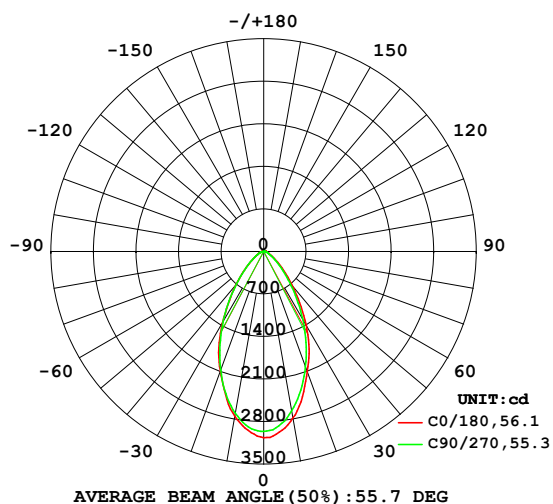


LUMINAIRE PHOTOMETRIC TEST REPORT

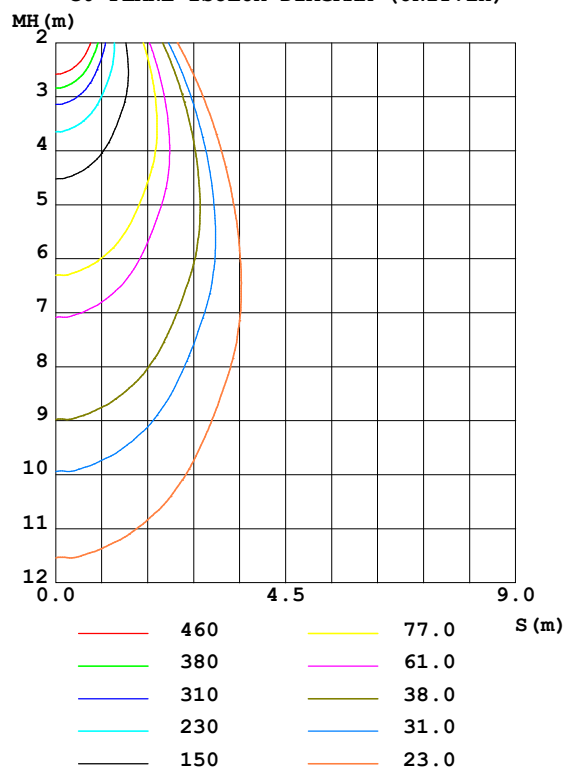
Test:U:226.88V I:0.0923A P:19.902W PF:0.9508 Freq:49.96Hz Lamp Flux:3176.63x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 159.61 lm/W			
MODEL	CTLS-0620-40NR-04WH	I _{max} (cd)	3064	S/MH (C0/180)	0.83
NOMINAL POWER (W)	20	LOR (%)	100.0	S/MH (C90/270)	0.84
RATED VOLTAGE (V)	230.0	TOTAL FLUX (lm)	3176.6	η UP, DN (C0-180)	1.1, 48.6
NOMINAL FLUX (lm)	3176.63	CIE CLASS	DIRECT	η UP, DN (C180-360)	1.1, 49.2
LAMPS INSIDE	1	η up (%)	2.2	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	230.0	η down (%)	97.8	CIBSE SHR MAX	0.90

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: 2020-06-19

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:

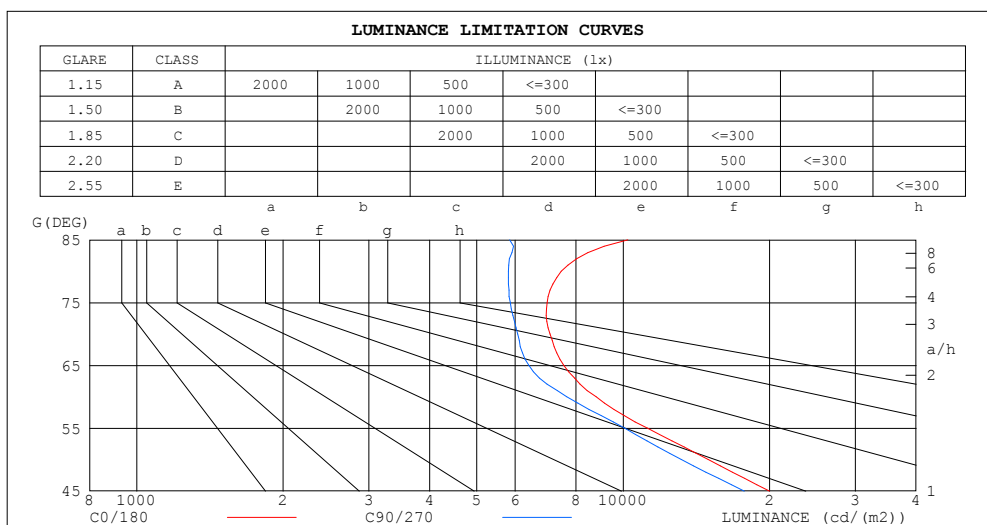
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	2784	2717	2663	2654	2753	2720	2700	2697	0- 10	271.3	271.3	8.54,8.54
20	2105	2065	2016	2010	2092	2094	2075	2072	10- 20	671.1	942.4	29.7,29.7
30	1400	1321	1285	1281	1362	1373	1340	1345	20- 30	777.9	1720	54.2,54.2
40	734.3	702.0	666.2	667.3	700.4	722.5	699.7	721.2	30- 40	621.4	2342	73.7,73.7
50	346.0	322.8	304.8	303.6	320.0	323.7	316.5	331.2	40- 50	374.0	2716	85.5,85.5
60	158.4	147.5	137.8	138.5	143.3	143.5	139.8	148.9	50- 60	196.0	2912	91.7,91.7
70	87.03	82.39	74.68	75.99	77.83	76.88	71.59	80.89	60- 70	105.9	3018	95,95
80	46.65	43.83	36.29	39.08	41.04	39.86	33.66	43.06	70- 80	62.03	3080	96.9,96.9
90	22.80	14.75	2.735	14.85	23.50	14.35	0.7840	14.35	80- 90	27.40	3107	97.8,97.8
100	20.71	14.42	0.5648	14.46	28.64	13.54	0.5782	13.26	90-100	14.48	3122	98.3,98.3
110	19.33	12.72	1.209	12.69	20.11	12.59	1.156	11.89	100-110	13.51	3135	98.7,98.7
120	14.47	9.989	2.392	10.23	15.49	9.917	2.229	8.391	110-120	10.02	3145	99,99
130	13.89	9.979	4.191	10.05	14.52	9.610	3.914	8.818	120-130	8.258	3153	99.3,99.3
140	13.78	10.41	6.427	10.08	13.69	9.602	6.055	9.215	130-140	7.415	3161	99.5,99.5
150	13.30	10.50	8.789	10.39	12.32	9.981	8.345	9.686	140-150	6.339	3167	99.7,99.7
160	12.88	11.42	10.91	11.34	12.21	10.97	10.47	10.86	150-160	4.984	3172	99.9,99.9
170	13.27	12.66	12.56	12.41	13.14	12.28	12.28	12.32	160-170	3.362	3175	100,100
180	14.17	13.44	13.36	13.35	14.26	13.50	13.39	13.36	170-180	1.238	3177	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:2020-06-19

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:226.88V I:0.0923A P:19.902W PF:0.9508 Freq:49.96Hz Lamp Flux:3176.63x1 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	10224	5846
80	7463	5805
75	6976	5858
70	7068	6066
65	7547	6399
60	8797	7657
55	11216	10068
50	14951	13171
45	20010	17752

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:zcx
Test Date:2020-06-19

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:226.88V I:0.0923A P:19.902W PF:0.9508 Freq:49.96Hz Lamp Flux:3176.63x1 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	.222	.126	.040	.214	.122	.039	.200	.115	.037	.187	.108	.035	.175	.102	.033		
2.0	.210	.115	.035	.204	.112	.035	.192	.107	.033	.180	.101	.032	.170	.096	.030		
3.0	.198	.105	.032	.192	.103	.031	.182	.098	.030	.172	.094	.029	.163	.090	.028		
4.0	.186	.097	.028	.181	.095	.028	.172	.091	.027	.163	.088	.026	.155	.084	.026		
5.0	.175	.089	.026	.171	.088	.026	.163	.085	.025	.155	.082	.024	.148	.079	.024		
6.0	.165	.083	.024	.162	.082	.023	.154	.079	.023	.147	.077	.023	.141	.074	.022		
7.0	.156	.077	.022	.153	.076	.022	.146	.074	.021	.140	.072	.021	.135	.070	.021		
8.0	.148	.072	.020	.145	.071	.020	.139	.070	.020	.134	.068	.020	.129	.066	.019		
9.0	.141	.068	.019	.138	.067	.019	.133	.066	.019	.128	.064	.018	.123	.062	.018		
10.0	.134	.064	.018	.131	.064	.018	.127	.062	.017	.122	.061	.017	.118	.059	.017		

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	.207	.207	.207	.177	.177	.177	.121	.121	.121	.069	.069	.069	.022	.022	.022	
1.0	.191	.174	.158	.163	.149	.136	.112	.103	.094	.064	.059	.055	.021	.019	.018	
2.0	.178	.149	.125	.153	.128	.108	.105	.089	.075	.060	.052	.044	.019	.017	.014	
3.0	.168	.131	.102	.144	.113	.088	.099	.078	.062	.057	.046	.036	.018	.015	.012	
4.0	.158	.117	.085	.136	.101	.074	.093	.070	.052	.054	.041	.031	.017	.013	.010	
5.0	.150	.106	.073	.129	.091	.063	.089	.064	.045	.052	.037	.026	.017	.012	.009	
6.0	.143	.097	.063	.123	.084	.055	.085	.059	.039	.049	.034	.023	.016	.011	.008	
7.0	.137	.089	.056	.118	.077	.049	.081	.054	.035	.047	.032	.021	.015	.010	.007	
8.0	.131	.083	.051	.113	.072	.044	.078	.051	.031	.045	.030	.019	.015	.010	.006	
9.0	.125	.078	.046	.108	.068	.041	.075	.048	.029	.044	.028	.017	.014	.009	.006	
10.0	.121	.074	.043	.104	.064	.038	.072	.045	.027	.042	.027	.016	.014	.009	.005	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:zcx
 Test Date:2020-06-19

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:226.88V I:0.0923A P:19.902W PF:0.9508 Freq:49.96Hz Lamp Flux:3176.63x1 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	15.5	16.6	15.8	16.8	17.1	15.0	16.2	15.3	16.4	16.6
3H	16.0	17.0	16.3	17.3	17.5	15.5	16.5	15.8	16.8	17.0
4H	16.3	17.3	16.6	17.5	17.8	15.7	16.7	16.0	16.9	17.2
6H	16.6	17.5	16.9	17.8	18.1	15.9	16.8	16.3	17.1	17.4
8H	16.7	17.6	17.1	17.9	18.2	16.0	16.9	16.4	17.2	17.5
12H	16.9	17.7	17.2	18.0	18.4	16.1	16.9	16.4	17.2	17.6
4H 2H	15.6	16.6	15.9	16.8	17.1	15.2	16.1	15.5	16.4	16.7
3H	16.3	17.1	16.6	17.4	17.8	15.8	16.6	16.2	17.0	17.3
4H	16.7	17.5	17.1	17.8	18.2	16.2	16.9	16.6	17.3	17.6
6H	17.1	17.8	17.6	18.2	18.6	16.5	17.2	16.9	17.6	18.0
8H	17.4	18.0	17.8	18.4	18.8	16.6	17.3	17.1	17.7	18.1
12H	17.6	18.2	18.1	18.6	19.1	16.8	17.3	17.2	17.8	18.2
8H 4H	16.8	17.4	17.2	17.8	18.2	16.3	16.9	16.7	17.3	17.8
6H	17.4	17.9	17.9	18.4	18.8	16.8	17.3	17.3	17.7	18.2
8H	17.8	18.2	18.3	18.7	19.2	17.0	17.5	17.5	17.9	18.4
12H	18.2	18.6	18.7	19.0	19.6	17.2	17.6	17.7	18.1	18.6
12H 4H	16.8	17.4	17.2	17.8	18.2	16.3	16.9	16.8	17.3	17.7
6H	17.5	17.9	17.9	18.4	18.9	16.9	17.3	17.3	17.8	18.3
8H	17.9	18.2	18.4	18.7	19.2	17.1	17.5	17.7	18.0	18.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.7 / - 0.9					+ 0.8 / - 1.0				
1.5H	+ 1.0 / - 0.6					+ 1.0 / - 0.7				
2.0H	+ 1.5 / - 0.8					+ 1.5 / - 1.0				

CIE Pub.117, 3177 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 4.0$)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:zcx
 Test Date:2020-06-19

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:226.88V I:0.0923A P:19.902W PF:0.9508 Freq:49.96Hz Lamp Flux:3176.63x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

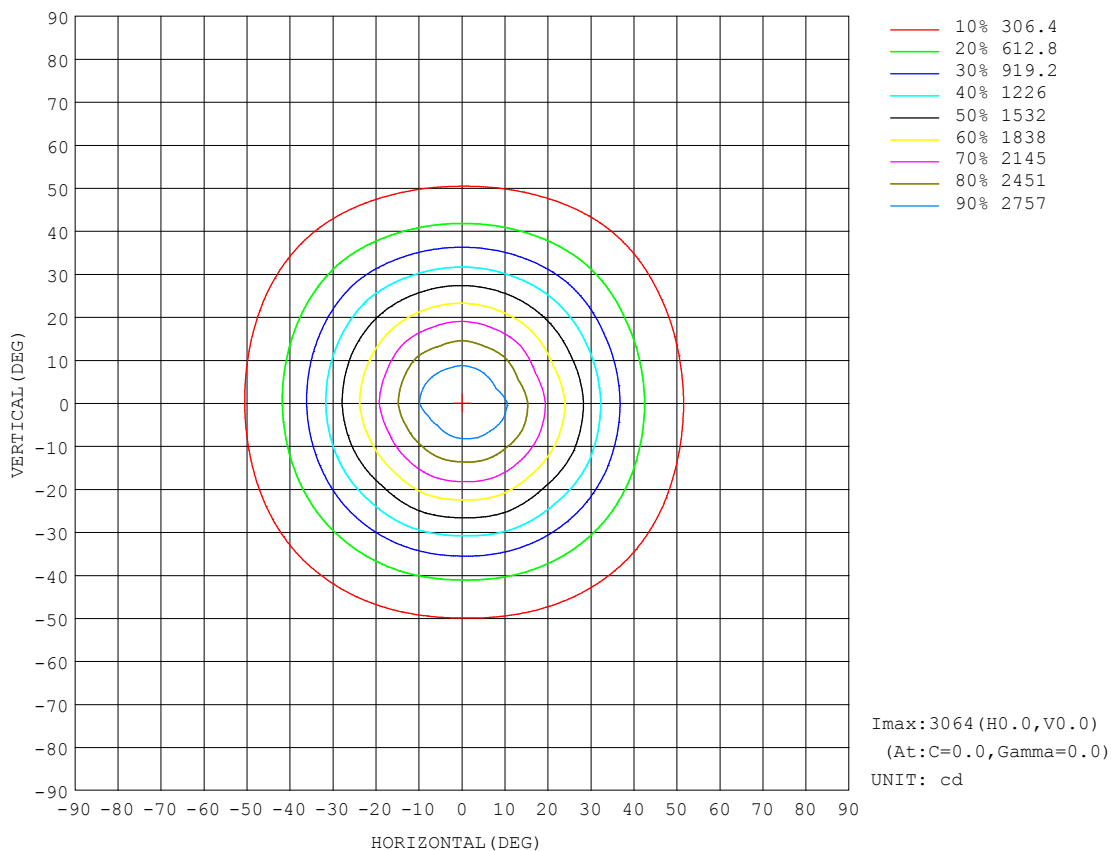
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	75	67	62	74	66	62	73	66	61	57
0.80	84	76	71	83	75	70	81	75	70	65
1.00	90	82	77	89	82	77	87	82	76	71
1.25	95	88	83	94	87	83	92	86	82	76
1.50	99	92	88	97	91	87	95	90	86	80
2.00	103	97	93	101	96	92	98	94	90	84
2.50	106	100	96	104	99	95	100	96	93	86
3.00	108	103	99	106	101	98	102	98	96	88
4.00	110	106	103	108	105	102	104	101	99	90
5.00	112	109	106	110	107	104	105	103	101	92
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:2020-06-19

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:226.88V I:0.0923A P:19.902W PF:0.9508 Freq:49.96Hz Lamp Flux:3176.63x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

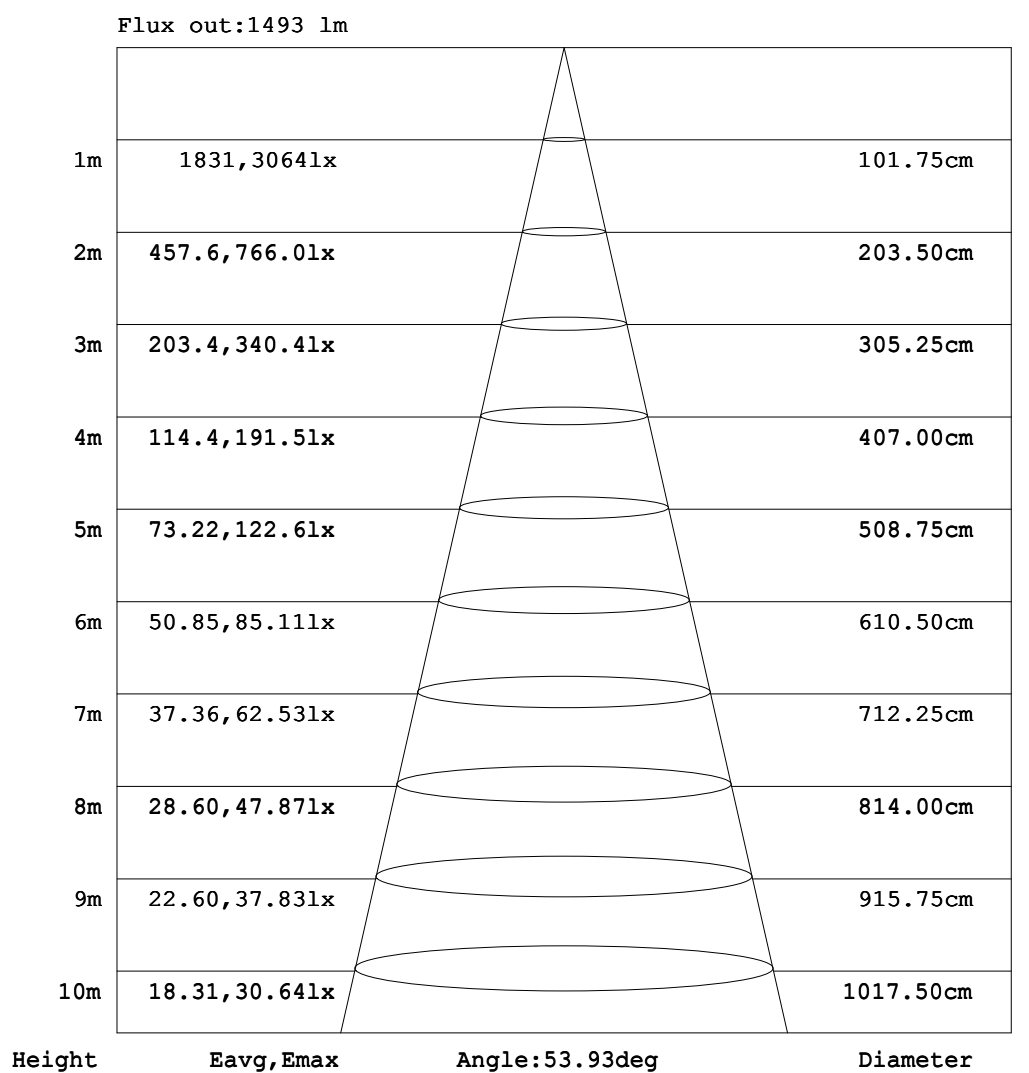


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:zcx
Test Date:2020-06-19

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:226.88V I:0.0923A P:19.902W PF:0.9508 Freq:49.96Hz Lamp Flux:3176.63x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

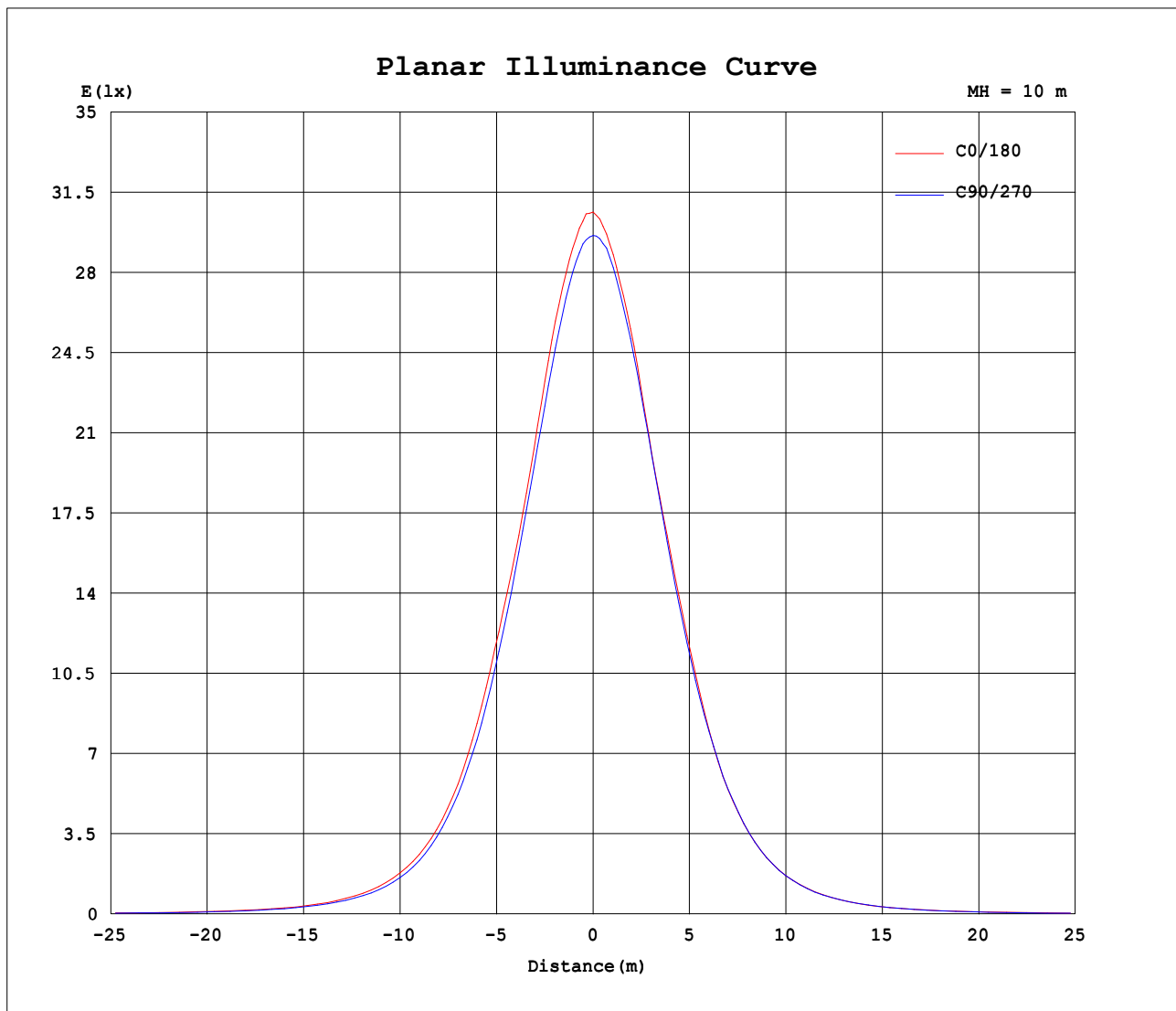


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:zcx
 Test Date:2020-06-19

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: 2020-06-19

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:226.88V I:0.0923A P:19.902W PF:0.9508 Freq:49.96Hz Lamp Flux:3176.63x1 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	3064	3043	3007	2984	2962	2967	2964	2973	3064	3043	3007	2984	2962	2967	2964	2973			
5	2984	2969	2930	2909	2882	2876	2868	2871	2957	2947	2924	2901	2899	2899	2894	2892			
10	2784	2766	2717	2696	2663	2659	2654	2677	2753	2741	2720	2693	2700	2692	2697	2695			
15	2475	2476	2421	2403	2365	2368	2363	2384	2439	2432	2447	2403	2420	2400	2424	2390			
20	2105	2093	2065	2056	2016	2029	2010	2021	2092	2073	2094	2066	2075	2062	2072	2027			
25	1775	1747	1685	1693	1652	1669	1635	1690	1753	1739	1731	1709	1708	1697	1699	1689			
30	1400	1391	1321	1325	1285	1299	1281	1329	1362	1368	1373	1341	1340	1331	1345	1351			
35	1033	1024	993	978	951	956	954	964	991	1004	1029	1001	994	999	1012	1005			
40	734	722	702	686	666	669	667	678	700	706	723	704	700	706	721	713			
45	509	496	478	469	452	456	452	462	476	479	488	476	474	481	494	489			
50	346	335	323	316	305	307	304	310	320	322	324	318	316	322	331	331			
55	232	230	215	209	208	202	201	211	209	216	212	207	213	211	219	226			
60	158	156	148	143	138	139	138	141	143	144	144	139	140	142	149	153			
65	115	111	110	107	97.4	103	102	101	104	103	105	102	95.0	104	110	108			
70	87.0	86.4	82.4	80.1	74.7	76.5	76.0	78.3	77.8	78.5	76.9	75.0	71.6	76.7	80.9	83.5			
75	65.0	66.1	62.3	57.8	54.6	54.8	57.0	58.9	58.0	58.5	57.4	53.4	51.8	55.2	60.8	63.5			
80	46.7	46.6	43.8	38.1	36.3	36.0	39.1	41.1	41.0	40.6	39.9	34.6	33.7	36.3	43.1	44.8			
85	32.1	30.4	26.6	21.2	18.3	19.5	23.2	27.7	29.5	27.2	23.7	18.6	16.0	20.0	26.4	29.3			
90	22.8	20.5	14.7	7.07	2.74	7.07	14.8	21.6	23.5	20.7	14.4	5.91	0.78	5.92	14.4	19.7			
95	21.5	18.0	14.8	8.28	0.42	9.08	16.4	20.4	25.3	20.5	15.9	7.88	0.45	6.20	13.7	17.5			
100	20.7	18.5	14.4	6.91	0.56	6.96	14.5	22.4	28.6	23.1	13.5	6.56	0.58	5.67	13.3	17.8			
105	19.7	18.3	13.5	5.91	0.83	5.61	15.5	22.9	25.2	22.7	14.9	5.57	0.82	5.00	12.3	17.8			
110	19.3	18.2	12.7	5.89	1.21	5.68	12.7	18.8	20.1	18.2	12.6	5.74	1.16	5.15	11.9	17.2			
115	16.0	14.8	10.7	5.23	1.72	5.16	10.9	15.6	17.0	15.1	10.7	5.00	1.62	4.68	9.18	14.0			
120	14.5	13.4	9.99	5.35	2.39	5.22	10.2	14.3	15.5	13.9	9.92	4.98	2.23	4.77	8.39	12.8			
125	13.9	12.9	9.81	5.65	3.23	5.44	10.0	13.6	14.9	13.2	9.61	5.13	3.00	5.08	8.72	12.2			
130	13.9	12.8	9.98	6.11	4.19	5.83	10.0	13.5	14.5	12.9	9.61	5.51	3.91	5.45	8.82	11.9			
135	13.9	12.9	10.2	6.66	5.27	6.43	10.2	13.1	14.2	12.7	9.74	6.07	4.94	5.99	9.07	12.0			
140	13.8	13.0	10.4	7.34	6.43	7.18	10.1	12.9	13.7	12.4	9.60	6.79	6.05	6.72	9.21	11.6			
145	13.6	13.1	10.3	8.14	7.62	8.07	10.1	12.7	13.3	12.2	9.69	7.67	7.21	7.58	9.30	11.4			
150	13.3	12.6	10.5	9.05	8.79	9.04	10.4	11.9	12.3	11.5	9.98	8.60	8.34	8.50	9.69	11.2			
155	12.9	12.4	10.9	10.0	9.88	9.99	10.8	11.9	12.1	11.4	10.4	9.56	9.44	9.49	10.2	11.2			
160	12.9	12.4	11.4	11.0	10.9	10.9	11.3	11.9	12.2	11.5	11.0	10.5	10.5	10.4	10.9	11.5			
165	12.9	12.6	12.0	11.8	11.8	11.8	11.9	12.1	12.5	11.9	11.6	11.4	11.4	11.4	11.6	12.0			
170	13.3	13.0	12.7	12.6	12.6	12.5	12.4	12.5	13.1	12.4	12.3	12.2	12.3	12.2	12.3	12.5			
175	13.8	13.5	13.2	13.2	13.1	13.1	13.0	13.0	13.8	13.1	13.1	13.0	13.0	12.9	13.0	13.1			
180	14.2	13.7	13.4	13.4	13.4	13.4	13.3	13.4	14.3	13.6	13.5	13.4	13.4	13.4	13.4	13.4			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:zcx
 Test Date:2020-06-19

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: