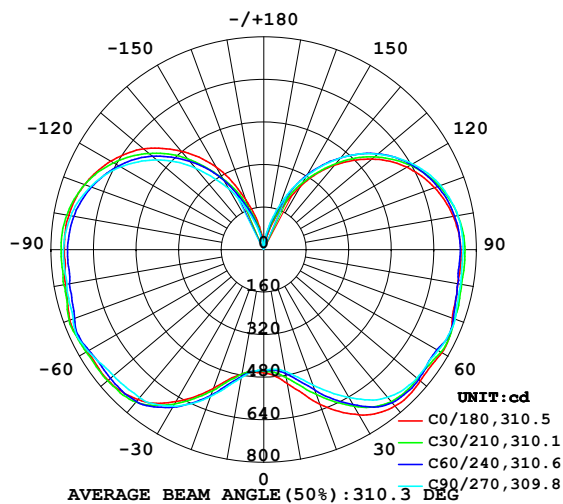


## LUMINAIRE PHOTOMETRIC TEST REPORT

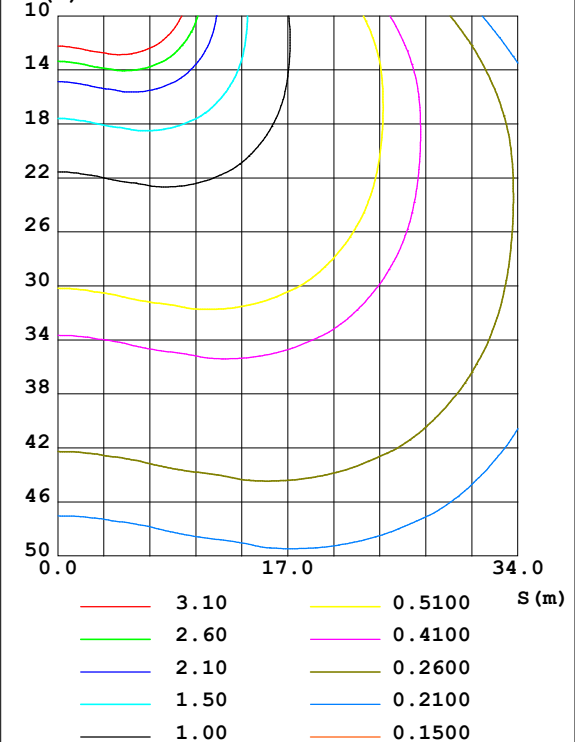
Test:U:119.8V I:0.5175A P:61.34W PF:0.9897 Freq:59.98Hz Lamp Flux:8080.8x1 lm		
NAME:LOC-CL-MW(45/54/63)MCCT(30/40/50)D	TYPE:	WEIGHT:
SPEC.:5000K	DIM.:	SERIAL No.:
MFR.:	SUR.:21cm*16cm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 131.74 lm/W			
MODEL	LOC-CL-MW(45/54/63)MCCT(30/40/50)D	Imax(cd)	780.9	S/MH(C0/180)	2.21
NOMINAL POWER(W)	63	LOR(%)	100.0	S/MH(C90/270)	2.19
RATED VOLTAGE(V)	100-277	TOTAL FLUX(lm)	8080.8	$\eta$ UP,DN(C0-180)	21.8,28.2
NOMINAL FLUX(lm)	8080.8	CIE CLASS	DIFFUSE	$\eta$ UP,DN(C180-360)	21.8,28.2
LAMPS INSIDE	1	$\eta$ up(%)	43.7	CIBSE SHR NOM	2.00
TEST VOLTAGE(V)	120	$\eta$ down(%)	56.3	CIBSE SHR MAX	2.00

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2021-11-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.361  
 Humidity:65.0%  
 Test Distance:8.800m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	511.7	481.1	464.9	469.4	475.4	480.1	489.4	475.6	0- 10	44.39	44.39	0.55,0.55
20	618.7	570.3	542.3	557.8	556.1	573.9	588.4	571.4	10- 20	149.1	193.5	2.39,2.39
30	717.5	676.4	642.5	656.6	659.2	677.3	679.8	670.5	20- 30	289.8	483.2	5.98,5.98
40	767.9	748.6	725.2	724.0	736.1	746.8	726.3	727.8	30- 40	446.7	929.9	11.5,11.5
50	768.4	757.6	751.3	740.3	764.7	760.0	737.8	742.4	40- 50	578.8	1509	18.7,18.7
60	773.9	761.2	757.4	757.1	765.9	765.1	763.5	752.7	50- 60	677.2	2186	27.1,27.1
70	754.2	761.1	766.2	754.6	776.9	768.3	762.8	747.9	60- 70	759.4	2945	36.4,36.4
80	740.9	748.4	751.3	743.7	756.2	753.0	752.0	735.9	70- 80	795.4	3741	46.3,46.3
90	741.5	748.3	749.8	740.3	750.6	750.4	753.3	735.0	80- 90	812.7	4553	56.3,56.3
100	723.6	735.2	740.5	730.6	745.1	738.4	736.0	722.3	90-100	808.7	5362	66.4,66.4
110	683.0	699.1	707.8	696.7	717.2	702.8	692.9	686.0	100-110	759.3	6121	75.8,75.8
120	621.0	638.4	645.7	636.6	665.5	641.4	622.7	623.4	110-120	664.4	6786	84,84
130	529.9	552.1	558.7	552.5	590.6	555.0	525.2	535.4	120-130	534.6	7321	90.6,90.6
140	414.8	437.2	450.8	442.1	483.6	440.9	399.9	424.2	130-140	384.7	7705	95.4,95.4
150	274.7	306.1	317.8	311.1	358.8	304.9	264.6	290.8	140-150	234.9	7940	98.3,98.3
160	128.1	156.2	178.3	163.0	200.3	158.4	128.1	148.7	150-160	108.4	8049	99.6,99.6
170	31.21	43.91	61.49	50.20	76.87	47.70	31.39	42.23	160-170	29.66	8078	100,100
180	8.884	8.759	8.685	8.617	8.939	8.752	8.640	8.630	170-180	2.626	8081	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 1205.4 lm

%lum = 14.9%

%lamp = 14.9%

Conical surface Flux(120deg): 2186 lm

%lum = 27.1%

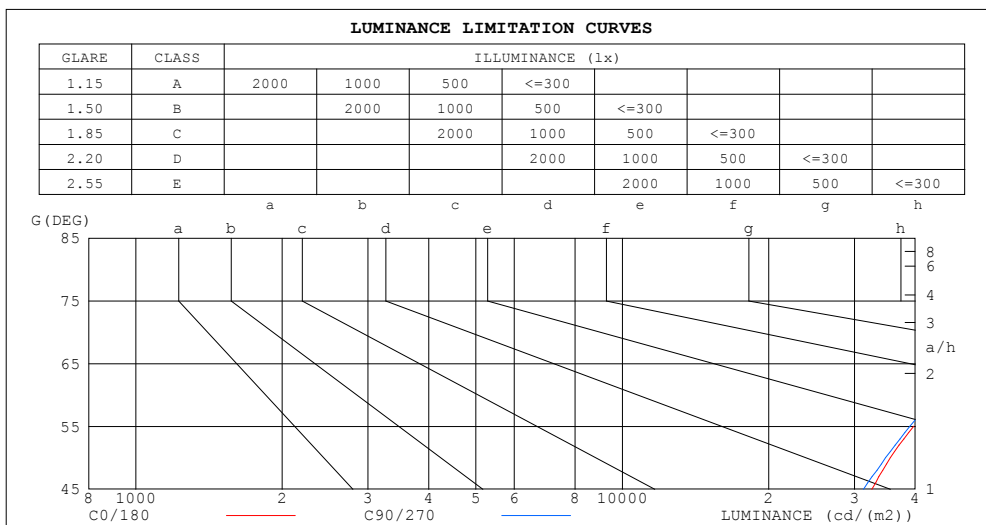
%lamp = 27.1%

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2021-11-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.361  
 Humidity:65.0%  
 Test Distance:8.800m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:119.8V I:0.5175A P:61.34W PF:0.9897 Freq:59.98Hz Lamp Flux:8080.8x1 lm		
NAME:LOC-CL-MW(45/54/63)MCCT(30/40/50)D	TYPE:	WEIGHT:
SPEC.:5000K	DIM.:	SERIAL No.:
MFR.:	SUR.:21cm*16cm	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	253549	255400
80	126982	128766
75	85898	86826
70	65628	66677
65	54296	53906
60	46066	45082
55	39743	38983
50	35577	34787
45	32569	31321

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2021-11-18

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.361  
Humidity:65.0%  
Test Distance:8.800m [K=1.0000]  
Remarks:

## WEC AND CCEC

Test:U:119.8V I:0.5175A P:61.34W PF:0.9897 Freq:59.98Hz Lamp Flux:8080.8x1 lm		
NAME:LOC-CL-MW(45/54/63)MCCT(30/40/50)D	TYPE:	WEIGHT:
SPEC.:5000K	DIM.:	SERIAL No.:
MFR.:	SUR.:21cm*16cm	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	.420	.239	.076	.399	.228	.072	.361	.207	.066	.325	.188	.060	.293	.170	.055		
2.0	.350	.192	.059	.331	.182	.056	.296	.165	.051	.264	.148	.046	.234	.132	.042		
3.0	.305	.162	.049	.288	.154	.046	.256	.139	.042	.226	.124	.038	.198	.110	.034		
4.0	.271	.141	.041	.256	.134	.040	.226	.120	.036	.199	.107	.032	.173	.094	.029		
5.0	.244	.125	.036	.230	.118	.034	.203	.106	.031	.178	.094	.028	.154	.083	.025		
6.0	.223	.112	.032	.209	.106	.030	.185	.095	.028	.161	.084	.025	.140	.073	.022		
7.0	.204	.101	.029	.192	.096	.027	.169	.086	.025	.148	.076	.022	.127	.066	.019		
8.0	.189	.092	.026	.178	.087	.025	.156	.078	.022	.136	.069	.020	.117	.060	.018		
9.0	.175	.085	.024	.165	.080	.023	.145	.072	.020	.126	.063	.018	.109	.055	.016		
10.0	.164	.079	.022	.154	.074	.021	.135	.066	.019	.118	.059	.017	.101	.051	.015		

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	.523	.523	.523	.447	.447	.447	.305	.305	.305	.175	.175	.175	.056	.056	.056	
1.0	.523	.490	.461	.448	.421	.397	.306	.290	.274	.176	.168	.160	.056	.054	.052	
2.0	.518	.469	.429	.443	.404	.370	.304	.279	.258	.175	.163	.151	.056	.053	.049	
3.0	.511	.454	.409	.438	.392	.354	.301	.272	.249	.174	.159	.147	.056	.052	.048	
4.0	.503	.442	.396	.432	.382	.344	.297	.266	.242	.172	.156	.143	.055	.051	.047	
5.0	.496	.433	.387	.426	.375	.337	.293	.262	.238	.170	.154	.141	.055	.050	.047	
6.0	.488	.426	.381	.420	.369	.332	.290	.258	.235	.168	.152	.140	.054	.050	.046	
7.0	.481	.420	.376	.414	.364	.328	.286	.255	.232	.166	.150	.138	.054	.049	.046	
8.0	.475	.414	.373	.409	.359	.325	.283	.252	.231	.165	.149	.137	.053	.049	.046	
9.0	.469	.410	.370	.404	.356	.323	.280	.250	.229	.163	.148	.137	.053	.048	.045	
10.0	.463	.406	.368	.399	.353	.321	.277	.248	.228	.161	.147	.136	.052	.048	.045	

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2021-11-18

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.361  
Humidity:65.0%  
Test Distance:8.800m [K=1.0000]  
Remarks:

UGR(Unified Glare Rating) Table

Test:U:119.8V I:0.5175A P:61.34W PF:0.9897 Freq:59.98Hz Lamp Flux:8080.8x1 lm										
NAME:LOC-CL-MW(45/54/63)MCCT(30/40/50)D					TYPE:			WEIGHT:		
SPEC.:5000K					DIM.:			SERIAL No.:		
MFR.:					SUR.:21cm*16cm			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	15.8	17.0	16.6	17.8	18.9	15.7	16.9	16.5	17.7	18.8
3H	19.0	20.0	19.8	20.9	22.0	18.9	20.0	19.8	20.9	21.9
4H	20.7	21.7	21.6	22.6	23.7	20.7	21.7	21.6	22.6	23.7
6H	22.7	23.6	23.5	24.5	25.6	22.7	23.6	23.6	24.5	25.6
8H	23.8	24.7	24.7	25.6	26.7	23.8	24.7	24.7	25.6	26.7
12H	25.1	25.9	25.9	26.8	28.0	25.1	26.0	26.0	26.9	28.0
4H 2H	16.8	17.8	17.6	18.7	19.8	16.7	17.7	17.6	18.6	19.7
3H	20.1	20.9	20.9	21.8	23.0	20.0	20.9	20.9	21.8	23.0
4H	22.0	22.8	22.9	23.7	24.9	21.9	22.7	22.8	23.7	24.8
6H	24.1	24.8	25.0	25.7	26.9	24.1	24.8	25.0	25.7	26.9
8H	25.3	26.0	26.2	26.9	28.1	25.3	26.0	26.2	26.9	28.1
12H	26.7	27.3	27.6	28.2	29.5	26.7	27.3	27.6	28.2	29.5
8H 4H	22.7	23.3	23.6	24.3	25.5	22.6	23.3	23.6	24.3	25.5
6H	25.1	25.6	26.0	26.6	27.8	25.0	25.6	26.0	26.6	27.8
8H	26.5	27.0	27.4	27.9	29.2	26.4	26.9	27.4	27.9	29.2
12H	28.1	28.5	29.0	29.5	30.8	28.0	28.5	29.0	29.5	30.7
12H 4H	22.9	23.5	23.8	24.4	25.7	22.8	23.5	23.8	24.4	25.6
6H	25.4	25.9	26.3	26.9	28.1	25.4	25.9	26.3	26.8	28.1
8H	26.9	27.3	27.9	28.3	29.6	26.9	27.3	27.8	28.3	29.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				

CIE Pub.117, 8081 lm Total Lamp Luminous Flux Correct ( $8\log(F/F_0) = 7.3$ )

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2021-11-18

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.361  
Humidity:65.0%  
Test Distance:8.800m [K=1.0000]  
Remarks:

## UTILIZATION FACTORS TABLE

Test:U:119.8V I:0.5175A P:61.34W PF:0.9897 Freq:59.98Hz Lamp Flux:8080.8x1 lm		
NAME:LOC-CL-MW(45/54/63)MCCT(30/40/50)D	TYPE:	WEIGHT:
SPEC.:5000K	DIM.:	SERIAL No.:
MFR.:	SUR.:21cm*16cm	Shielding Angle:

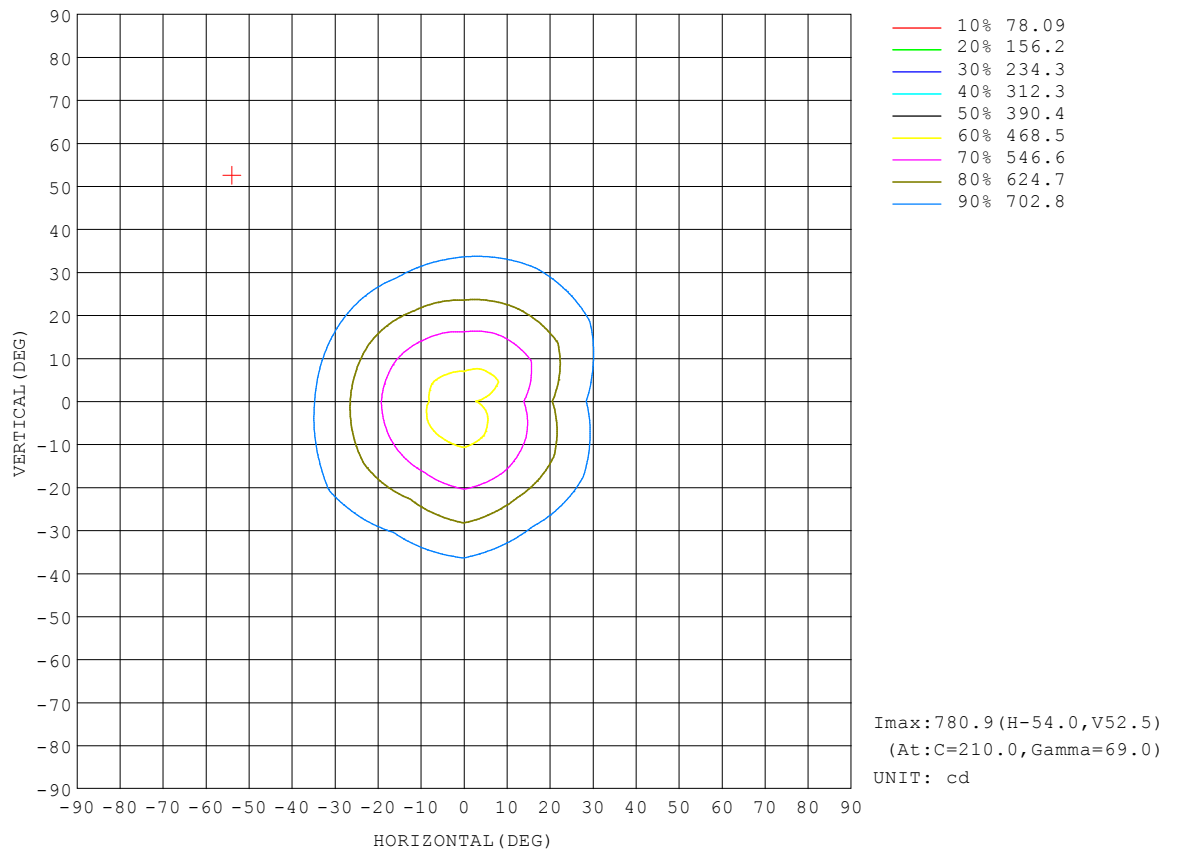
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	37	24	17	35	23	16	32	22	15	8
0.80	46	31	23	43	30	22	39	28	21	11
1.00	53	38	29	50	37	28	44	35	26	15
1.25	60	45	36	56	43	34	49	39	31	18
1.50	65	51	41	61	48	39	53	43	35	21
2.00	73	60	50	68	56	47	59	50	42	25
2.50	78	66	56	72	62	53	63	54	47	29
3.00	82	71	62	76	66	58	66	58	51	31
4.00	87	78	70	81	73	65	70	63	57	35
5.00	91	82	75	84	77	70	72	67	61	38
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2021-11-18

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.361  
 Humidity:65.0%  
 Test Distance:8.800m [K=1.0000]  
 Remarks:

## ISOCANDELA DIAGRAM

Test:U:119.8V I:0.5175A P:61.34W PF:0.9897 Freq:59.98Hz Lamp Flux:8080.8x1 lm		
NAME:LOC-CL-MW(45/54/63)MCCT(30/40/50)D	TYPE:	WEIGHT:
SPEC.:5000K	DIM.:	SERIAL No.:
MFR.:	SUR.:21cm*16cm	Shielding Angle:

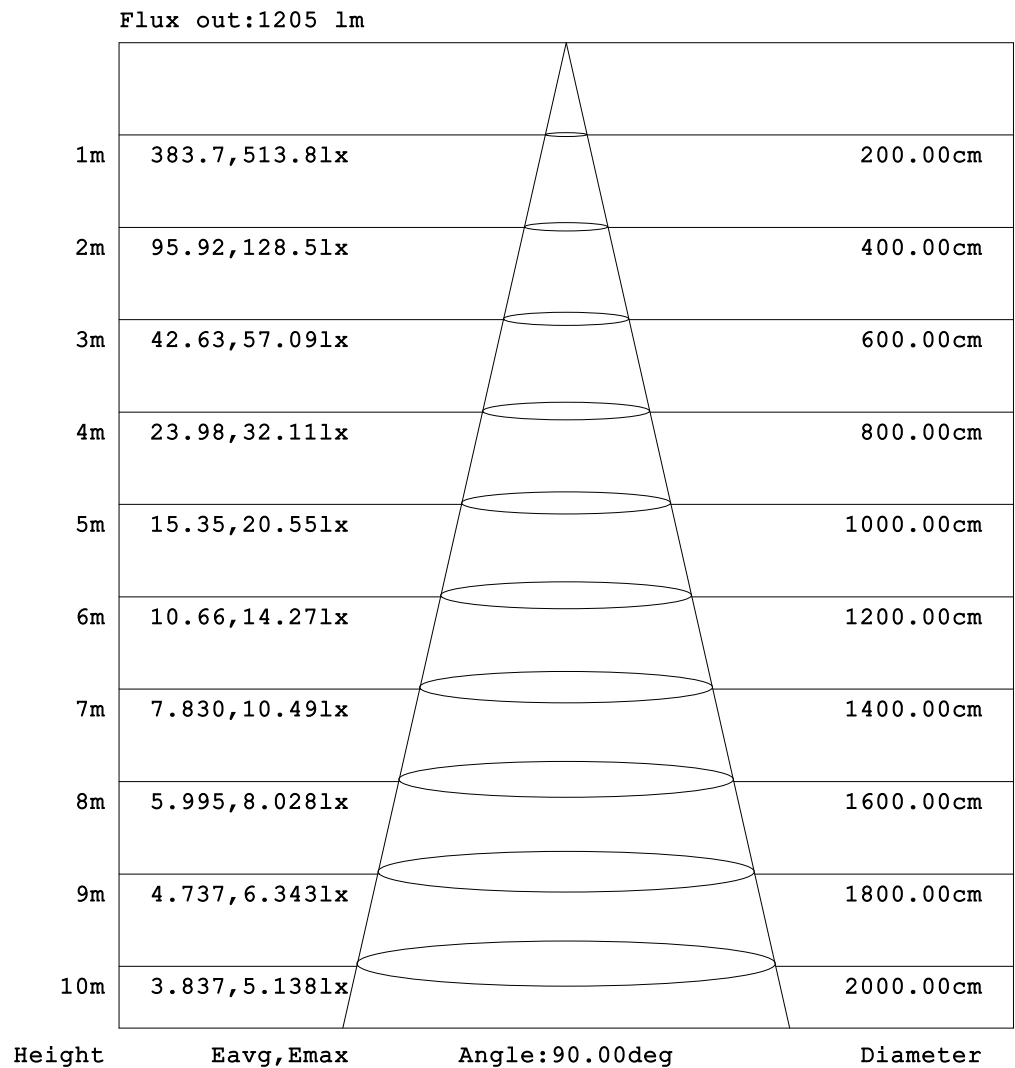


C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2021-11-18

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.361  
Humidity:65.0%  
Test Distance:8.800m [K=1.0000]  
Remarks:

## AAI Figure

Test:U:119.8V I:0.5175A P:61.34W PF:0.9897 Freq:59.98Hz Lamp Flux:8080.8x1 lm		
NAME:LOC-CL-MW(45/54/63)MCCT(30/40/50)D	TYPE:	WEIGHT:
SPEC.:5000K	DIM.:	SERIAL No.:
MFR.:	SUR.:21cm*16cm	Shielding Angle:



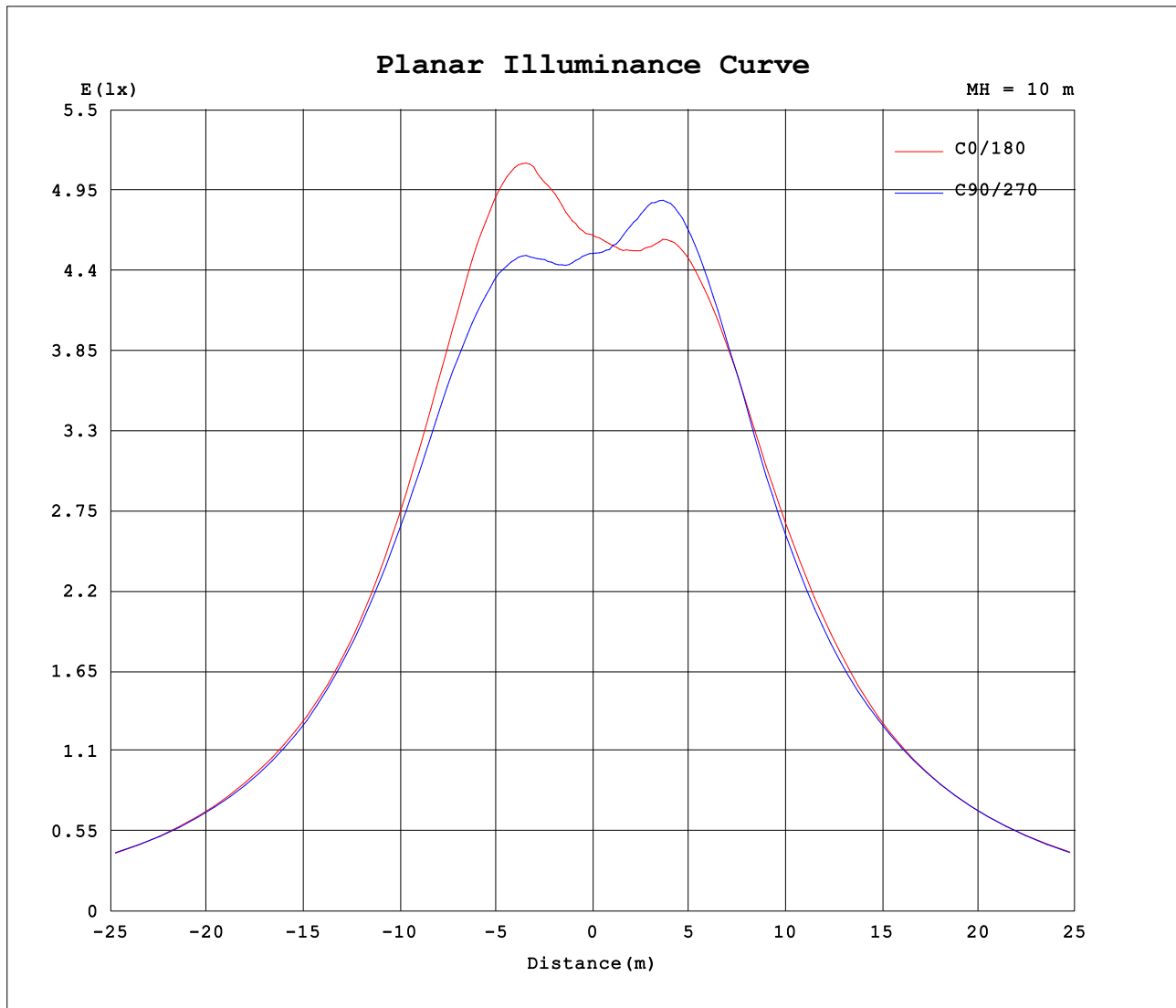
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2021-11-18

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.361  
 Humidity: 65.0%  
 Test Distance: 8.800m [K=1.0000]  
 Remarks:



## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2021-11-18

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.361  
Humidity: 65.0%  
Test Distance: 8.800m [K=1.0000]  
Remarks:

### LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:119.8V I:0.5175A P:61.34W PF:0.9897 Freq:59.98Hz Lamp Flux:8080.8x1 lm		
NAME:LOC-CL-MW(45/54/63)MCCT(30/40/50)D	TYPE:	WEIGHT:
SPEC.:5000K	DIM.:	SERIAL No.:
MFR.:	SUR.:21cm*16cm	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	464	458	455	452	450	447	464	458	455	452	450	447							
5	478	463	455	452	451	450	464	460	459	460	454	451							
10	512	489	473	465	469	470	475	475	485	489	478	473							
15	559	529	511	497	507	506	505	512	527	534	521	515							
20	619	579	562	542	561	554	556	565	583	588	577	566							
25	671	631	620	592	617	604	609	618	636	639	628	620							
30	717	680	673	643	667	647	659	670	685	680	674	667							
35	750	722	723	690	709	688	705	715	721	710	704	708							
40	768	746	751	725	734	714	736	748	745	726	723	732							
45	774	755	760	744	746	724	755	762	753	733	733	741							
50	768	755	760	751	750	730	765	767	753	738	737	747							
55	766	758	752	751	754	739	764	768	751	747	740	751							
60	774	770	753	757	761	753	766	771	759	763	749	756							
65	771	772	767	765	764	763	775	776	768	774	755	759							
70	754	764	758	766	752	757	777	779	757	763	742	753							
75	747	761	747	755	740	752	764	765	747	758	735	745							
80	741	756	741	751	736	751	756	764	742	752	728	743							
85	743	757	737	748	732	747	750	761	737	753	724	742							
90	741	757	740	750	732	749	751	763	738	753	726	744							
95	736	752	737	748	731	747	750	760	734	748	722	741							
100	724	741	729	741	723	738	745	752	725	736	713	732							
105	706	725	716	727	710	724	734	738	711	719	698	717							
110	683	702	696	708	691	703	717	716	690	693	678	694							
115	655	672	671	681	666	674	694	689	663	662	652	664							
120	621	636	641	646	636	637	665	652	630	623	620	627							
125	580	592	605	606	600	595	630	611	593	577	583	583							
130	530	543	561	559	557	548	591	563	547	525	537	534							
135	475	487	509	509	506	495	539	510	492	468	485	481							
140	415	423	451	451	449	436	484	447	435	400	428	420							
145	350	357	390	386	387	370	424	376	372	330	367	352							
150	275	289	324	318	321	301	359	308	302	265	298	283							
155	193	217	245	252	240	232	283	243	221	196	219	217							
160	128	145	168	178	167	159	200	166	151	128	150	148							
165	69.9	84.3	107	116	105	98.8	134	107	89.5	71.8	89.8	90.4							
170	31.2	37.5	50.3	61.5	51.4	49.0	76.9	55.6	39.8	31.4	40.3	44.2							
175	11.1	13.8	18.8	24.6	19.2	18.6	30.7	21.0	13.3	11.4	12.4	17.0							
180	8.88	8.82	8.69	8.68	8.62	8.61	8.94	8.77	8.73	8.64	8.66	8.59							

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2021-11-18

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.361  
Humidity:65.0%  
Test Distance:8.800m [K=1.0000]  
Remarks: