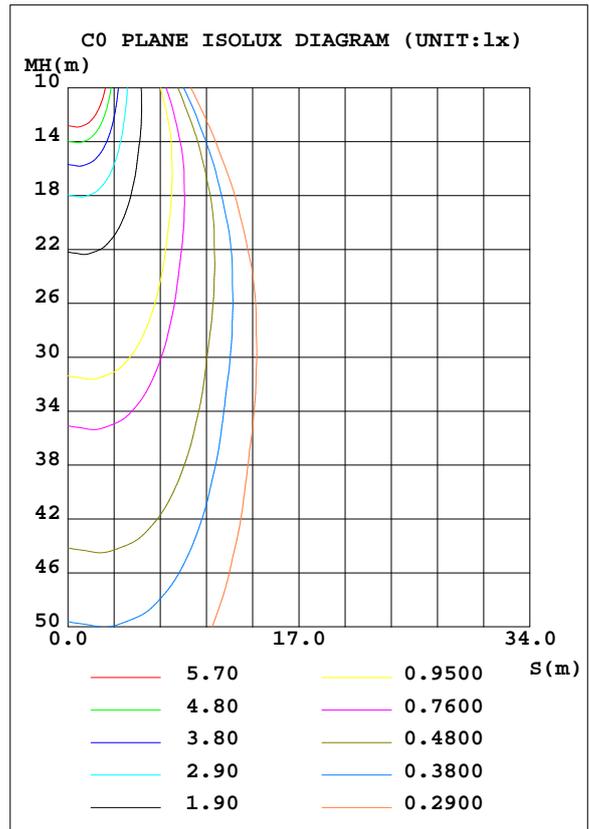
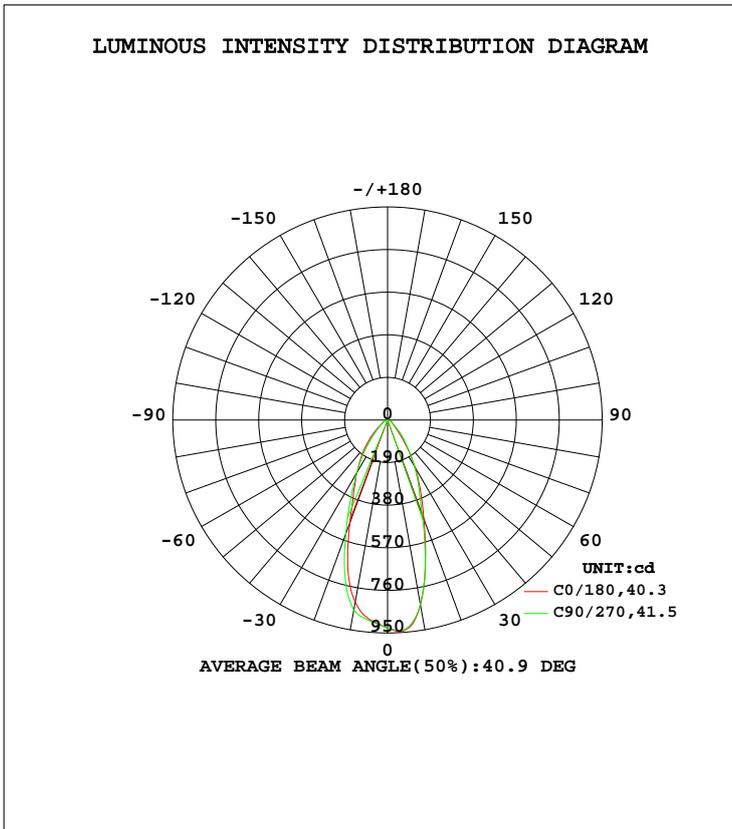


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:5.995V I:0.9636A P:5.776W PF:0.9998 Freq:0Hz Lamp Flux:672.48x1 lm		
NAME: MR16 6W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 116.42 lm/W			
MODEL	MR16 6W 6V	I <sub>max</sub> (cd)	947.1	S/MH(C0/180)	0.67
NOMINAL POWER(W)	6	LOR(%)	100.0	S/MH(C90/270)	0.71
RATED VOLTAGE(V)	6	TOTAL FLUX(lm)	672.48	η UP, DN(C0-180)	0.5,46.6
NOMINAL FLUX(lm)	672.48	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.4,52.5
LAMPS INSIDE	1	η up(%)	0.9	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	6	η down(%)	99.1	CIBSE SHR MAX	0.70



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:24.5DEG  
 Operators:  
 Test Date:2022-11-01

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.361  
 Humidity:47.5%  
 Test Distance:10.680m [K=1.0000]  
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270				γ	Φ zone	Φ total	%lum, lamp
10	838.9	835.3	824.0	860.7				0- 10	85.14	85.14	12.7,12.7
20	469.2	446.0	488.2	539.2				10- 20	184.8	269.9	40.1,40.1
30	243.8	238.4	271.8	273.9				20- 30	162.9	432.8	64.4,64.4
40	89.48	112.1	147.1	121.1				30- 40	112.1	544.9	81,81
50	35.40	43.74	59.73	47.21				40- 50	58.62	603.5	89.7,89.7
60	23.27	24.25	26.26	24.20				50- 60	29.43	632.9	94.1,94.1
70	14.49	14.61	14.48	16.10				60- 70	19.70	652.6	97.1,97.1
80	6.074	5.096	5.765	7.067				70- 80	10.82	663.5	98.7,98.7
90	0.1003	0.0851	0.0685	0.3959				80- 90	3.056	666.5	99.1,99.1
100	0.0912	0.1623	0.1142	0.0850				90-100	0.1054	666.6	99.1,99.1
110	0.2509	0.2936	0.2281	0.1543				100-110	0.1669	666.8	99.2,99.2
120	0.5471	0.6030	0.4563	0.3552				110-120	0.3424	667.1	99.2,99.2
130	0.9577	1.136	0.8746	0.7413				120-130	0.6105	667.7	99.3,99.3
140	1.687	1.886	1.544	1.390				130-140	0.9718	668.7	99.4,99.4
150	2.493	2.681	2.320	2.123				140-150	1.261	670.0	99.6,99.6
160	3.109	3.276	2.980	2.795				150-160	1.260	671.2	99.8,99.8
170	3.497	3.554	3.369	3.290				160-170	0.9146	672.1	100,100
180	3.513	3.569	3.543	3.530				170-180	0.3307	672.5	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

Conical surface Flux(90deg): 579.71 lm

%lum = 86.2%  
 %lamp = 86.2%

Conical surface Flux(120deg): 632.95 lm

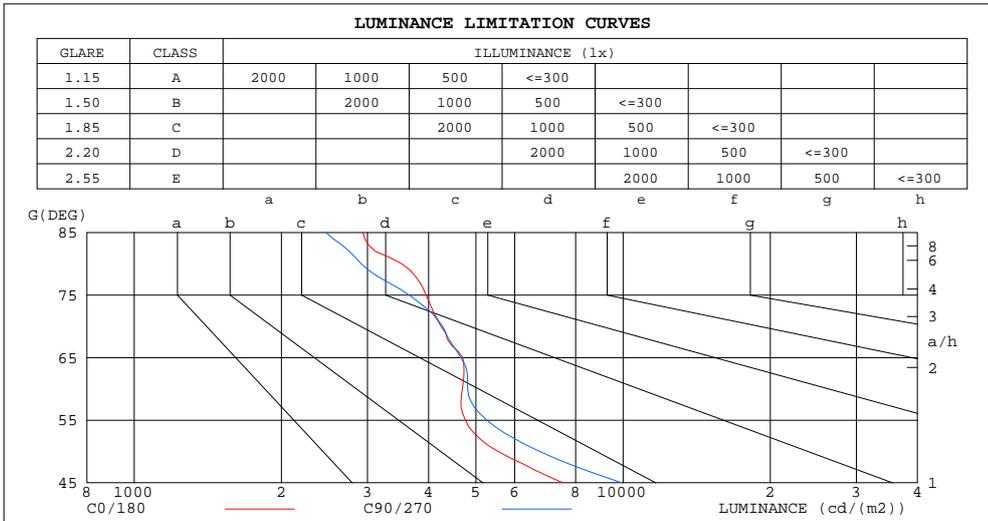
%lum = 94.1%  
 %lamp = 94.1%

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:24.5DEG  
 Operators:  
 Test Date:2022-11-01

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.361  
 Humidity:47.5%  
 Test Distance:10.680m [K=1.0000]  
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:5.995V I:0.9636A P:5.776W PF:0.9998 Freq:0Hz Lamp Flux:672.48x1 lm		
NAME: MR16 6W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	2934	2465
80	3526	2911
75	3954	3652
70	4271	4237
65	4702	4657
60	4691	4810
55	4759	5262
50	5552	6751
45	7529	9937

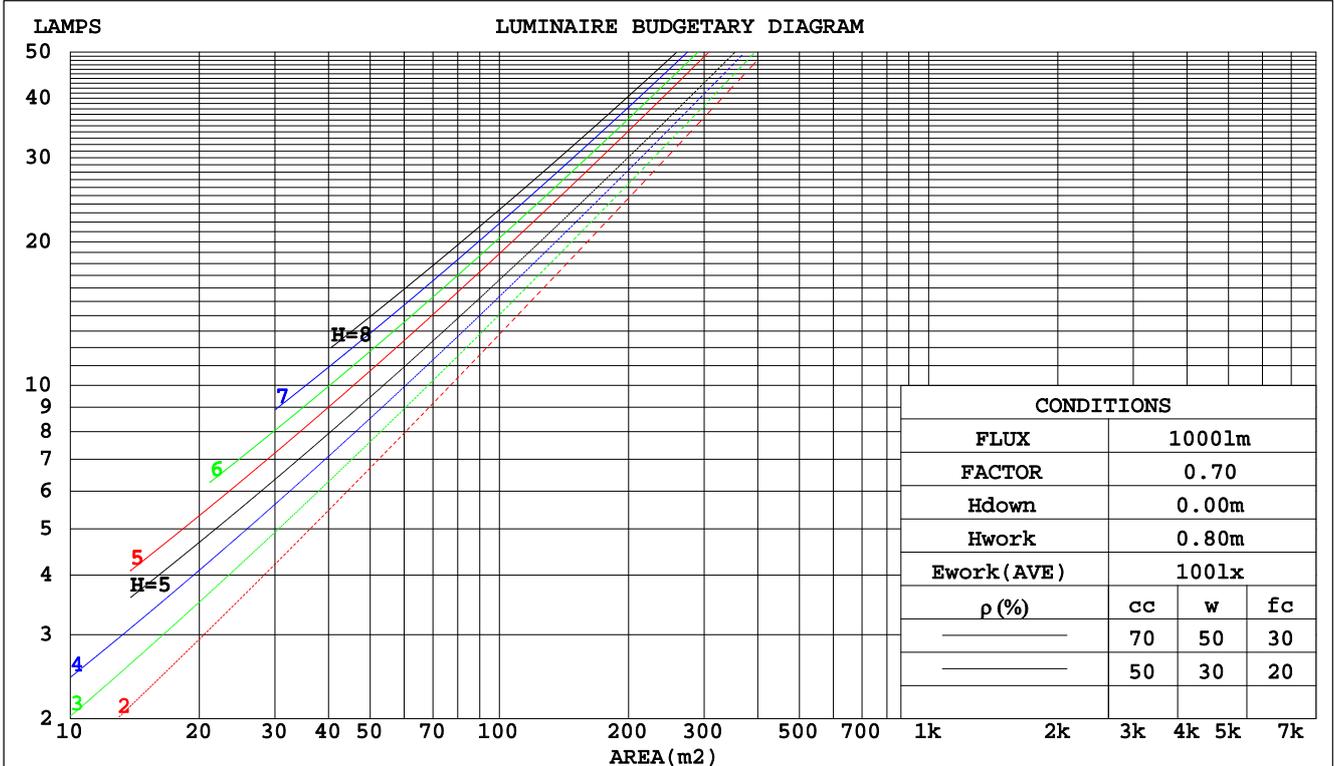
C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 24.5DEG  
 Operators:  
 Test Date: 2022-11-01

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.361  
 Humidity: 47.5%  
 Test Distance: 10.680m [K=1.0000]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:5.995V I:0.9636A P:5.776W PF:0.9998 Freq:0Hz Lamp Flux:672.48x1 lm		
NAME: MR16 6W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc																0
RCR	RCR:Room Cavity Ratio      Coefficients of Utilization(CU)															
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	.99
1.0	1.09	1.07	1.04	1.07	1.05	1.02	1.03	1.01	.99	.99	.97	.96	.95	.94	.93	.91
2.0	1.01	.96	.92	.99	.95	.91	.95	.92	.89	.92	.90	.87	.89	.87	.85	.83
3.0	.93	.88	.83	.92	.87	.83	.89	.85	.81	.86	.83	.80	.84	.81	.78	.77
4.0	.87	.81	.76	.85	.80	.75	.83	.78	.74	.81	.77	.73	.79	.75	.73	.71
5.0	.81	.75	.70	.80	.74	.70	.78	.73	.69	.76	.72	.68	.74	.70	.67	.66
6.0	.76	.69	.65	.75	.69	.64	.73	.68	.64	.72	.67	.63	.70	.66	.63	.61
7.0	.71	.65	.60	.70	.64	.60	.69	.64	.60	.68	.63	.59	.66	.62	.59	.57
8.0	.67	.61	.56	.66	.60	.56	.65	.60	.56	.64	.59	.56	.63	.59	.55	.54
9.0	.63	.57	.53	.63	.57	.53	.62	.56	.53	.61	.56	.53	.60	.56	.52	.51
10.0	.60	.54	.50	.60	.54	.50	.59	.53	.50	.58	.53	.50	.57	.53	.49	.48



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 24.5DEG  
 Operators:  
 Test Date: 2022-11-01

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.361  
 Humidity: 47.5%  
 Test Distance: 10.680m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:5.995V I:0.9636A P:5.776W PF:0.9998 Freq:0Hz Lamp Flux:672.48x1 lm		
NAME: MR16 6W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.202	.115	.036	.194	.111	.035	.181	.104	.033	.169	.098	.031	.158	.092	.030	
2.0	.191	.105	.032	.185	.102	.031	.174	.097	.030	.164	.092	.029	.154	.087	.027	
3.0	.180	.096	.029	.175	.094	.028	.165	.090	.027	.156	.086	.026	.148	.082	.025	
4.0	.170	.088	.026	.165	.086	.026	.157	.083	.025	.149	.080	.024	.142	.077	.023	
5.0	.160	.081	.024	.156	.080	.023	.149	.077	.023	.142	.075	.022	.135	.072	.022	
6.0	.151	.076	.022	.148	.075	.021	.141	.072	.021	.135	.070	.021	.129	.068	.020	
7.0	.143	.071	.020	.140	.070	.020	.134	.068	.020	.129	.066	.019	.124	.064	.019	
8.0	.136	.066	.019	.133	.066	.019	.128	.064	.018	.123	.062	.018	.119	.061	.018	
9.0	.129	.063	.017	.127	.062	.017	.122	.060	.017	.118	.059	.017	.114	.058	.017	
10.0	.123	.059	.016	.121	.058	.016	.117	.057	.016	.113	.056	.016	.109	.055	.016	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.197	.197	.197	.169	.169	.169	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.180	.164	.150	.154	.141	.129	.105	.097	.089	.061	.056	.052	.019	.018	.017	
2.0	.166	.139	.117	.142	.120	.101	.097	.083	.071	.056	.048	.041	.018	.016	.013	
3.0	.154	.121	.094	.132	.104	.081	.091	.072	.057	.052	.042	.034	.017	.014	.011	
4.0	.144	.106	.077	.124	.092	.067	.085	.064	.047	.049	.037	.028	.016	.012	.009	
5.0	.136	.095	.065	.116	.082	.056	.080	.057	.040	.046	.034	.024	.015	.011	.008	
6.0	.128	.086	.055	.110	.074	.048	.076	.052	.034	.044	.031	.020	.014	.010	.007	
7.0	.121	.078	.048	.104	.068	.042	.072	.047	.030	.042	.028	.018	.014	.009	.006	
8.0	.115	.072	.042	.099	.062	.037	.069	.044	.026	.040	.026	.015	.013	.008	.005	
9.0	.110	.067	.037	.095	.058	.033	.066	.041	.023	.038	.024	.014	.012	.008	.005	
10.0	.105	.062	.034	.091	.054	.030	.063	.038	.021	.037	.023	.013	.012	.007	.004	

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:24.5DEG  
 Operators:  
 Test Date:2022-11-01

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.361  
 Humidity:47.5%  
 Test Distance:10.680m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:5.995V I:0.9636A P:5.776W PF:0.9998 Freq:0Hz Lamp Flux:672.48x1 lm										
NAME: MR16 6W 6V					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.:					SUR.:			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	16.9	18.0	17.2	18.1	18.3	17.3	18.4	17.6	18.5	18.7
3H	17.8	18.7	18.0	18.9	19.2	18.1	19.0	18.4	19.2	19.5
4H	18.1	19.0	18.4	19.3	19.5	18.4	19.3	18.7	19.5	19.8
6H	18.4	19.3	18.7	19.5	19.8	18.5	19.4	18.9	19.6	19.9
8H	18.5	19.3	18.8	19.6	19.9	18.6	19.4	18.9	19.7	20.0
12H	18.5	19.3	18.9	19.6	19.9	18.6	19.4	18.9	19.7	20.0
4H 2H	17.2	18.1	17.5	18.3	18.6	17.6	18.4	17.8	18.7	18.9
3H	18.3	19.0	18.6	19.3	19.6	18.5	19.3	18.8	19.6	19.9
4H	18.7	19.4	19.1	19.8	20.1	18.9	19.6	19.3	19.9	20.3
6H	19.1	19.8	19.5	20.1	20.5	19.2	19.8	19.6	20.1	20.5
8H	19.2	19.8	19.7	20.2	20.6	19.2	19.8	19.7	20.2	20.6
12H	19.3	19.8	19.7	20.2	20.6	19.3	19.8	19.7	20.2	20.6
8H 4H	18.9	19.5	19.3	19.8	20.2	19.0	19.6	19.4	20.0	20.4
6H	19.4	19.9	19.8	20.3	20.7	19.4	19.9	19.8	20.3	20.7
8H	19.5	20.0	20.0	20.4	20.9	19.5	19.9	20.0	20.4	20.8
12H	19.7	20.0	20.2	20.5	21.0	19.6	20.0	20.1	20.4	20.9
12H 4H	18.9	19.4	19.3	19.8	20.2	19.0	19.5	19.4	19.9	20.3
6H	19.4	19.8	19.9	20.2	20.7	19.4	19.8	19.9	20.3	20.7
8H	19.6	19.9	20.1	20.4	20.9	19.6	19.9	20.0	20.4	20.9
Variations with the observer position at spacings:										
S = 1.0H	+ 0.7 / - 0.8					+ 0.8 / - 1.0				
1.5H	+ 1.3 / - 0.8					+ 1.5 / - 0.8				
2.0H	+ 0.8 / - 0.4					+ 1.6 / - 0.6				

CIE Pub.117, 672.5 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.4)

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:24.5DEG  
 Operators:  
 Test Date:2022-11-01

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.361  
 Humidity:47.5%  
 Test Distance:10.680m [K=1.0000]  
 Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:5.995V I:0.9636A P:5.776W PF:0.9998 Freq:0Hz Lamp Flux:672.48x1 lm		
NAME: MR16 6W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

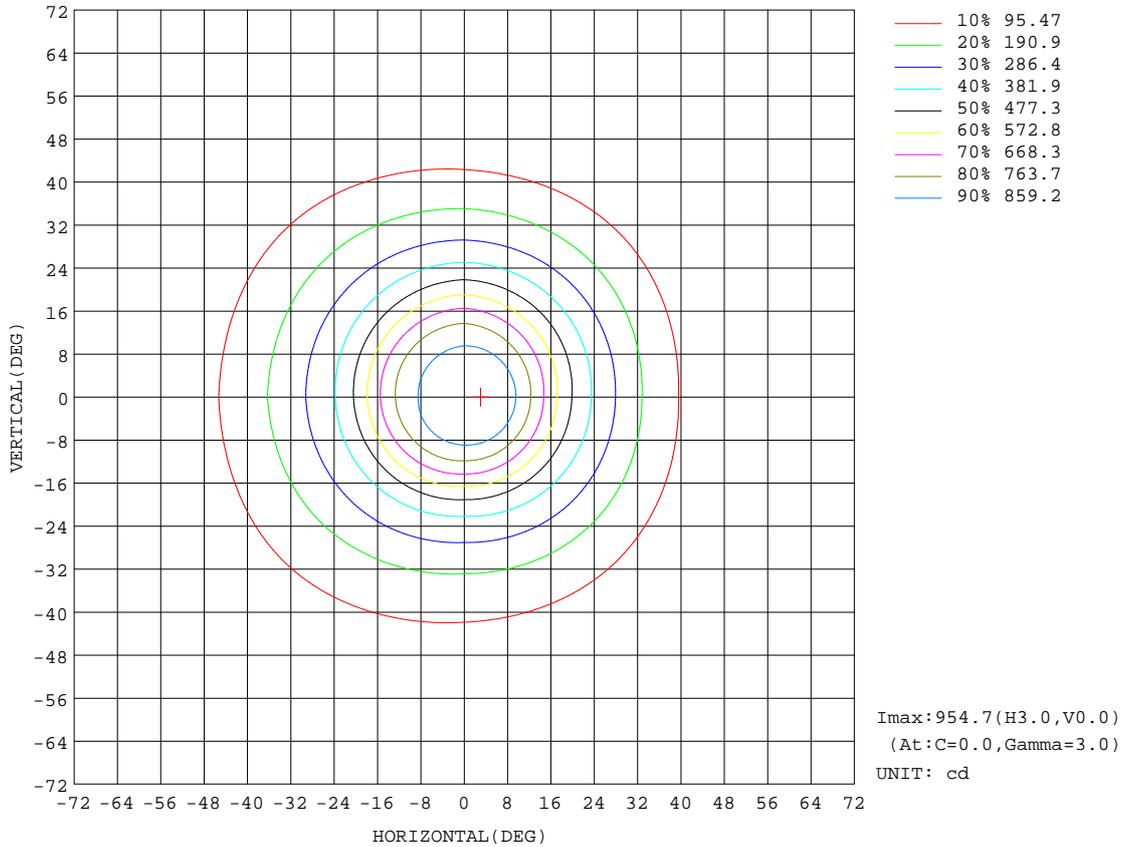
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	80	72	68	79	72	67	78	72	67	63
0.80	88	81	76	87	80	76	86	80	76	71
1.00	93	87	82	92	86	82	91	86	81	76
1.25	98	92	87	97	91	87	95	90	86	81
1.50	102	96	91	100	95	91	98	93	90	84
2.00	105	100	96	104	99	95	101	97	94	88
2.50	107	103	99	106	101	98	102	99	96	89
3.00	109	105	102	107	104	101	104	101	98	91
4.00	112	108	106	110	107	104	106	103	101	94
5.00	113	110	108	111	109	106	107	105	103	95
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:24.5DEG  
 Operators:  
 Test Date:2022-11-01

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.361  
 Humidity:47.5%  
 Test Distance:10.680m [K=1.0000]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:5.995V I:0.9636A P:5.776W PF:0.9998 Freq:0Hz Lamp Flux:672.48x1 lm		
NAME: MR16 6W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

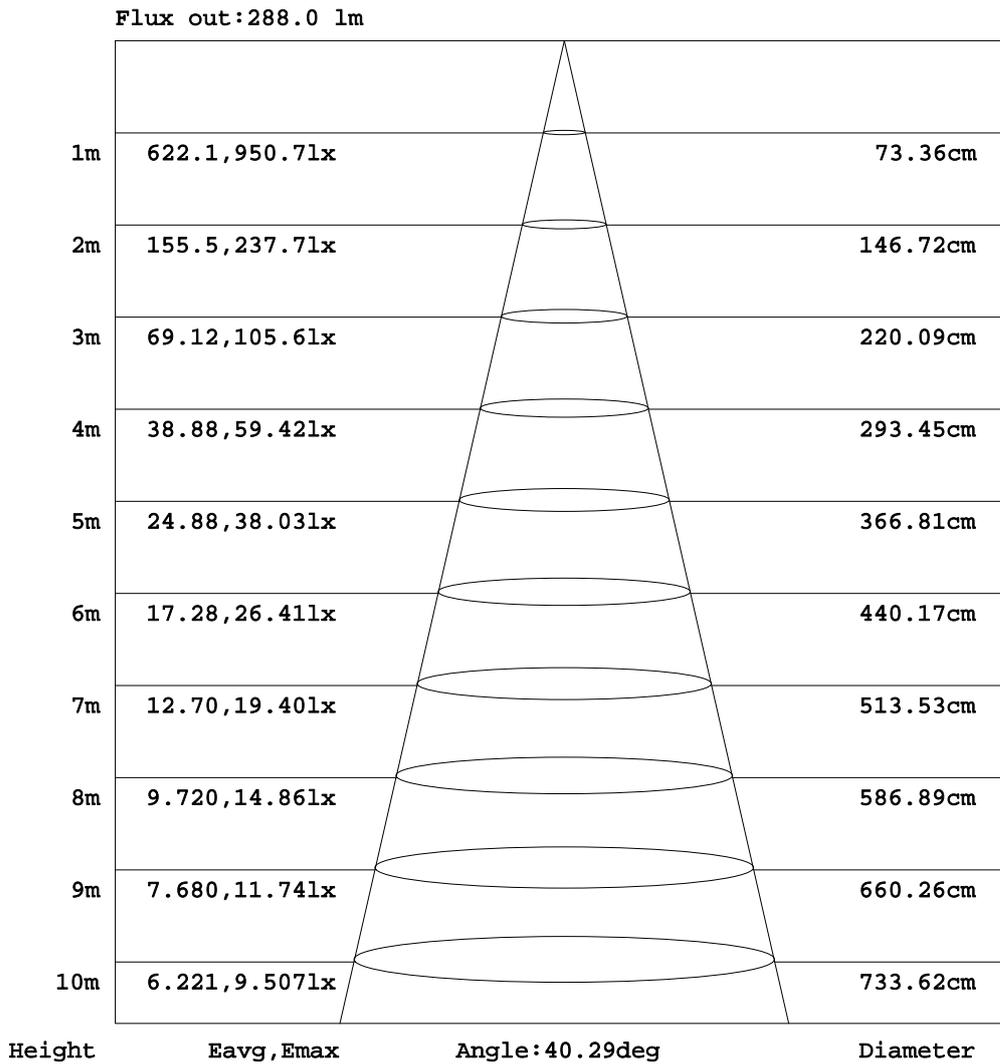


C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 24.5DEG  
 Operators:  
 Test Date: 2022-11-01

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.361  
 Humidity: 47.5%  
 Test Distance: 10.680m [K=1.0000]  
 Remarks:

AAI Figure

Test:U:5.995V I:0.9636A P:5.776W PF:0.9998 Freq:0Hz Lamp Flux:672.48x1 lm		
NAME: MR16 6W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



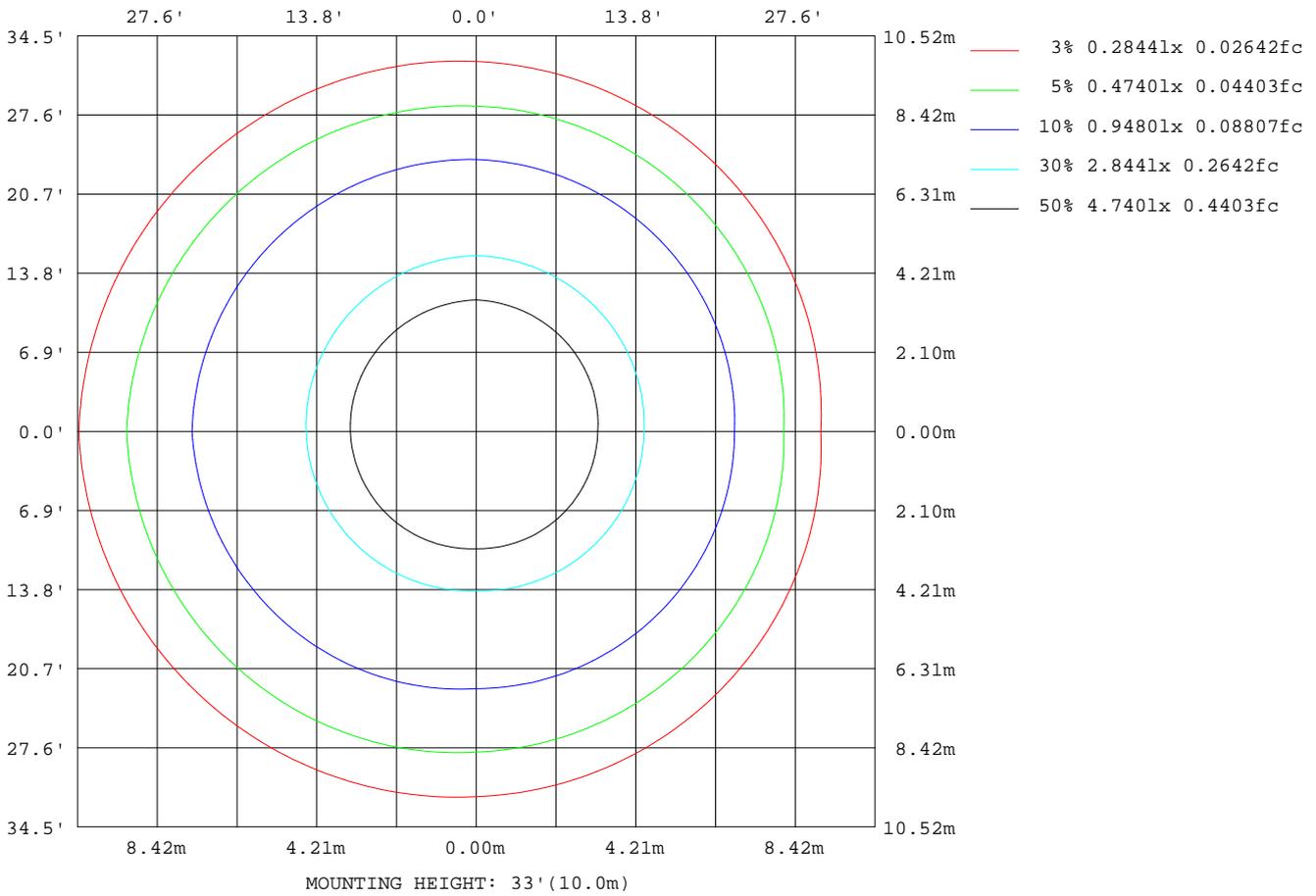
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:24.5DEG  
 Operators:  
 Test Date:2022-11-01

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.361  
 Humidity:47.5%  
 Test Distance:10.680m [K=1.0000]  
 Remarks:

ISOLUX DIAGRAM

Test:U:5.995V I:0.9636A P:5.776W PF:0.9998 Freq:0Hz Lamp Flux:672.48x1 lm		
NAME: MR16 6W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 24.5DEG  
 Operators:  
 Test Date: 2022-11-01

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.361  
 Humidity: 47.5%  
 Test Distance: 10.680m [K=1.0000]  
 Remarks:

LED Avg.L Report

Test:U:5.995V I:0.9636A P:5.776W PF:0.9998 Freq:0Hz Lamp Flux:672.48x1 lm		
NAME: MR16 6W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

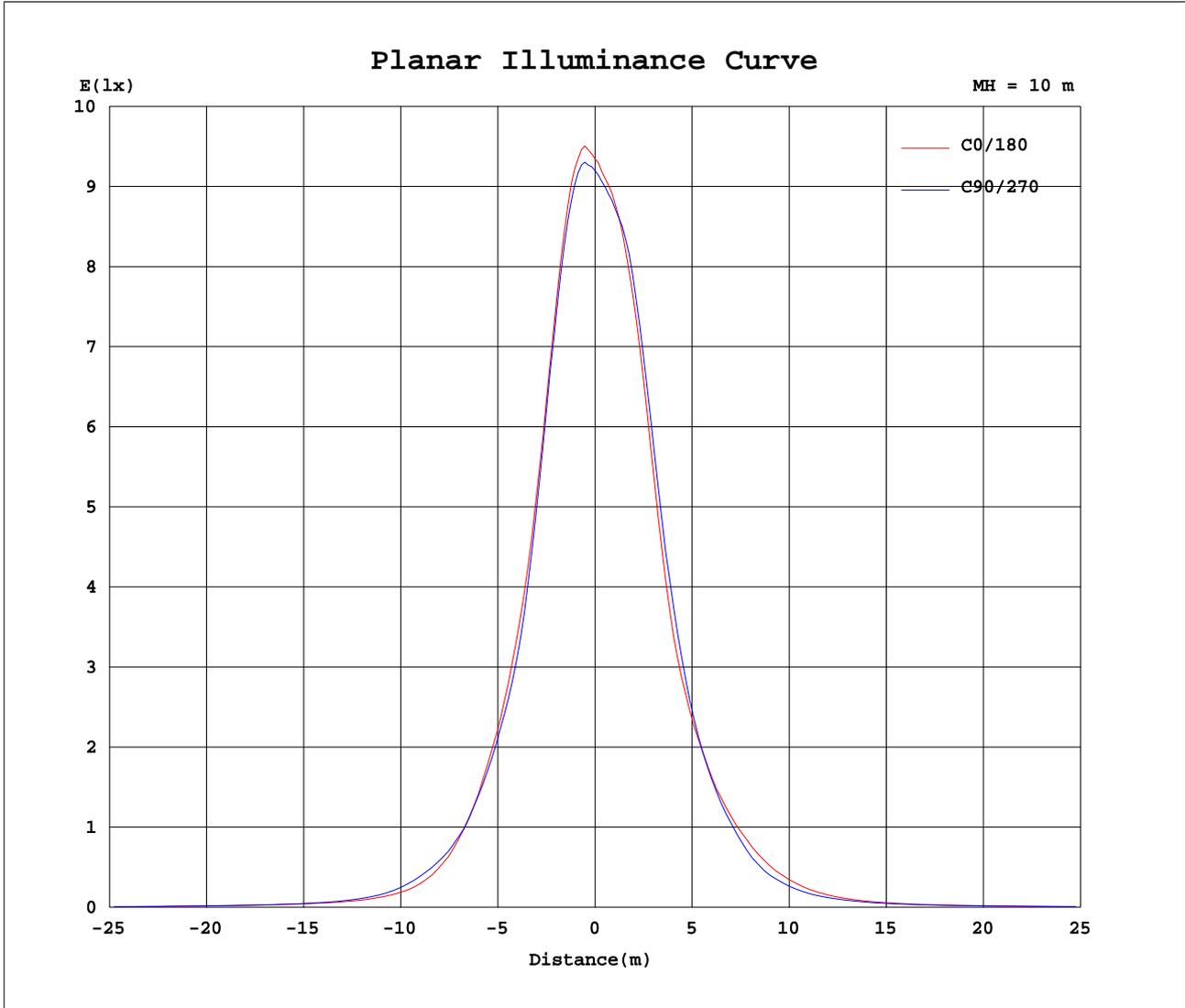
AvgL	cd/m2
L_0~180(65)av	4671
L_0~180(75)av	3823
L_0~180(85)av	3020
L_90~270(65)av	4823
L_90~270(75)av	4041
L_90~270(85)av	2942
L_45(65)av	4766
L_45(75)av	3953
L_45(85)av	2978

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:24.5DEG  
 Operators:  
 Test Date:2022-11-01

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.361  
 Humidity:47.5%  
 Test Distance:10.680m [K=1.0000]  
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature: 24.5DEG  
 Operators:  
 Test Date: 2022-11-01

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.361  
 Humidity: 47.5%  
 Test Distance: 10.680m [K=1.0000]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:5.995V I:0.9636A P:5.776W PF:0.9998 Freq:0Hz Lamp Flux:672.48x1 lm		
NAME: MR16 6W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	90	180	270															
0	927	927	927	927															
5	938	935	895	900															
10	839	835	824	861															
15	649	645	682	728															
20	469	446	488	539															
25	344	326	356	386															
30	244	238	272	274															
35	155	163	205	193															
40	89.5	112	147	121															
45	52.8	70.8	97.3	75.4															
50	35.4	43.7	59.7	47.2															
55	27.1	30.4	37.3	32.2															
60	23.3	24.2	26.3	24.2															
65	19.7	19.8	19.8	20.9															
70	14.5	14.6	14.5	16.1															
75	10.2	9.53	9.64	11.4															
80	6.07	5.10	5.76	7.07															
85	2.54	2.17	2.73	2.96															
90	0.10	0.09	0.07	0.40															
95	0.08	0.12	0.07	0.08															
100	0.09	0.16	0.11	0.08															
105	0.15	0.22	0.14	0.09															
110	0.25	0.29	0.23	0.15															
115	0.35	0.43	0.32	0.28															
120	0.55	0.60	0.46	0.36															
125	0.71	0.83	0.63	0.52															
130	0.96	1.14	0.87	0.74															
135	1.30	1.49	1.18	1.04															
140	1.69	1.89	1.54	1.39															
145	2.09	2.30	1.93	1.76															
150	2.49	2.68	2.32	2.12															
155	2.81	3.01	2.68	2.49															
160	3.11	3.28	2.98	2.80															
165	3.30	3.46	3.21	3.06															
170	3.50	3.55	3.37	3.29															
175	3.51	3.58	3.47	3.37															
180	3.51	3.57	3.54	3.53															

C Range: 0 - 360DEG  
 C Interval: 90.0DEG  
 Test Speed: HIGH  
 Temperature:24.5DEG  
 Operators:  
 Test Date:2022-11-01

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.361  
 Humidity:47.5%  
 Test Distance:10.680m [K=1.0000]  
 Remarks: