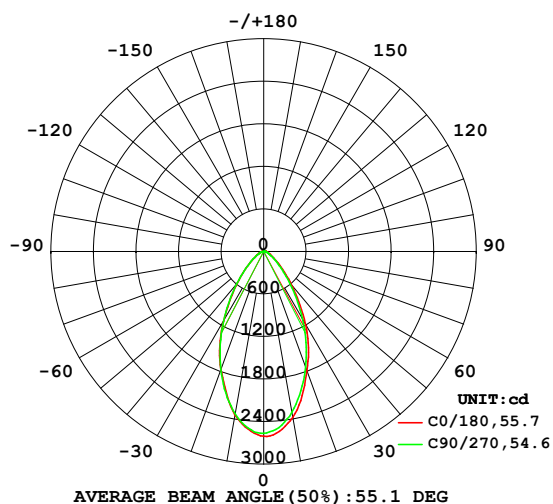


LUMINAIRE PHOTOMETRIC TEST REPORT

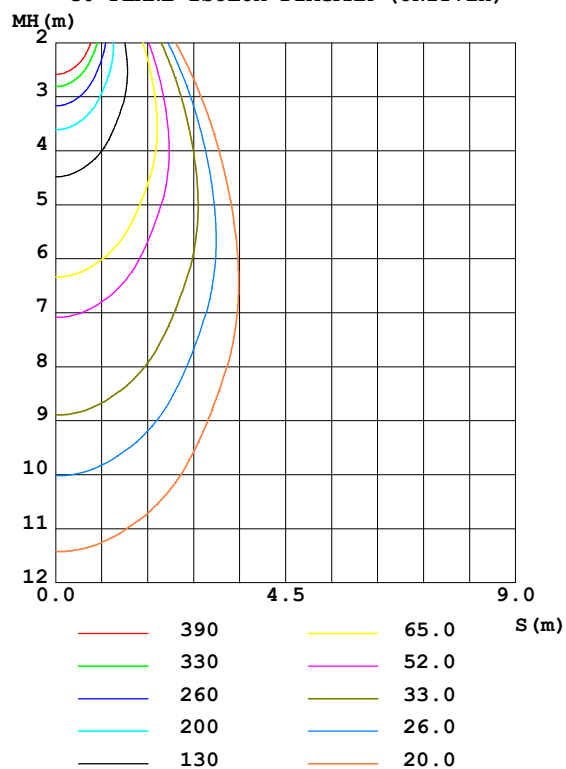
Test:U:225.38V I:0.0782A P:16.558W PF:0.9393 Freq:50.02Hz Lamp Flux:2685.64x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 162.20 lm/W			
MODEL	CTLS-0616-40NR-04WH	I _{max} (cd)	2609	S/MH (C0/180)	0.82
NOMINAL POWER (W)	16	LOR (%)	100.0	S/MH (C90/270)	0.82
RATED VOLTAGE (V)	230.0	TOTAL FLUX (lm)	2685.6	η UP, DN (C0-180)	1.1, 48.7
NOMINAL FLUX (lm)	2685.64	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:

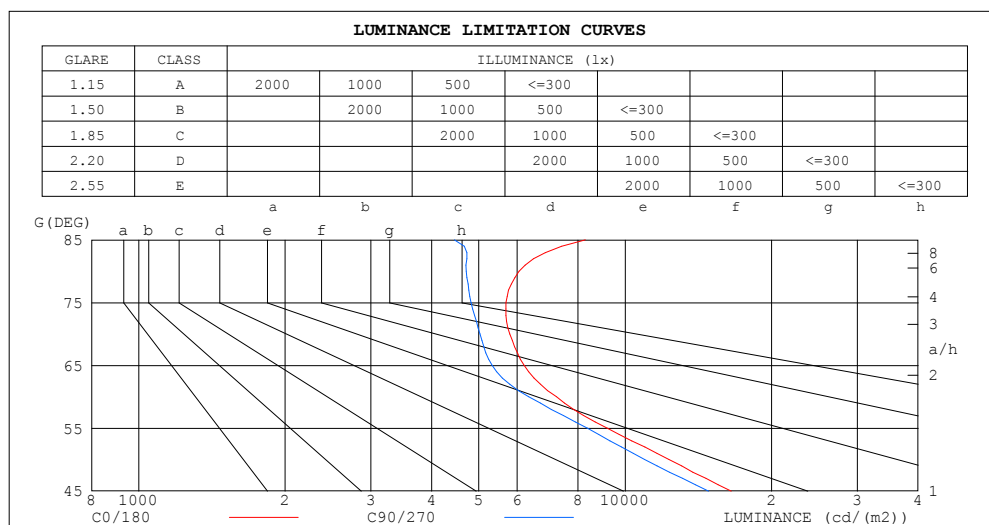
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	2374	2333	2300	2292	2341	2330	2325	2324	0- 10	233.4	233.4	8.69,8.69
20	1787	1759	1731	1732	1768	1790	1771	1773	10- 20	574.4	807.8	30.1,30.1
30	1180	1121	1097	1098	1132	1168	1135	1133	20- 30	662.3	1470	54.7,54.7
40	609.3	583.5	556.7	562.2	577.6	609.5	587.2	604.4	30- 40	523.2	1993	74.2,74.2
50	284.8	265.7	253.7	254.5	261.9	270.2	263.1	275.5	40- 50	311.6	2305	85.8,85.8
60	130.0	121.5	113.9	116.5	116.7	119.0	115.3	123.6	50- 60	162.1	2467	91.9,91.9
70	71.33	67.70	61.94	63.77	63.23	63.43	59.29	67.02	60- 70	87.69	2555	95.1,95.1
80	37.84	35.51	29.47	32.27	32.98	32.34	27.25	35.09	70- 80	51.00	2606	97,97
90	18.64	11.97	2.296	12.66	19.25	11.89	0.6634	11.45	80- 90	22.05	2628	97.8,97.8
100	17.25	11.74	0.3905	12.12	22.85	11.12	0.4118	10.76	90-100	12.06	2640	98.3,98.3
110	15.69	10.40	0.9054	10.32	16.23	10.22	0.8736	9.638	100-110	11.12	2651	98.7,98.7
120	11.76	8.193	1.885	8.380	12.56	8.059	1.759	6.823	110-120	8.149	2659	99,99
130	11.36	8.246	3.435	8.267	11.78	7.860	3.194	7.296	120-130	6.744	2666	99.3,99.3
140	11.38	8.671	5.434	8.409	11.20	7.952	5.098	7.711	130-140	6.120	2672	99.5,99.5
150	11.10	8.936	7.567	8.869	10.23	8.431	7.152	8.277	140-150	5.324	2677	99.7,99.7
160	11.00	9.887	9.521	9.854	10.38	9.466	9.117	9.458	150-160	4.275	2682	99.9,99.9
170	11.52	11.08	11.03	10.92	11.34	10.73	10.78	10.82	160-170	2.926	2685	100,100
180	12.34	11.79	11.77	11.78	12.36	11.81	11.78	11.78	170-180	1.085	2686	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:225.38V I:0.0782A P:16.558W PF:0.9393 Freq:50.02Hz Lamp Flux:2685.64x1 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	8286	4456
80	6052	4715
75	5687	4820
70	5793	5031
65	6203	5328
60	7222	6330
55	9175	8359
50	12306	10965
45	16520	14836

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:225.38V I:0.0782A P:16.558W PF:0.9393 Freq:50.02Hz Lamp Flux:2685.64x1 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	.220	.125	.040	.213	.121	.039	.199	.114	.036	.186	.107	.034	.174	.101	.033		
2.0	.209	.114	.035	.202	.111	.034	.190	.106	.033	.179	.101	.031	.169	.096	.030		
3.0	.197	.105	.031	.191	.102	.031	.181	.098	.030	.171	.094	.029	.162	.090	.028		
4.0	.185	.096	.028	.180	.094	.028	.171	.091	.027	.162	.087	.026	.154	.084	.026		
5.0	.174	.089	.026	.170	.087	.025	.162	.084	.025	.154	.081	.024	.147	.079	.024		
6.0	.165	.083	.024	.161	.081	.023	.153	.079	.023	.147	.076	.022	.140	.074	.022		
7.0	.156	.077	.022	.152	.076	.022	.146	.074	.021	.140	.072	.021	.134	.070	.020		
8.0	.148	.072	.020	.145	.071	.020	.139	.069	.020	.133	.067	.019	.128	.066	.019		
9.0	.140	.068	.019	.137	.067	.019	.132	.065	.019	.127	.064	.018	.122	.062	.018		
10.0	.133	.064	.018	.131	.063	.018	.126	.062	.017	.122	.060	.017	.117	.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	.173	.158	.163	.149	.136	.112	.102	.094	.064	.059	.055	.021	.019	.018		
2.0	.178	.149	.125	.152	.128	.108	.104	.089	.075	.060	.052	.044	.019	.017	.014		
3.0	.167	.131	.101	.143	.113	.088	.098	.078	.062	.057	.046	.036	.018	.015	.012		
4.0	.158	.116	.085	.135	.101	.074	.093	.070	.052	.054	.041	.031	.017	.013	.010		
5.0	.150	.105	.072	.129	.091	.063	.089	.064	.044	.051	.037	.026	.017	.012	.009		
6.0	.143	.096	.063	.123	.083	.055	.085	.058	.039	.049	.034	.023	.016	.011	.008		
7.0	.136	.089	.056	.117	.077	.049	.081	.054	.035	.047	.032	.021	.015	.010	.007		
8.0	.130	.083	.051	.112	.072	.044	.078	.051	.031	.045	.030	.019	.015	.010	.006		
9.0	.125	.078	.046	.108	.068	.040	.075	.048	.029	.043	.028	.017	.014	.009	.006		
10.0	.120	.074	.043	.103	.064	.037	.072	.045	.026	.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:225.38V I:0.0782A P:16.558W PF:0.9393 Freq:50.02Hz Lamp Flux:2685.64x1 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	15.3	16.5	15.6	16.7	16.9	14.9	16.0	15.2	16.3	16.5
3H	15.8	16.9	16.1	17.1	17.3	15.4	16.4	15.7	16.6	16.9
4H	16.1	17.1	16.4	17.3	17.6	15.6	16.6	15.9	16.8	17.1
6H	16.4	17.3	16.7	17.6	17.9	15.8	16.7	16.1	17.0	17.3
8H	16.5	17.4	16.9	17.7	18.0	15.9	16.7	16.2	17.0	17.4
12H	16.7	17.5	17.1	17.8	18.2	15.9	16.8	16.3	17.1	17.4
4H 2H	15.4	16.4	15.7	16.7	16.9	15.1	16.0	15.4	16.3	16.6
3H	16.1	16.9	16.5	17.2	17.6	15.7	16.5	16.0	16.8	17.2
4H	16.5	17.3	16.9	17.6	18.0	16.0	16.8	16.4	17.1	17.5
6H	17.0	17.6	17.4	18.0	18.4	16.4	17.0	16.8	17.4	17.8
8H	17.2	17.8	17.6	18.2	18.6	16.5	17.1	16.9	17.5	17.9
12H	17.4	18.0	17.9	18.4	18.9	16.6	17.2	17.0	17.6	18.0
8H 4H	16.6	17.2	17.1	17.6	18.1	16.2	16.8	16.6	17.2	17.6
6H	17.2	17.7	17.7	18.2	18.6	16.6	17.2	17.1	17.6	18.1
8H	17.6	18.0	18.0	18.5	19.0	16.9	17.3	17.3	17.8	18.3
12H	17.9	18.3	18.4	18.8	19.3	17.0	17.4	17.6	17.9	18.4
12H 4H	16.6	17.2	17.1	17.6	18.0	16.2	16.7	16.6	17.2	17.6
6H	17.3	17.7	17.7	18.2	18.7	16.7	17.2	17.2	17.6	18.1
8H	17.6	18.0	18.1	18.5	19.0	17.0	17.4	17.5	17.8	18.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.7 / - 0.9					+ 0.8 / - 1.0				
1.5H	+ 1.0 / - 0.7					+ 1.1 / - 0.8				
2.0H	+ 1.5 / - 0.8					+ 1.6 / - 1.0				

CIE Pub.117, 2686 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 3.4$)

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:

UTILIZATION FACTORS TABLE

Test:U:225.38V I:0.0782A P:16.558W PF:0.9393 Freq:50.02Hz Lamp Flux:2685.64x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

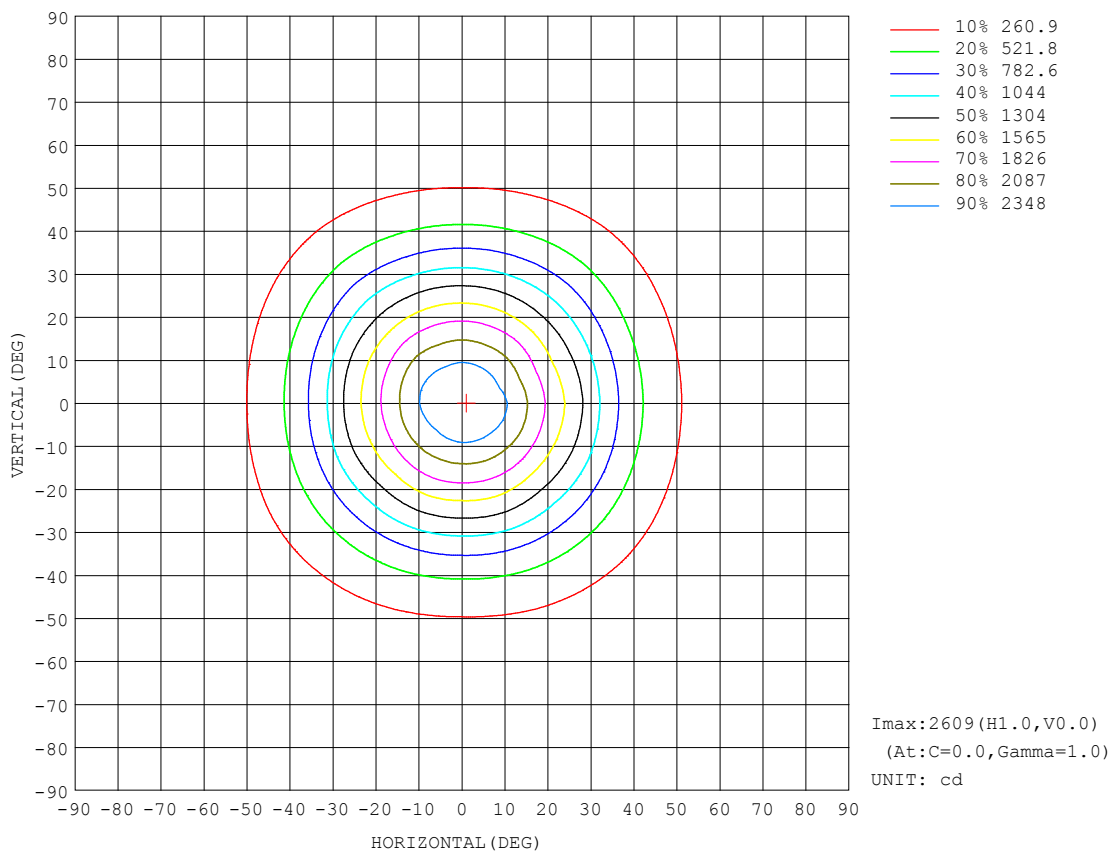
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	75	67	62	75	67	62	74	66	62	57
0.80	84	76	71	83	76	71	82	75	70	65
1.00	90	83	78	89	82	77	87	82	77	72
1.25	95	88	84	94	88	83	92	86	82	77
1.50	99	92	88	98	92	87	95	90	86	80
2.00	103	98	93	102	96	92	98	94	91	84
2.50	106	100	96	104	99	95	100	96	93	86
3.00	108	103	99	106	102	98	102	99	96	88
4.00	110	107	103	108	105	102	104	101	99	91
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:225.38V I:0.0782A P:16.558W PF:0.9393 Freq:50.02Hz Lamp Flux:2685.64x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

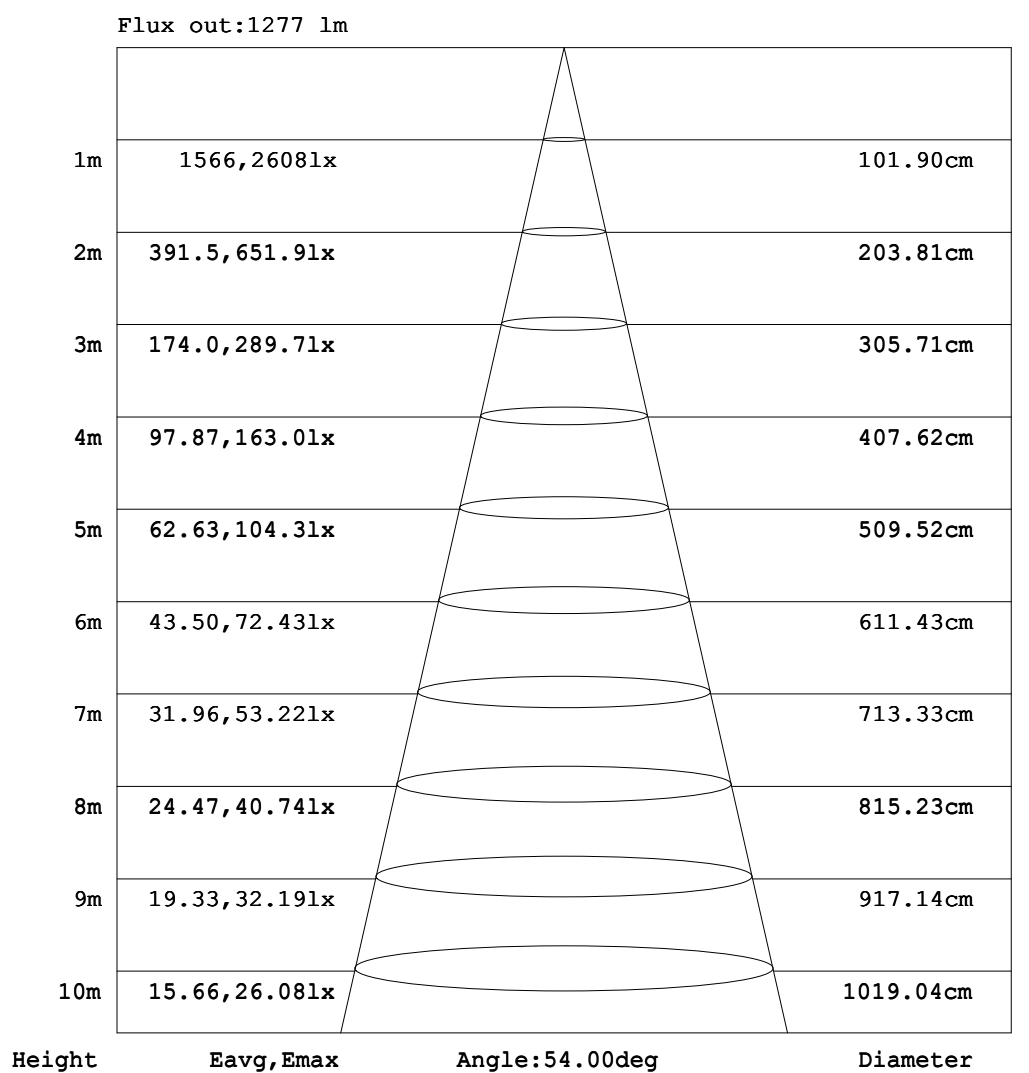


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:zcx
Test Date:2020-06-19

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:225.38V I:0.0782A P:16.558W PF:0.9393 Freq:50.02Hz Lamp Flux:2685.64x1 lm		
NAME: LED Linear Lighting System	TYPE:	WEIGHT:2kg
SPEC.:	DIM.: 600*60*45mm	SERIAL No.:
MFR.: CoreShine	SUR.:600*60mm	Shielding Angle:

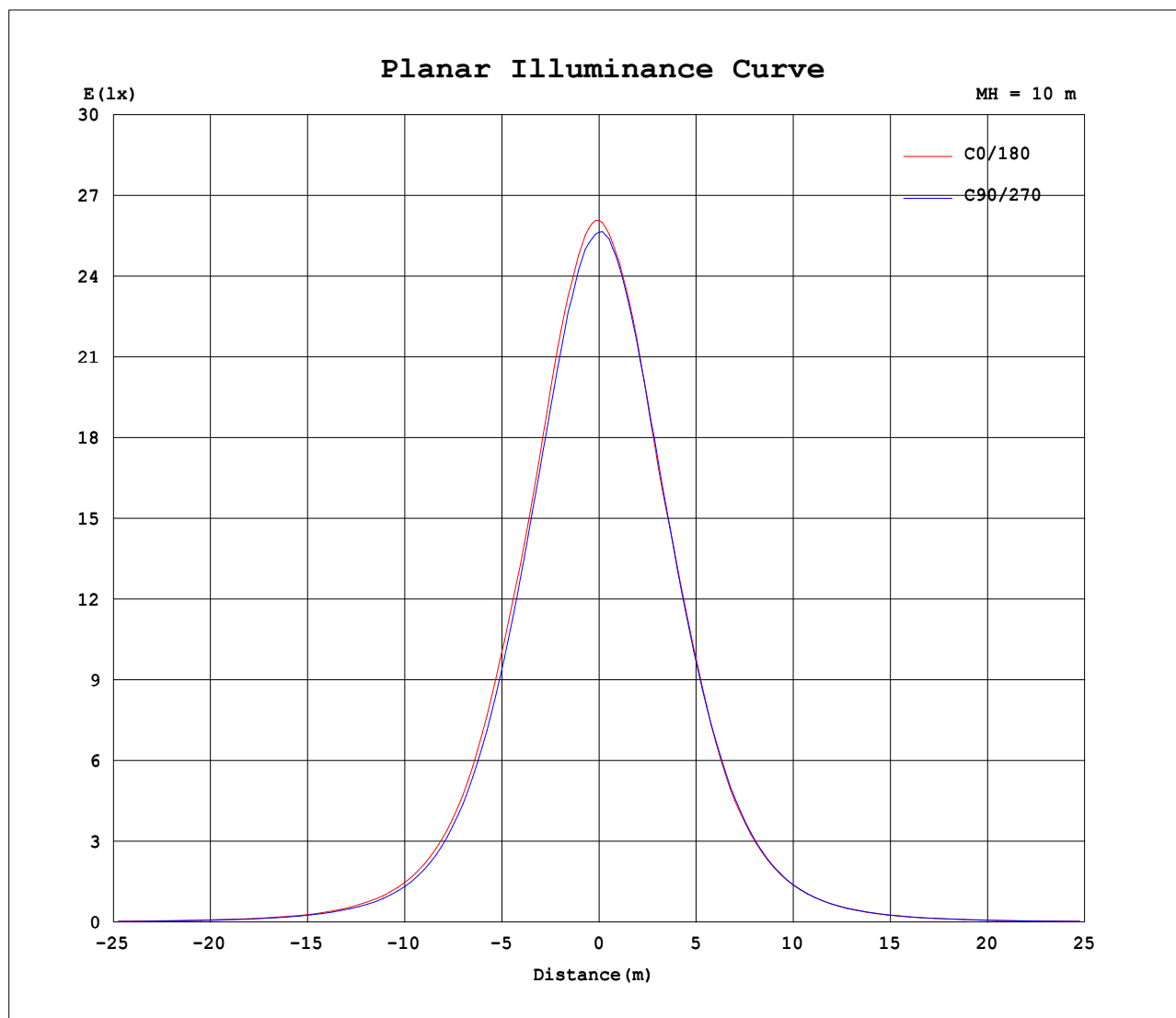


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:225.38V I:0.0782A P:16.558W PF:0.9393 Freq:50.02Hz Lamp Flux:2685.64x1 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	2607	2604	2586	2568	2564	2569	2570	2573	2607	2604	2586	2568	2564	2569	2570	2573			
5	2545	2540	2515	2503	2493	2484	2480	2486	2516	2522	2514	2500	2504	2500	2500	2501			
10	2374	2361	2333	2317	2300	2294	2292	2313	2341	2347	2330	2316	2325	2323	2324	2323			
15	2103	2100	2073	2055	2034	2037	2038	2048	2054	2075	2096	2064	2068	2062	2074	2058			
20	1787	1773	1759	1753	1731	1742	1732	1734	1768	1773	1790	1778	1771	1767	1773	1742			
25	1500	1473	1433	1439	1415	1424	1408	1445	1470	1483	1473	1463	1453	1451	1448	1450			
30	1180	1167	1121	1120	1097	1103	1098	1133	1132	1160	1168	1144	1135	1135	1133	1151			
35	862	855	830	822	802	807	808	819	820	841	873	843	839	840	853	847			
40	609	599	583	573	557	563	562	572	578	590	610	590	587	590	604	598			
45	421	408	396	389	378	382	380	389	391	398	409	399	395	400	411	408			
50	285	275	266	263	254	257	254	263	262	265	270	265	263	267	276	275			
55	189	189	176	172	173	168	168	177	170	178	176	173	177	174	181	188			
60	130	128	122	118	114	117	117	118	117	118	119	117	115	118	124	127			
65	94.4	91.3	90.8	88.1	81.1	86.1	85.7	84.7	84.6	84.5	86.5	85.4	78.8	85.9	91.0	89.7			
70	71.3	71.0	67.7	66.1	61.9	63.9	63.8	66.0	63.2	64.6	63.4	62.8	59.3	63.3	67.0	69.2			
75	53.0	53.9	51.1	47.3	44.9	45.5	47.7	49.0	47.0	47.7	47.2	44.1	42.6	45.2	50.3	52.2			
80	37.8	37.7	35.5	30.9	29.5	29.6	32.3	33.8	33.0	32.7	32.3	28.2	27.3	29.4	35.1	36.5			
85	26.0	24.5	21.2	16.7	14.0	15.5	18.8	22.8	23.8	22.1	18.9	14.6	12.5	15.7	21.2	23.7			
90	18.6	16.8	12.0	5.52	2.30	6.05	12.7	17.7	19.3	16.8	11.9	4.96	0.66	4.46	11.5	16.1			
95	18.1	15.2	12.5	6.97	0.30	7.48	13.9	17.2	20.7	17.1	13.3	6.61	0.37	5.23	11.5	14.8			
100	17.3	15.5	11.7	5.66	0.39	5.58	12.1	19.8	22.8	20.3	11.1	5.34	0.41	4.63	10.8	15.1			
105	16.6	15.6	11.4	4.80	0.59	4.51	13.2	19.3	20.7	19.0	12.6	4.48	0.60	4.04	10.5	15.2			
110	15.7	14.9	10.4	4.76	0.91	4.57	10.3	15.4	16.2	14.8	10.2	4.60	0.87	4.09	9.64	14.2			
115	12.9	12.1	8.71	4.25	1.33	4.23	8.91	12.8	13.7	12.3	8.74	4.04	1.25	3.77	7.48	11.5			
120	11.8	11.0	8.19	4.34	1.89	4.22	8.38	11.7	12.6	11.3	8.06	4.03	1.76	3.86	6.82	10.5			
125	11.3	10.5	8.07	4.60	2.60	4.42	8.21	11.2	12.0	10.8	7.84	4.14	2.40	4.13	7.16	10.0			
130	11.4	10.5	8.25	5.03	3.44	4.79	8.27	11.1	11.8	10.6	7.86	4.48	3.19	4.45	7.30	9.81			
135	11.4	10.6	8.46	5.52	4.39	5.35	8.43	10.9	11.5	10.4	8.01	5.00	4.10	4.97	7.49	9.91			
140	11.4	10.7	8.67	6.15	5.43	6.04	8.41	10.7	11.2	10.2	7.95	5.68	5.10	5.63	7.71	9.70			
145	11.3	10.9	8.67	6.90	6.50	6.86	8.52	10.7	11.0	10.1	8.11	6.49	6.12	6.44	7.86	9.73			
150	11.1	10.6	8.94	7.73	7.57	7.76	8.87	10.1	10.2	9.65	8.43	7.36	7.15	7.32	8.28	9.53			
155	10.9	10.5	9.37	8.63	8.58	8.65	9.35	10.2	10.2	9.71	8.92	8.24	8.16	8.21	8.83	9.60			
160	11.0	10.6	9.89	9.51	9.52	9.47	9.85	10.4	10.4	9.92	9.47	9.09	9.12	9.10	9.46	10.0			
165	11.1	10.9	10.5	10.3	10.3	10.3	10.4	10.6	10.7	10.3	10.1	9.94	9.99	9.97	10.1	10.5			
170	11.5	11.3	11.1	11.0	11.0	11.0	10.9	11.0	11.3	10.8	10.7	10.7	10.8	10.7	10.8	11.0			
175	12.0	11.8	11.6	11.6	11.5	11.5	11.5	11.5	12.0	11.5	11.4	11.4	11.4	11.4	11.4	11.6			
180	12.3	12.0	11.8	11.8	11.8	11.8	11.8	11.8	12.4	11.9	11.8	11.8	11.8	11.8	11.8	11.8			

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: