	.023		
8.0	.163	.080	.022	.159	.078	.022	.153	.076	.022	.146	.074	.021	.141	.072	.021		
9.0	.154	.074	.021	.151	.074	.021	.145	.072	.020	.139	.070	.020	.134	.068	.020		
10.0	.146	.070	.019	.143	.069	.019	.138	.067	.019	.132	.066	.019	.127	.064	.018		

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	.218	.218	.218	.186	.186	.186	.127	.127	.127	.073	.073	.073	.023	.023	.023		
1.0	.205	.185	.166	.175	.158	.143	.120	.109	.099	.069	.063	.058	.022	.020	.019		
2.0	.194	.160	.132	.166	.138	.114	.114	.095	.080	.066	.056	.047	.021	.018	.015		
3.0	.184	.142	.109	.158	.123	.095	.108	.085	.066	.063	.050	.039	.020	.016	.013		
4.0	.175	.129	.093	.151	.111	.081	.104	.077	.057	.060	.045	.034	.019	.015	.011		
5.0	.168	.118	.081	.144	.102	.070	.099	.071	.050	.057	.042	.029	.019	.014	.010		
6.0	.161	.109	.072	.138	.094	.063	.095	.066	.044	.055	.039	.026	.018	.013	.009		
7.0	.154	.102	.065	.133	.088	.057	.092	.062	.040	.053	.037	.024	.017	.012	.008		
8.0	.148	.096	.060	.128	.083	.053	.088	.059	.037	.051	.035	.022	.017	.011	.007		
9.0	.143	.091	.056	.123	.079	.049	.085	.056	.035	.050	.033	.021	.016	.011	.007		
10.0	.138	.087	.053	.119	.075	.046	.082	.053	.033	.048	.031	.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:222.49V I:0.2297A P:49.599W PF:0.9703 Freq:49.97Hz Lamp Flux:7798.05x1 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	12.9	14.1	13.2	14.4	14.6	13.7	14.9	14.0	15.2	15.4
3H	14.0	15.2	14.4	15.4	15.7	14.6	15.8	15.0	16.1	16.4
4H	14.7	15.7	15.0	16.0	16.4	15.2	16.2	15.5	16.5	16.8
6H	15.3	16.3	15.7	16.7	17.0	15.6	16.6	16.0	17.0	17.3
8H	15.6	16.6	16.0	17.0	17.3	15.8	16.8	16.2	17.1	17.5
12H	16.0	17.0	16.4	17.3	17.7	15.9	16.9	16.3	17.2	17.6
4H 2H	13.2	14.3	13.6	14.6	14.9	13.9	15.0	14.2	15.3	15.6
3H	14.6	15.5	15.0	15.9	16.2	15.1	16.1	15.5	16.4	16.8
4H	15.4	16.2	15.8	16.6	17.0	15.8	16.7	16.2	17.0	17.4
6H	16.2	17.0	16.7	17.4	17.8	16.4	17.2	16.9	17.6	18.0
8H	16.7	17.4	17.1	17.8	18.2	16.7	17.4	17.2	17.8	18.3
12H	17.1	17.8	17.6	18.2	18.7	16.9	17.6	17.4	18.0	18.5
8H 4H	15.6	16.3	16.1	16.8	17.2	16.0	16.7	16.5	17.1	17.6
6H	16.7	17.2	17.2	17.7	18.2	16.8	17.4	17.3	17.9	18.4
8H	17.2	17.8	17.8	18.2	18.8	17.2	17.7	17.7	18.2	18.7
12H	17.9	18.3	18.4	18.8	19.4	17.5	18.0	18.1	18.5	19.0
12H 4H	15.7	16.3	16.1	16.8	17.2	16.0	16.7	16.5	17.1	17.6
6H	16.8	17.3	17.3	17.8	18.3	16.9	17.4	17.4	17.9	18.4
8H	17.4	17.8	17.9	18.3	18.9	17.4	17.8	17.9	18.3	18.9
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.4					+ 0.5 / - 0.5				
1.5H	+ 0.5 / - 0.3					+ 0.4 / - 0.5				
2.0H	+ 0.4 / - 0.2					+ 0.8 / - 0.5				

CIE Pub.117, 7798 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 7.1$)

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:222.49V I:0.2297A P:49.599W PF:0.9703 Freq:49.97Hz Lamp Flux:7798.05x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 1500*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:1500*60mm	Shielding Angle:

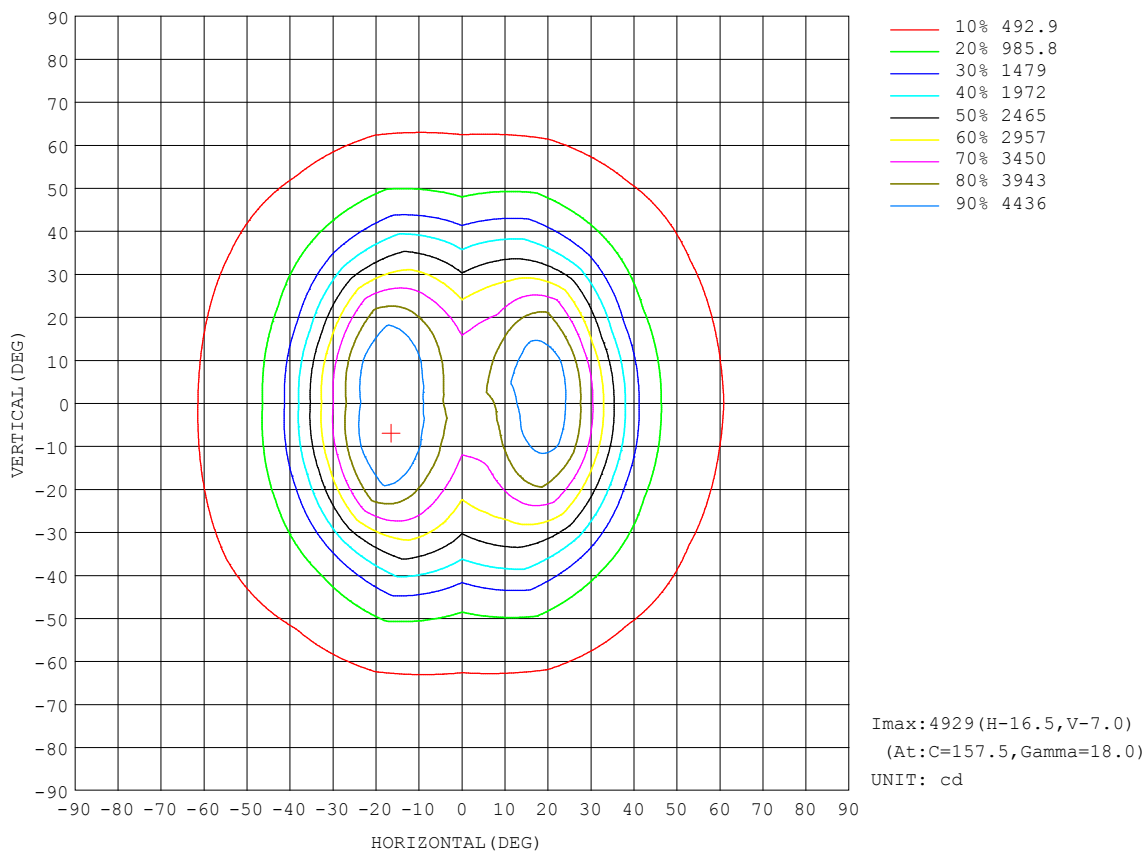
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	69	60	54	68	60	54	67	59	54	49
0.80	78	69	63	77	69	63	75	68	62	57
1.00	85	76	70	84	76	70	82	76	69	63
1.25	91	82	77	89	82	76	87	80	75	69
1.50	95	87	81	93	86	81	90	84	79	73
2.00	100	93	88	98	92	87	94	89	85	78
2.50	103	96	91	100	95	90	96	92	88	80
3.00	105	100	95	103	98	94	99	95	91	83
4.00	108	104	100	106	102	98	101	98	95	86
5.00	110	106	103	107	104	101	103	100	97	88
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:222.49V I:0.2297A P:49.599W PF:0.9703 Freq:49.97Hz Lamp Flux:7798.05x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 1500*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:1500*60mm	Shielding Angle:

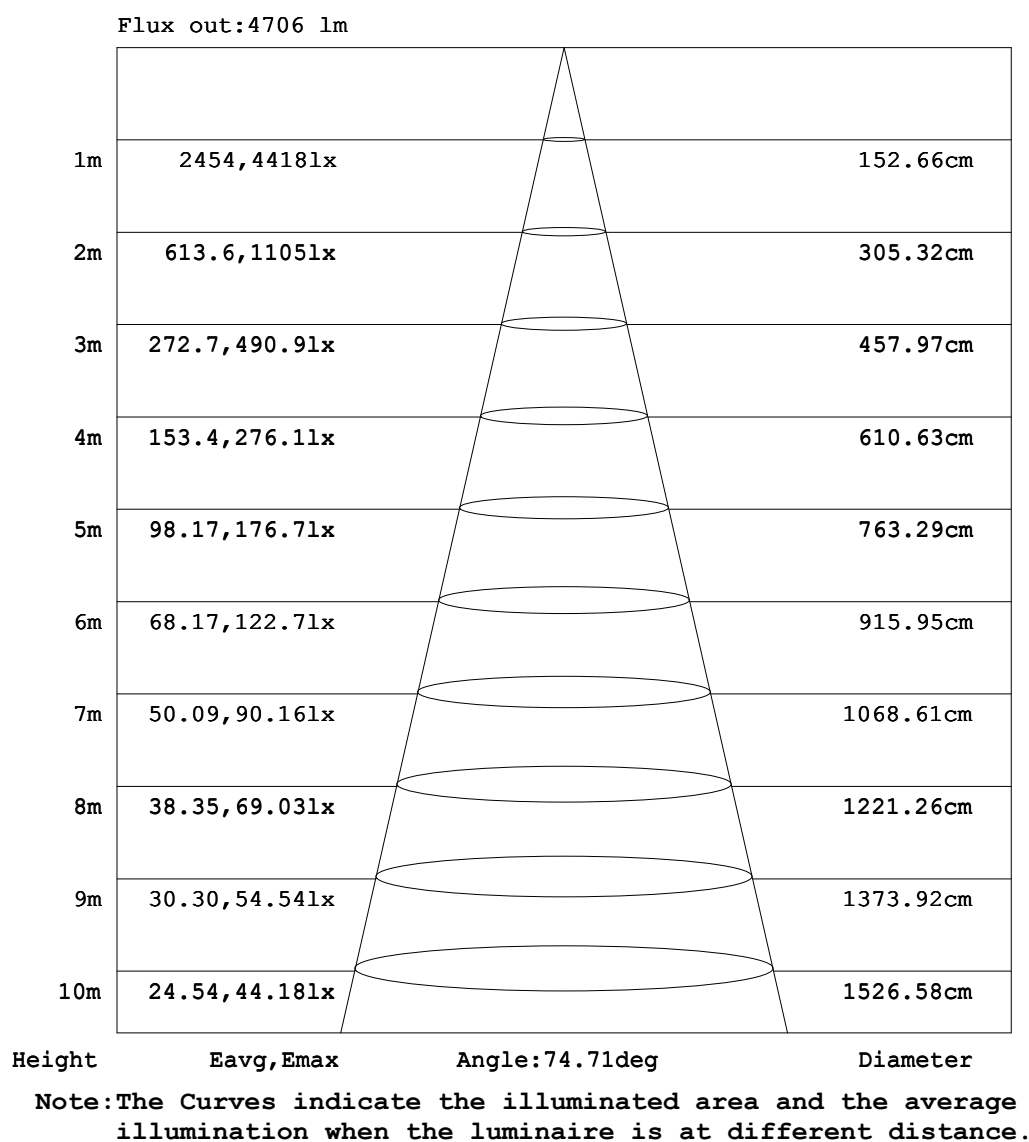


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:zcx
Test Date:2020-07-03

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

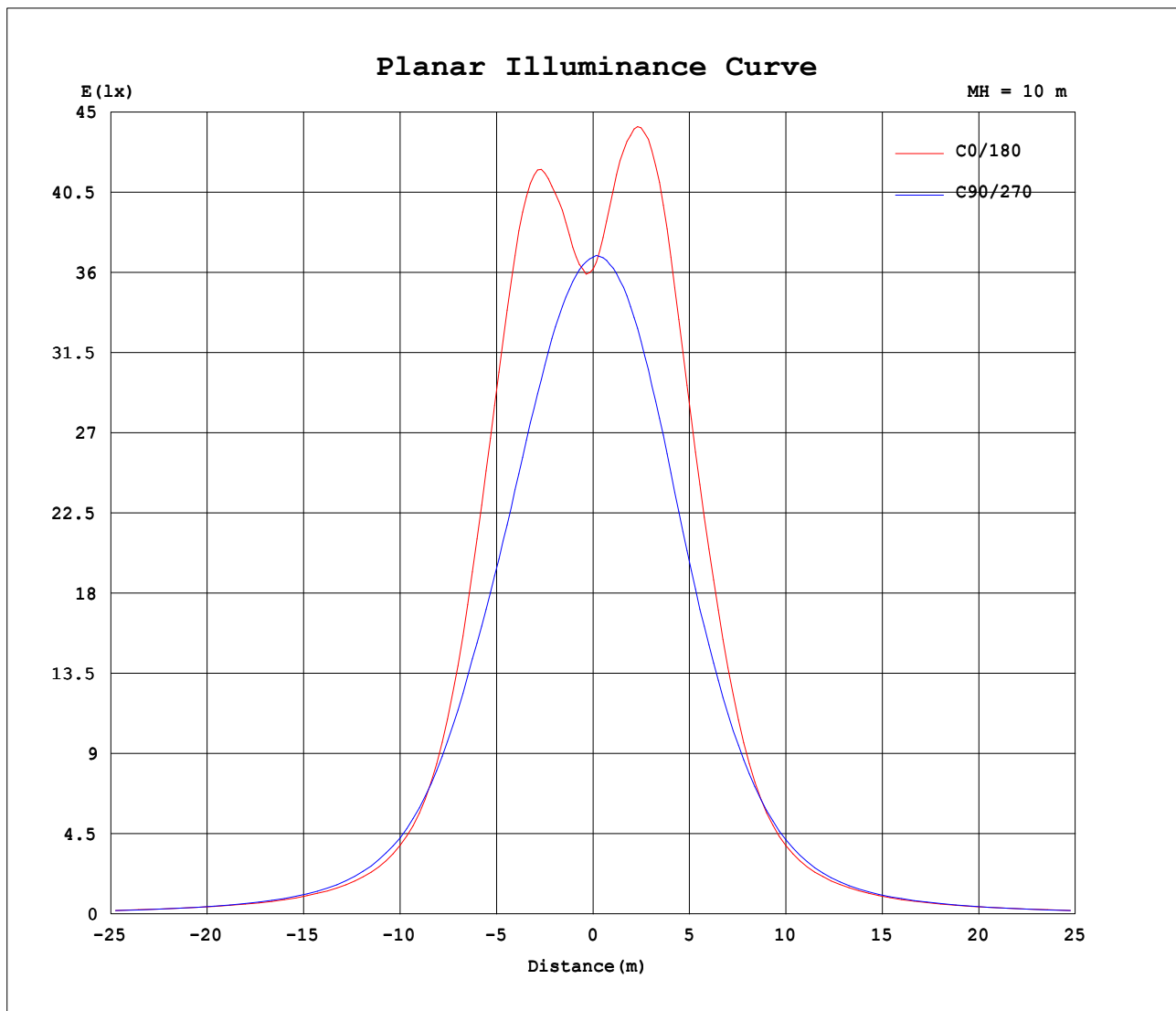
Test:U:222.49V I:0.2297A P:49.599W PF:0.9703 Freq:49.97Hz Lamp Flux:7798.05x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 1500*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:1500*60mm	Shielding Angle:



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

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

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:222.49V I:0.2297A P:49.599W PF:0.9703 Freq:49.97Hz Lamp Flux:7798.05x1 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	3619	3601	3612	3608	3686	3701	3747	3709	3619	3601	3612	3608	3686	3701	3747	3709			
5	3730	3672	3594	3552	3627	3762	3949	4018	4018	3989	3865	3746	3687	3686	3802	3857			
10	4186	4056	3774	3517	3511	3845	4246	4484	4541	4473	4244	3868	3632	3697	3991	4271			
15	4638	4444	4001	3459	3329	3882	4497	4840	4863	4825	4505	3930	3479	3668	4205	4650			
20	4747	4653	4147	3376	3089	3803	4647	4888	4795	4849	4614	3862	3240	3537	4358	4786			
25	4322	4363	4051	3178	2813	3622	4529	4499	4238	4430	4431	3642	2883	3310	4265	4421			
30	3533	3626	3588	2898	2488	3313	4025	3704	3428	3628	3879	3273	2487	2990	3782	3600			
35	2536	2652	2836	2521	2085	2847	3126	2734	2514	2655	3014	2746	2045	2538	2957	2573			
40	1649	1736	2020	2054	1629	2285	2188	1843	1648	1771	2136	2159	1591	2012	2086	1678			
45	1093	1128	1356	1545	1209	1696	1440	1221	1087	1174	1441	1580	1181	1481	1374	1105			
50	787	790	918	1106	905	1203	972	853	792	824	976	1121	871	1061	930	779			
55	619	603	673	801	683	855	708	659	620	637	711	816	666	771	680	604			
60	507	484	517	598	551	624	534	535	517	514	539	610	542	581	516	490			
65	444	397	412	463	443	473	420	449	438	428	425	472	441	452	409	404			
70	375	330	329	358	357	360	333	368	374	348	336	367	361	353	326	337			
75	290	259	249	274	273	271	253	289	285	273	257	279	279	271	248	264			
80	215	196	178	188	184	185	182	210	211	200	186	194	192	189	178	197			
85	153	139	120	105	89.6	106	124	150	147	144	126	111	99.4	109	122	137			
90	101	91.9	78.1	44.0	8.53	46.5	82.2	99.5	105	95.2	81.6	46.5	11.2	45.9	78.8	87.9			
95	105	88.0	85.0	41.0	9.16	43.6	85.5	96.1	118	95.6	86.3	40.3	8.99	42.8	81.4	88.5			
100	115	106	69.9	31.8	10.0	32.7	69.1	117	127	111	64.9	31.4	9.96	32.6	68.8	101			
105	107	90.3	68.8	30.5	11.5	32.5	67.3	98.5	104	92.2	68.6	30.9	11.2	30.4	68.2	90.4			
110	85.4	75.6	55.7	28.2	12.9	29.0	53.8	79.1	83.5	73.6	51.9	28.4	12.4	28.5	53.9	76.3			
115	72.7	65.2	48.0	27.8	13.4	29.2	48.1	67.0	68.8	63.7	48.0	28.4	13.3	27.2	47.1	64.9			
120	60.4	56.3	40.8	26.3	14.1	27.7	43.9	57.1	58.0	55.1	44.0	27.9	14.4	25.9	39.4	56.6			
125	56.4	53.0	34.1	24.9	15.3	26.8	40.3	52.1	52.6	50.3	40.6	26.9	15.5	24.9	34.8	53.3			
130	53.4	49.4	31.4	23.5	16.2	25.7	38.0	47.9	49.2	46.4	38.4	25.6	16.7	23.9	31.2	49.0			
135	50.5	43.5	30.1	22.1	17.2	24.5	37.6	43.8	45.8	42.5	36.8	24.2	17.7	22.5	30.8	43.3			
140	46.3	36.7	29.2	20.9	18.1	22.8	35.2	40.3	41.7	39.4	35.1	22.5	18.6	21.3	29.3	35.4			
145	42.9	32.8	27.2	20.3	19.0	21.4	32.8	36.5	39.6	35.1	32.4	21.4	19.6	20.9	27.4	31.1			
150	39.2	31.0	25.1	19.4	20.1	20.8	29.0	35.0	34.7	33.5	28.3	20.8	20.7	20.0	25.2	29.5			
155	35.4	28.7	23.8	20.6	21.0	21.0	25.7	31.3	31.9	29.8	24.9	20.9	21.6	21.0	23.8	27.7			
160	30.6	26.4	23.5	21.8	21.9	21.4	23.7	27.2	27.9	26.0	23.1	21.4	22.3	22.2	23.6	25.8			
165	26.8	24.9	23.7	23.2	23.2	22.5	23.1	24.4	25.3	23.8	22.9	22.7	23.6	23.5	23.9	24.6			
170	25.6	25.0	24.5	24.5	24.4	24.0	23.4	23.9	25.3	23.7	23.5	24.1	24.6	24.7	24.5	24.9			
175	26.6	26.1	25.5	25.4	25.2	25.2	25.0	25.1	26.6	25.3	25.1	25.2	25.4	25.5	25.6	26.0			
180	27.5	26.5	25.9	25.8	25.7	25.9	25.9	26.3	27.6	26.5	26.0	25.8	25.8	25.8	26.0	26.3			

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: