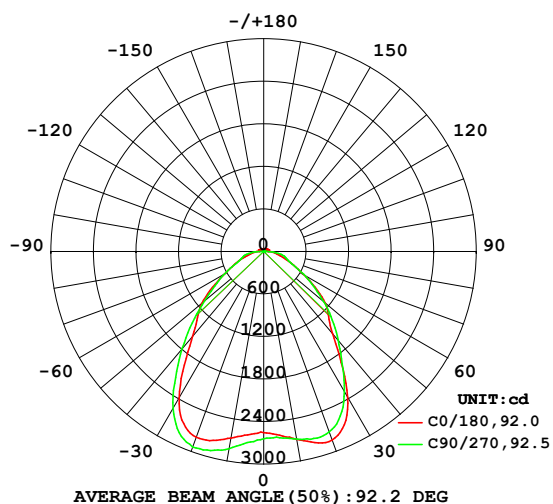


LUMINAIRE PHOTOMETRIC TEST REPORT

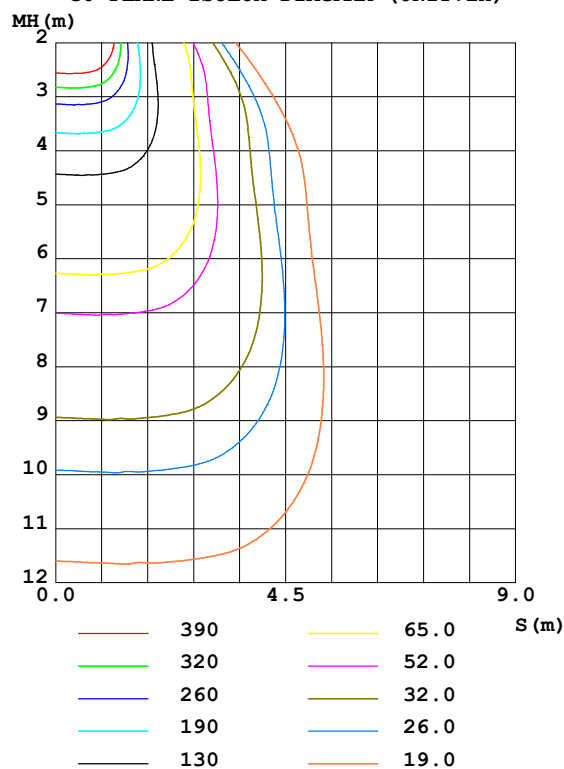
Test:U:226.18V I:0.1828A P:39.620W PF:0.9581 Freq:49.96Hz Lamp Flux:6613.1x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 1500*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:1500*60mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 166.91 lm/W			
MODEL	CTLS-1540-40WD-04WH	I _{max} (cd)	2999	S/MH (C0/180)	1.24
NOMINAL POWER (W)	40	LOR (%)	100.0	S/MH (C90/270)	1.29
RATED VOLTAGE (V)	230.0	TOTAL FLUX (lm)	6613.1	η UP, DN (C0-180)	1.8, 47.5
NOMINAL FLUX (lm)	6613.1	CIE CLASS	DIRECT	η UP, DN (C180-360)	1.8, 48.9
LAMPS INSIDE	1	η up (%)	3.6	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230.0	η down (%)	96.4	CIBSE SHR MAX	1.25

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: 2020-06-18

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:

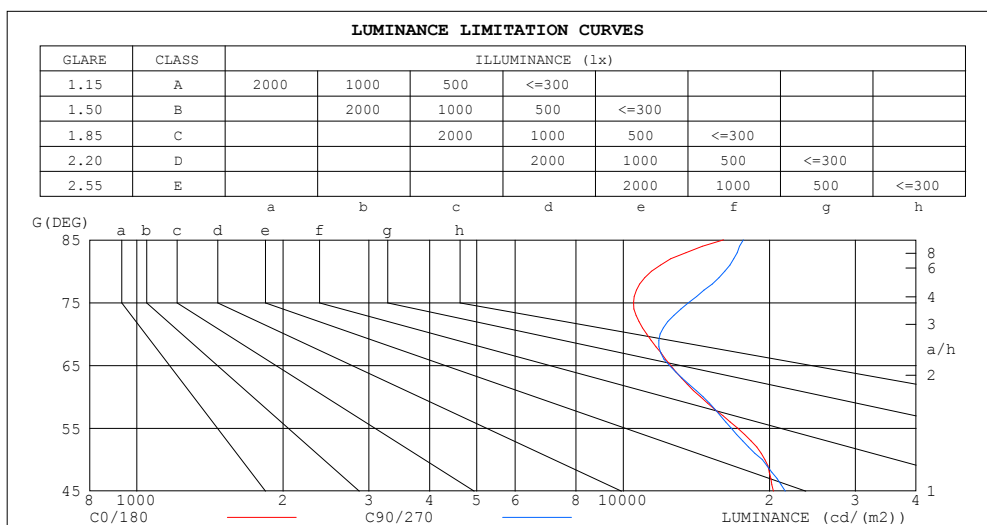
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	2691	2670	2685	2777	2674	2736	2825	2762	0- 10	255.1	255.1	3.86,3.86
20	2828	2713	2707	2887	2788	2949	2934	2882	10- 20	797.4	1052	15.9,15.9
30	2369	2231	2275	2477	2388	2613	2555	2440	20- 30	1239	2291	34.6,34.6
40	1513	1500	1637	1694	1559	1761	1790	1592	30- 40	1257	3548	53.7,53.7
50	1131	1129	1117	1248	1137	1270	1093	1160	40- 50	1067	4615	69.8,69.8
60	648.4	662.3	656.6	735.2	639.6	735.1	645.3	697.2	50- 60	824.1	5439	82.2,82.2
70	344.2	377.4	366.5	404.4	353.6	397.9	355.7	395.0	60- 70	506.2	5945	89.9,89.9
80	178.6	186.0	252.9	194.7	179.3	189.2	248.0	188.7	70- 80	289.8	6235	94.3,94.3
90	78.07	69.64	22.62	74.09	81.59	73.89	27.48	70.70	80- 90	137.2	6372	96.4,96.4
100	59.83	51.16	12.98	46.49	56.20	42.68	11.16	45.92	90-100	48.61	6421	97.1,97.1
110	72.17	58.52	14.38	59.62	72.26	58.80	12.14	57.31	100-110	54.96	6476	97.9,97.9
120	58.80	42.00	13.44	48.36	59.42	46.56	12.66	38.42	110-120	44.34	6520	98.6,98.6
130	53.44	36.10	13.26	42.97	53.49	41.78	12.82	33.77	120-130	34.64	6555	99.1,99.1
140	45.87	28.42	13.40	35.02	45.69	34.11	13.26	27.65	130-140	25.90	6581	99.5,99.5
150	34.47	21.47	13.82	25.92	35.24	25.12	13.90	21.14	140-150	16.72	6597	99.8,99.8
160	23.44	17.20	14.57	18.30	23.97	17.79	14.54	16.74	150-160	9.565	6607	99.9,99.9
170	16.65	15.39	15.23	14.97	16.75	14.85	15.14	15.25	160-170	4.698	6612	100,100
180	16.66	15.83	15.77	15.87	16.67	15.82	15.80	15.87	170-180	1.490	6613	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:2020-06-18

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:226.18V I:0.1828A P:39.620W PF:0.9581 Freq:49.96Hz Lamp Flux:6613.1x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 1500*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:1500*60mm	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	16087	17651
80	11430	16185
75	10509	13625
70	11181	11905
65	12526	12450
60	14409	14592
55	17191	16684
50	19556	19304
45	20354	21543

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:zcx
Test Date:2020-06-18

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:226.18V I:0.1828A P:39.620W PF:0.9581 Freq:49.96Hz Lamp Flux:6613.1x1 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	.280	.159	.051	.272	.155	.049	.257	.147	.047	.243	.140	.045	.230	.133	.043		
2.0	.262	.144	.044	.255	.141	.043	.242	.134	.042	.230	.129	.040	.218	.123	.039		
3.0	.244	.130	.039	.238	.127	.038	.226	.122	.037	.215	.118	.036	.205	.113	.035		
4.0	.227	.118	.035	.221	.116	.034	.210	.112	.033	.201	.108	.033	.192	.104	.032		
5.0	.211	.107	.031	.206	.106	.031	.197	.102	.030	.188	.099	.029	.180	.096	.029		
6.0	.197	.099	.028	.193	.097	.028	.184	.094	.027	.176	.092	.027	.169	.089	.026		
7.0	.184	.091	.026	.180	.090	.026	.173	.087	.025	.166	.085	.025	.159	.083	.024		
8.0	.173	.085	.024	.170	.084	.024	.163	.081	.023	.156	.079	.023	.150	.077	.022		
9.0	.163	.079	.022	.160	.078	.022	.154	.076	.022	.148	.074	.021	.142	.072	.021		
10.0	.154	.074	.021	.151	.073	.020	.146	.071	.020	.140	.070	.020	.135	.068	.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	.218	.218	.218	.187	.187	.187	.127	.127	.127	.073	.073	.073	.023	.023	.023	
1.0	.206	.184	.165	.176	.158	.142	.121	.109	.098	.069	.063	.057	.022	.020	.018	
2.0	.196	.160	.130	.168	.138	.112	.115	.095	.078	.067	.056	.046	.021	.018	.015	
3.0	.188	.142	.106	.161	.123	.092	.111	.085	.065	.064	.050	.038	.021	.016	.012	
4.0	.180	.129	.090	.154	.111	.078	.106	.078	.055	.061	.045	.033	.020	.015	.011	
5.0	.172	.118	.079	.148	.102	.068	.102	.072	.048	.059	.042	.029	.019	.014	.009	
6.0	.165	.110	.070	.142	.095	.061	.098	.067	.043	.057	.039	.026	.018	.013	.008	
7.0	.159	.103	.064	.137	.089	.056	.094	.063	.039	.055	.037	.023	.018	.012	.008	
8.0	.153	.097	.059	.131	.084	.051	.091	.059	.037	.053	.035	.022	.017	.011	.007	
9.0	.147	.092	.055	.127	.080	.048	.088	.056	.034	.051	.033	.020	.017	.011	.007	
10.0	.142	.088	.052	.122	.076	.046	.085	.054	.032	.049	.032	.019	.016	.010	.006	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:zcx
 Test Date:2020-06-18

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:226.18V I:0.1828A P:39.620W PF:0.9581 Freq:49.96Hz Lamp Flux:6613.1x1 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	15.1	16.4	15.4	16.7	16.9	15.2	16.5	15.5	16.8	17.0
3H	16.0	17.2	16.3	17.5	17.8	16.1	17.4	16.5	17.6	17.9
4H	16.3	17.5	16.7	17.8	18.1	16.7	17.8	17.0	18.1	18.5
6H	16.7	17.8	17.1	18.1	18.5	17.3	18.4	17.7	18.7	19.1
8H	16.9	18.0	17.3	18.3	18.7	17.6	18.7	18.0	19.0	19.4
12H	17.1	18.2	17.5	18.5	18.9	17.8	18.9	18.2	19.2	19.6
4H 2H	15.5	16.6	15.8	16.9	17.3	15.5	16.7	15.9	17.0	17.3
3H	16.5	17.6	16.9	17.9	18.3	16.7	17.7	17.1	18.1	18.5
4H	17.0	18.0	17.5	18.4	18.8	17.4	18.3	17.8	18.7	19.1
6H	17.6	18.4	18.0	18.8	19.2	18.1	18.9	18.6	19.4	19.8
8H	17.9	18.6	18.3	19.0	19.5	18.5	19.3	19.0	19.7	20.1
12H	18.2	18.9	18.7	19.3	19.8	18.8	19.5	19.3	20.0	20.5
8H 4H	17.3	18.0	17.7	18.5	18.9	17.5	18.3	18.0	18.7	19.2
6H	18.0	18.6	18.5	19.1	19.6	18.4	19.1	18.9	19.5	20.0
8H	18.4	18.9	18.9	19.4	19.9	18.9	19.5	19.4	20.0	20.5
12H	18.8	19.3	19.4	19.8	20.4	19.4	19.9	19.9	20.4	20.9
12H 4H	17.3	18.0	17.8	18.4	18.9	17.6	18.3	18.0	18.7	19.2
6H	18.0	18.6	18.6	19.1	19.6	18.5	19.1	19.0	19.6	20.1
8H	18.5	19.0	19.1	19.5	20.1	19.0	19.5	19.6	20.0	20.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
2.0H	+ 0.5 / - 0.4					+ 0.4 / - 0.3				

CIE Pub.117, 6613 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 6.6$)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:zcx
 Test Date:2020-06-18

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:226.18V I:0.1828A P:39.620W PF:0.9581 Freq:49.96Hz Lamp Flux:6613.1x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 1500*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:1500*60mm	Shielding Angle:

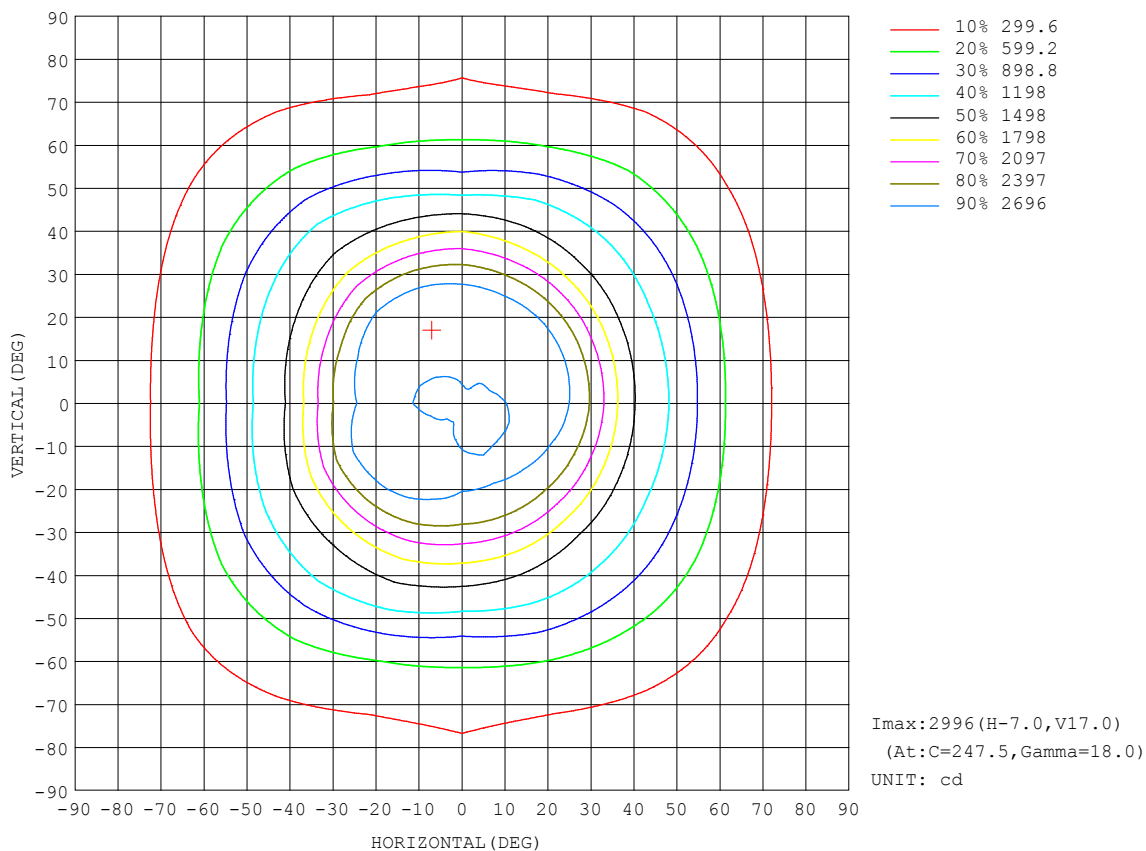
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	63	52	46	62	52	46	61	51	45	40
0.80	72	62	55	71	61	55	69	61	55	48
1.00	80	70	64	79	70	63	77	70	63	56
1.25	87	77	71	85	76	70	82	75	69	63
1.50	91	82	76	89	81	76	86	79	74	67
2.00	97	89	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	99	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:2020-06-18

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:226.18V I:0.1828A P:39.620W PF:0.9581 Freq:49.96Hz Lamp Flux:6613.1x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 1500*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:1500*60mm	Shielding Angle:

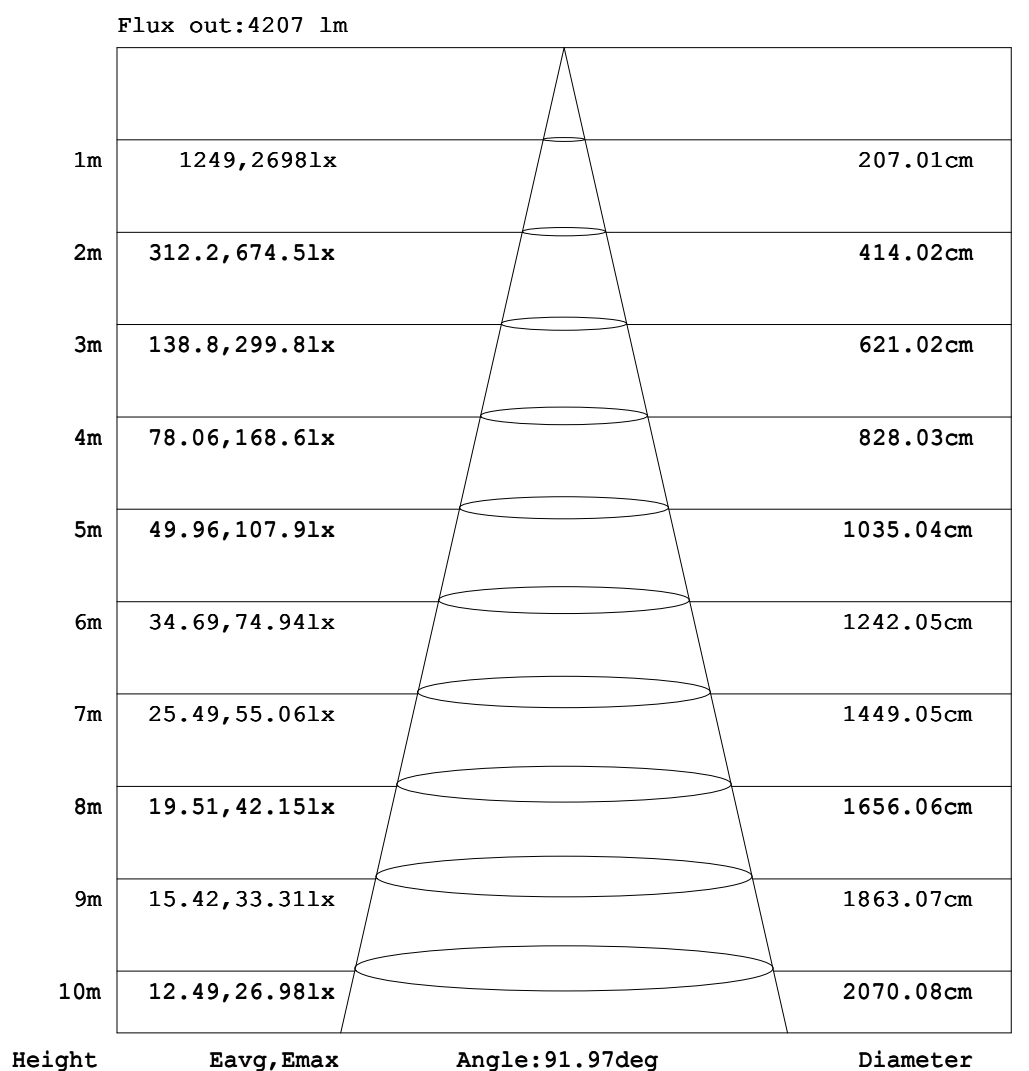


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:zcx
 Test Date:2020-06-18

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:226.18V I:0.1828A P:39.620W PF:0.9581 Freq:49.96Hz Lamp Flux:6613.1x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 1500*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:1500*60mm	Shielding Angle:

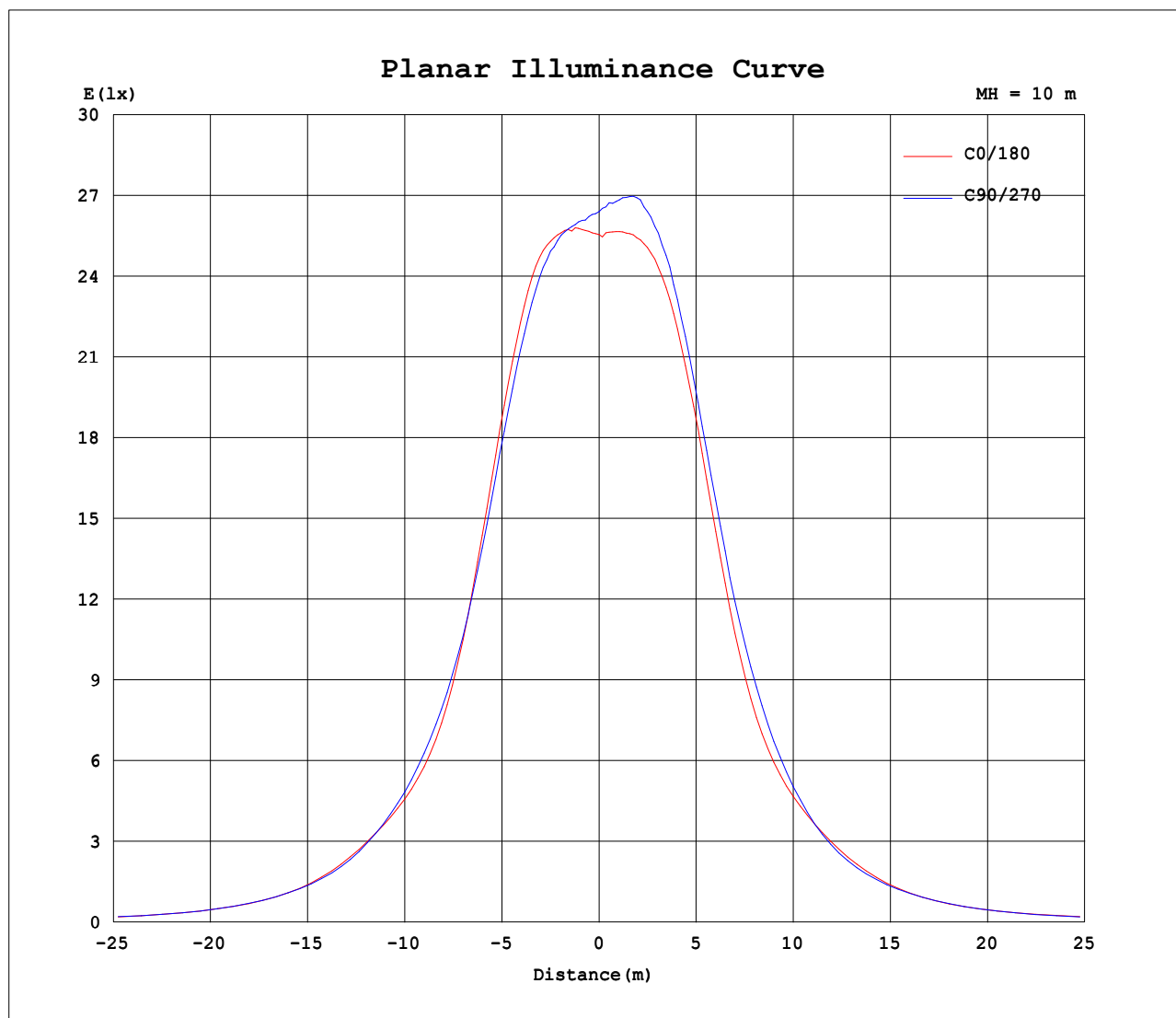


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:zcx
 Test Date:2020-06-18

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: 2020-06-18

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:226.18V I:0.1828A P:39.620W PF:0.9581 Freq:49.96Hz Lamp Flux:6613.1x1 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	2556	2555	2559	2590	2640	2665	2640	2613	2556	2555	2559	2590	2640	2665	2640	2613			
5	2603	2587	2593	2597	2638	2699	2696	2646	2596	2593	2623	2661	2708	2719	2678	2656			
10	2691	2668	2670	2656	2685	2744	2777	2731	2674	2685	2736	2803	2825	2791	2762	2756			
15	2791	2752	2733	2716	2732	2799	2884	2839	2759	2792	2866	2961	2907	2885	2851	2844			
20	2828	2756	2713	2696	2707	2791	2887	2899	2788	2840	2949	2995	2934	2905	2882	2887			
25	2695	2618	2556	2548	2559	2665	2763	2813	2677	2759	2883	2872	2820	2780	2764	2740			
30	2369	2281	2231	2255	2275	2389	2477	2544	2388	2475	2613	2595	2555	2480	2440	2403			
35	1911	1856	1837	1899	1934	2030	2068	2107	1955	2052	2180	2190	2170	2075	1994	1936			
40	1513	1493	1500	1583	1637	1701	1694	1689	1559	1651	1761	1771	1790	1685	1592	1539			
45	1295	1271	1280	1348	1371	1446	1433	1425	1322	1400	1473	1455	1427	1405	1332	1309			
50	1131	1108	1129	1145	1117	1210	1248	1232	1137	1206	1270	1190	1093	1176	1160	1121			
55	887	885	892	915	861	936	1006	989	886	973	1011	918	842	914	928	911			
60	648	678	662	673	657	673	735	751	640	734	735	661	645	662	697	694			
65	476	485	505	502	474	498	548	544	478	529	540	491	465	496	533	493			
70	344	347	377	379	366	381	404	394	354	381	398	368	356	372	395	352			
75	245	248	264	268	317	273	283	281	250	268	276	259	304	264	274	250			
80	179	175	186	181	253	184	195	194	179	186	189	180	248	181	189	177			
85	126	121	127	111	138	112	130	135	128	128	129	110	144	110	127	122			
90	78.1	75.5	69.6	49.0	22.6	49.4	74.1	89.1	81.6	82.2	73.9	49.7	27.5	48.5	70.7	75.4			
95	56.9	56.8	53.0	32.4	11.7	34.6	51.3	61.9	57.2	59.0	49.0	32.4	10.1	31.0	50.6	58.0			
100	59.8	57.7	51.2	31.6	13.0	32.3	46.5	52.6	56.2	54.8	42.7	31.0	11.2	30.0	45.9	63.2			
105	73.8	74.3	63.0	32.3	13.9	34.2	65.6	79.5	74.8	76.1	59.4	30.9	11.7	28.7	60.3	76.8			
110	72.2	71.1	58.5	33.2	14.4	35.5	59.6	73.8	72.3	70.6	58.8	34.0	12.1	30.2	57.3	71.5			
115	62.5	60.2	49.0	27.5	14.1	30.4	51.2	61.6	62.7	59.5	49.4	28.3	12.4	24.8	44.7	60.8			
120	58.8	56.8	42.0	25.1	13.4	28.3	48.4	58.2	59.4	55.9	46.6	26.7	12.7	23.2	38.4	57.5			
125	55.9	53.4	39.6	23.0	13.4	26.5	45.8	54.5	55.3	52.5	44.2	25.2	12.7	21.5	37.2	54.9			
130	53.4	50.8	36.1	21.0	13.3	24.4	43.0	52.2	53.5	50.5	41.8	23.5	12.8	19.8	33.8	52.2			
135	50.3	47.4	31.9	18.9	13.3	21.8	39.0	48.7	50.3	47.2	38.0	21.2	13.0	18.0	30.5	46.9			
140	45.9	38.5	28.4	17.3	13.4	19.5	35.0	44.3	45.7	42.6	34.1	19.1	13.3	16.8	27.6	36.1			
145	40.9	31.4	24.5	16.2	13.6	17.4	30.5	39.5	41.2	37.9	29.8	17.2	13.6	15.9	23.9	29.4			
150	34.5	27.0	21.5	15.2	13.8	15.9	25.9	33.6	35.2	32.2	25.1	15.7	13.9	15.1	21.1	24.7			
155	28.7	23.4	19.2	14.7	14.2	15.0	21.8	28.0	29.4	26.7	21.1	14.9	14.3	14.5	18.8	22.7			
160	23.4	20.3	17.2	14.5	14.6	14.4	18.3	22.8	24.0	21.7	17.8	14.3	14.5	14.3	16.7	19.7			
165	19.2	17.4	15.8	14.8	14.9	14.7	16.0	18.4	19.4	17.6	15.7	14.5	14.7	14.7	15.4	16.9			
170	16.7	16.0	15.4	15.3	15.2	15.1	15.0	15.9	16.8	15.6	14.8	15.0	15.1	15.2	15.2	15.7			
175	16.4	16.0	15.7	15.6	15.6	15.5	15.5	15.6	16.4	15.6	15.5	15.5	15.5	15.6	15.7	15.9			
180	16.7	16.0	15.8	15.8	15.8	15.8	15.9	16.0	16.7	16.0	15.8	15.8	15.8	15.8	15.9	16.0			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:zcx
 Test Date:2020-06-18

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: