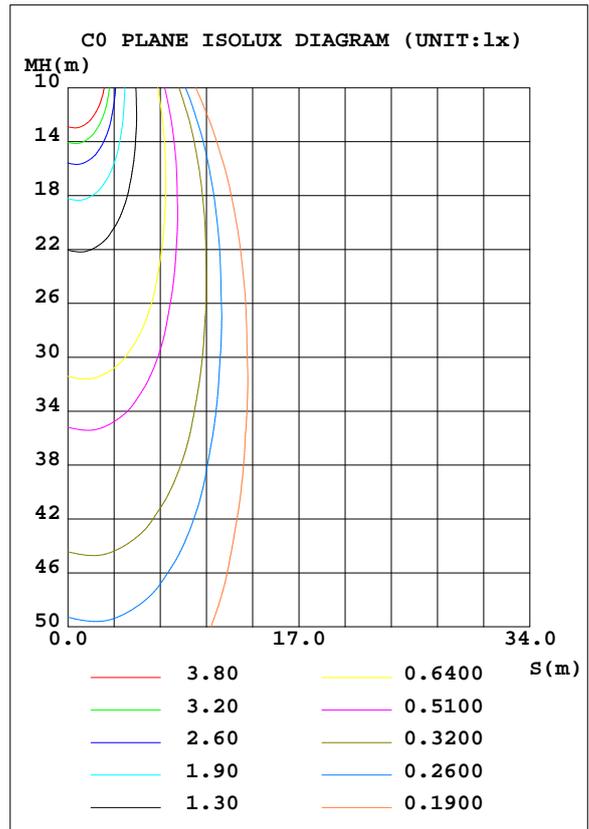
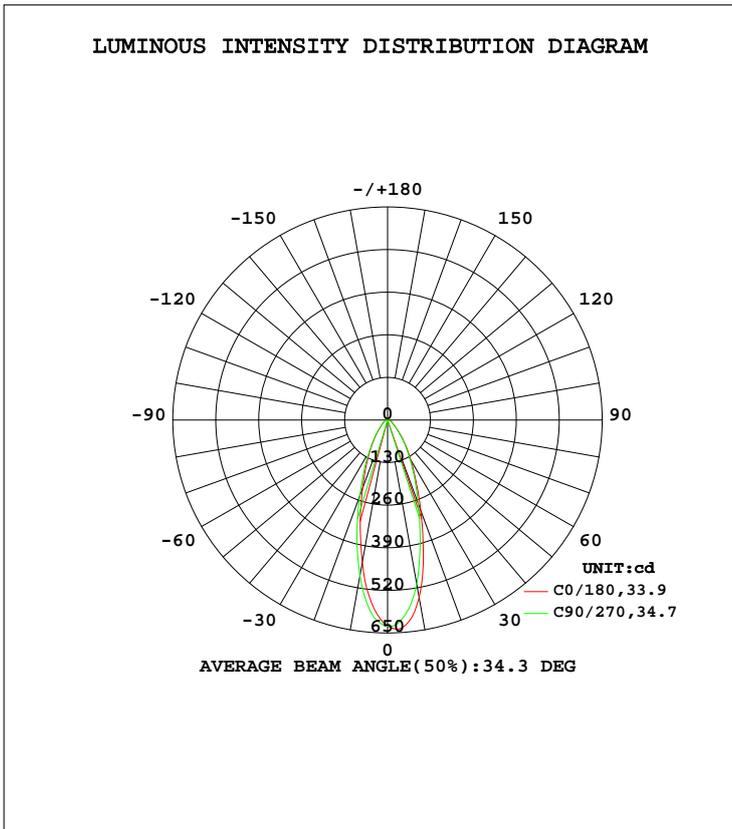


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:6.045V I:0.5070A P:3.065W PF:0.9997 Freq:0Hz Lamp Flux:362.187x1 lm		
NAME: MR16 3W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 118.18 lm/W			
MODEL	MR16 3W 6V	I _{max} (cd)	638.9	S/MH(C0/180)	0.50
NOMINAL POWER(W)	3	LOR(%)	100.0	S/MH(C90/270)	0.55
RATED VOLTAGE(V)	6	TOTAL FLUX(lm)	362.19	η UP, DN(C0-180)	0.4,54.1
NOMINAL FLUX(lm)	362.187	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.4,45.1
LAMPS INSIDE	1	η up(%)	0.9	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	6	η down(%)	99.1	CIBSE SHR MAX	0.60



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	550.1	508.5	440.9	482.4				0- 10	53.52	53.52	14.8,14.8
20	293.7	271.3	221.2	249.0				10- 20	102.0	155.5	42.9,42.9
30	140.9	133.7	105.9	111.0				20- 30	82.79	238.3	65.8,65.8
40	64.67	61.02	47.40	48.18				30- 40	52.59	290.9	80.3,80.3
50	28.97	27.78	23.17	23.69				40- 50	29.32	320.2	88.4,88.4
60	16.48	15.74	14.05	14.75				50- 60	17.62	337.8	93.3,93.3
70	11.57	8.786	8.212	9.999				60- 70	12.25	350.1	96.6,96.6
80	5.109	3.256	3.105	4.101				70- 80	7.006	357.1	98.6,98.6
90	0.8109	0.0538	0.0534	0.0883				80- 90	1.934	359.0	99.1,99.1
100	0.0534	0.1000	0.0916	0.0462				90-100	0.0867	359.1	99.1,99.1
110	0.0916	0.1463	0.1604	0.0770				100-110	0.0941	359.2	99.2,99.2
120	0.1982	0.2774	0.2827	0.2154				110-120	0.1651	359.3	99.2,99.2
130	0.3967	0.5161	0.5347	0.4076				120-130	0.3005	359.6	99.3,99.3
140	0.7703	0.9161	0.9239	0.8157				130-140	0.4992	360.1	99.4,99.4
150	1.266	1.393	1.366	1.246				140-150	0.6779	360.8	99.6,99.6
160	1.656	1.747	1.694	1.570				150-160	0.6912	361.5	99.8,99.8
170	1.839	1.901	1.877	1.785				160-170	0.5003	362.0	100,100
180	1.939	1.924	1.946	1.862				170-180	0.1790	362.2	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

Conical surface Flux(90deg): 307.65 lm

%lum = 84.9%
%lamp = 84.9%

Conical surface Flux(120deg): 337.8 lm

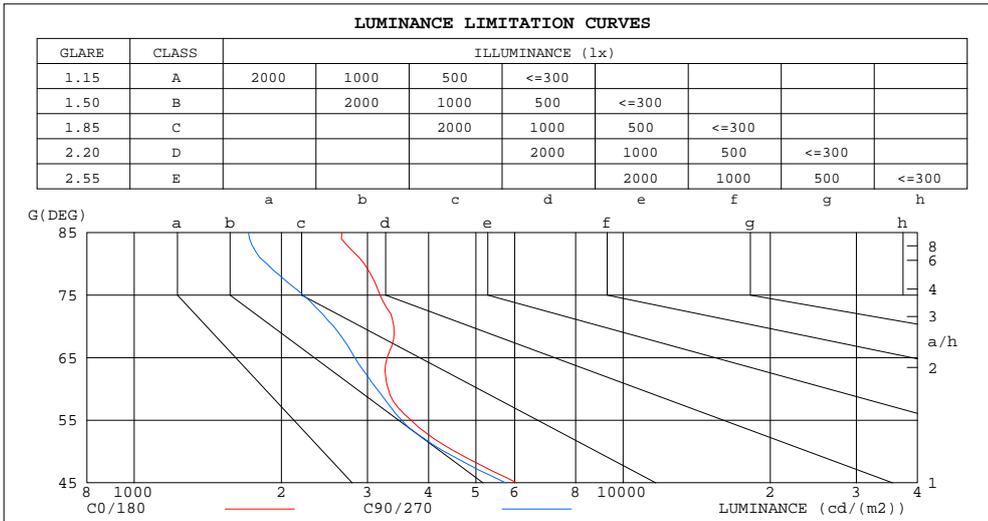
%lum = 93.3%
%lamp = 93.3%

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:6.045V I:0.5070A P:3.065W PF:0.9997 Freq:0Hz Lamp Flux:362.187x1 lm		
NAME: MR16 3W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	2659	1713
80	2954	1867
75	3183	2217
70	3396	2558
65	3292	2826
60	3309	3134
55	3683	3525
50	4526	4304
45	6066	5754

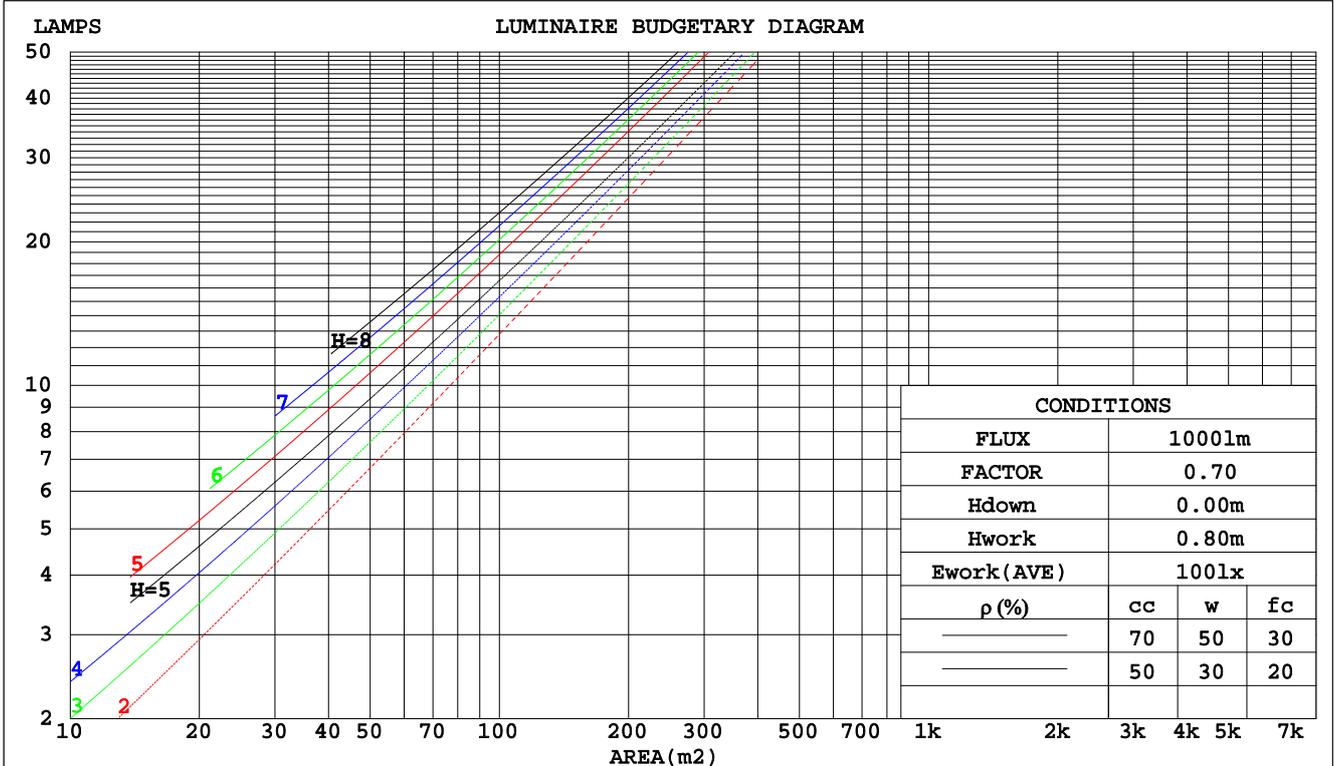
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 24.5DEG
 Operators:
 Test Date: 2022-11-01

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:6.045V I:0.5070A P:3.065W PF:0.9997 Freq:0Hz Lamp Flux:362.187x1 lm		
NAME: MR16 3W 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	1.06	1.04	1.07	1.04	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	.89	.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	.86	.80	.76	.83	.78	.75	.81	.77	.74	.79	.76	.73	.71
5.0	.81	.75	.70	.80	.74	.70	.78	.73	.69	.76	.72	.69	.75	.71	.68	.66
6.0	.76	.70	.65	.75	.69	.65	.74	.68	.65	.72	.68	.64	.71	.67	.64	.62
7.0	.72	.66	.61	.71	.65	.61	.70	.64	.61	.68	.64	.60	.67	.63	.60	.58
8.0	.68	.62	.57	.67	.61	.57	.66	.61	.57	.65	.60	.57	.64	.60	.56	.55
9.0	.64	.58	.54	.64	.58	.54	.63	.58	.54	.62	.57	.54	.61	.57	.53	.52
10.0	.61	.55	.51	.61	.55	.51	.60	.55	.51	.59	.54	.51	.58	.54	.51	.49



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:6.045V I:0.5070A P:3.065W PF:0.9997 Freq:0Hz Lamp Flux:362.187x1 lm		
NAME: MR16 3W 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	.203	.115	.036	.196	.112	.035	.182	.105	.033	.170	.098	.031	.159	.092	.030	
2.0	.191	.105	.032	.185	.102	.031	.174	.097	.030	.164	.092	.029	.154	.087	.028	
3.0	.180	.096	.029	.174	.093	.028	.165	.089	.027	.156	.085	.026	.148	.082	.025	
4.0	.169	.088	.026	.164	.086	.025	.156	.083	.025	.148	.079	.024	.141	.076	.023	
5.0	.158	.081	.023	.155	.079	.023	.147	.077	.023	.140	.074	.022	.134	.072	.022	
6.0	.149	.075	.021	.146	.074	.021	.139	.071	.021	.133	.069	.020	.128	.067	.020	
7.0	.141	.070	.020	.138	.069	.020	.132	.067	.019	.127	.065	.019	.122	.063	.019	
8.0	.134	.065	.018	.131	.065	.018	.126	.063	.018	.121	.061	.018	.117	.060	.017	
9.0	.127	.062	.017	.125	.061	.017	.120	.059	.017	.116	.058	.017	.112	.057	.016	
10.0	.121	.058	.016	.119	.057	.016	.115	.056	.016	.111	.055	.016	.107	.054	.015	

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	.123	.092	.067	.085	.064	.047	.049	.037	.028	.016	.012	.009	
5.0	.135	.095	.065	.116	.082	.056	.080	.057	.040	.046	.034	.024	.015	.011	.008	
6.0	.127	.085	.055	.110	.074	.048	.076	.052	.034	.044	.030	.020	.014	.010	.007	
7.0	.121	.078	.048	.104	.068	.042	.072	.047	.030	.042	.028	.018	.013	.009	.006	
8.0	.115	.072	.042	.099	.062	.037	.068	.044	.026	.040	.026	.016	.013	.008	.005	
9.0	.109	.066	.038	.094	.058	.033	.065	.041	.023	.038	.024	.014	.012	.008	.005	
10.0	.104	.062	.034	.090	.054	.030	.062	.038	.021	.036	.022	.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:6.045V I:0.5070A P:3.065W PF:0.9997 Freq:0Hz Lamp Flux:362.187x1 lm										
NAME: MR16 3W 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	18.6	19.6	18.9	19.8	20.0	18.4	19.4	18.6	19.6	19.8
3H	19.6	20.5	19.9	20.8	21.0	19.1	20.1	19.4	20.3	20.5
4H	20.1	21.0	20.4	21.2	21.5	19.4	20.3	19.7	20.5	20.8
6H	20.5	21.3	20.8	21.6	21.8	19.6	20.4	19.9	20.7	21.0
8H	20.6	21.4	20.9	21.7	22.0	19.6	20.5	20.0	20.7	21.0
12H	20.7	21.5	21.0	21.7	22.0	19.7	20.4	20.0	20.7	21.0
4H 2H	18.9	19.8	19.2	20.0	20.2	18.7	19.6	19.0	19.8	20.0
3H	20.1	20.9	20.4	21.2	21.5	19.6	20.4	20.0	20.7	21.0
4H	20.7	21.4	21.1	21.7	22.1	20.0	20.8	20.4	21.1	21.4
6H	21.2	21.8	21.6	22.2	22.6	20.3	21.0	20.7	21.3	21.7
8H	21.4	22.0	21.8	22.3	22.7	20.4	21.0	20.8	21.4	21.8
12H	21.5	22.0	21.9	22.4	22.8	20.5	21.0	20.9	21.4	21.8
8H 4H	20.8	21.4	21.3	21.8	22.2	20.2	20.8	20.7	21.2	21.6
6H	21.5	22.0	21.9	22.4	22.8	20.7	21.1	21.1	21.5	22.0
8H	21.7	22.2	22.2	22.6	23.0	20.8	21.2	21.3	21.7	22.1
12H	21.9	22.3	22.4	22.7	23.2	20.9	21.3	21.4	21.7	22.2
12H 4H	20.8	21.4	21.3	21.8	22.2	20.2	20.8	20.7	21.2	21.6
6H	21.5	21.9	22.0	22.3	22.8	20.7	21.1	21.2	21.5	22.0
8H	21.8	22.1	22.3	22.6	23.1	20.9	21.2	21.4	21.7	22.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.5 / - 0.6					+ 0.6 / - 0.8				
1.5H	+ 0.9 / - 0.5					+ 0.9 / - 0.7				
2.0H	+ 1.0 / - 0.5					+ 1.1 / - 0.6				

CIE Pub.117, 362.2 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -3.5)

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:6.045V I:0.5070A P:3.065W PF:0.9997 Freq:0Hz Lamp Flux:362.187x1 lm		
NAME: MR16 3W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

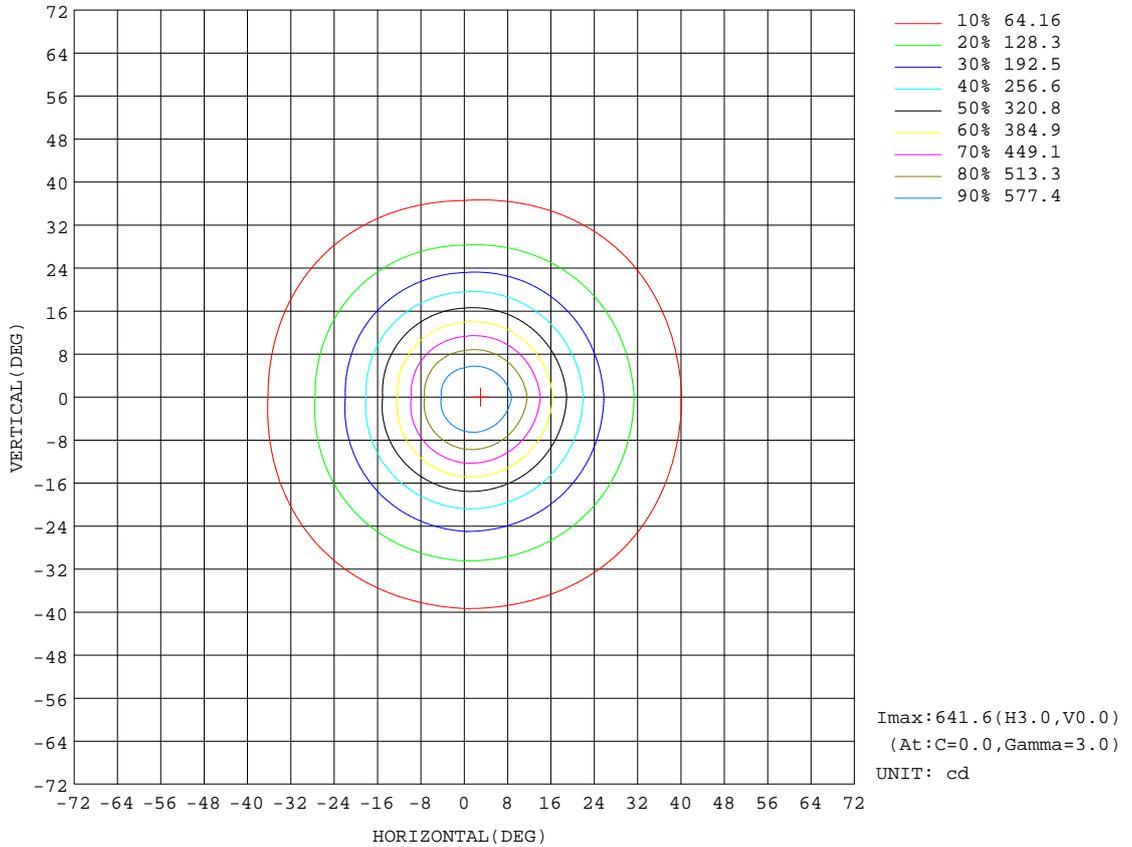
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	79	72	67	79	71	67	78	71	67	62
0.80	88	80	76	87	80	75	85	79	75	70
1.00	93	86	81	92	85	81	90	86	81	76
1.25	98	91	87	97	91	86	94	89	86	80
1.50	101	95	91	100	94	90	97	93	89	84
2.00	105	100	96	103	98	95	100	96	93	87
2.50	107	102	98	105	101	98	102	98	96	89
3.00	109	105	101	107	103	100	103	100	98	91
4.00	112	108	105	109	106	104	105	103	101	93
5.00	113	110	108	111	108	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

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:

ISOCANDELA DIAGRAM

Test:U:6.045V I:0.5070A P:3.065W PF:0.9997 Freq:0Hz Lamp Flux:362.187x1 lm		
NAME: MR16 3W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



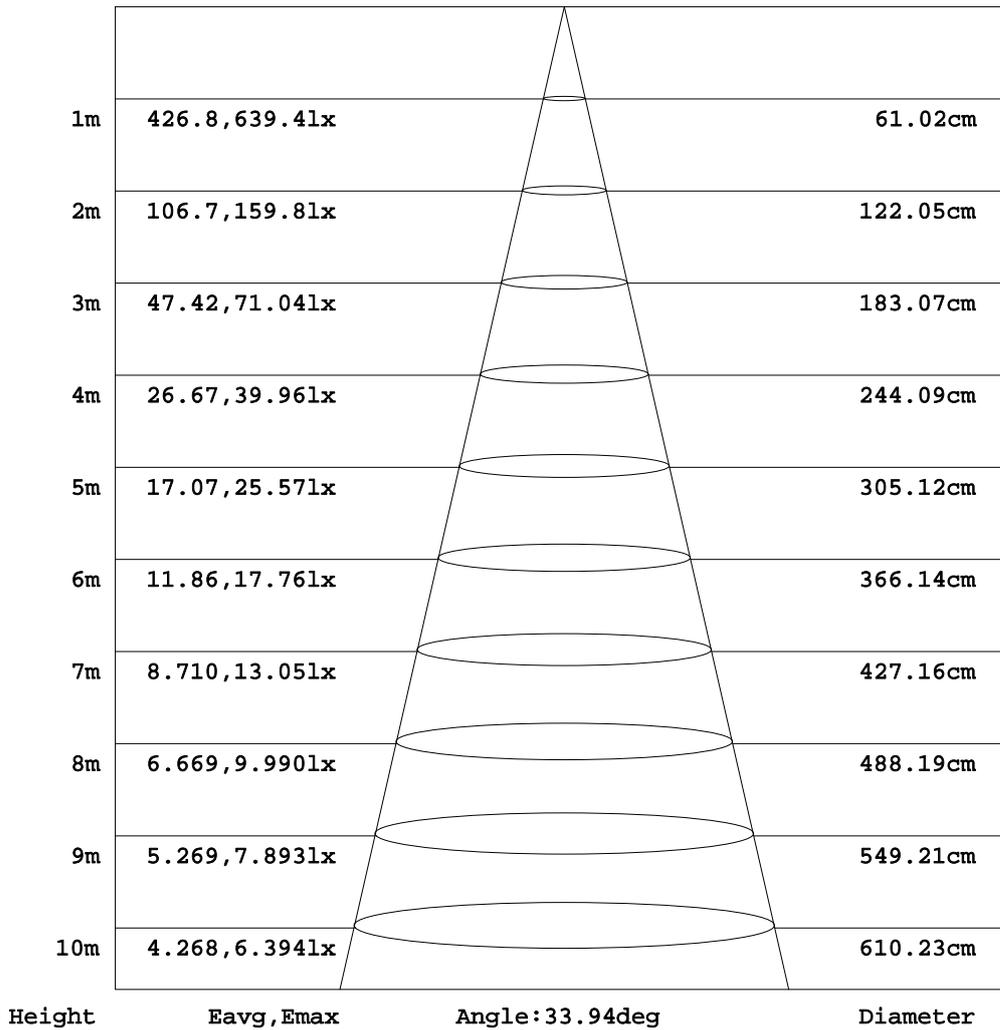
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 24.5DEG
 Operators:
 Test Date: 2022-11-01

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:6.045V I:0.5070A P:3.065W PF:0.9997 Freq:0Hz Lamp Flux:362.187x1 lm		
NAME: MR16 3W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Flux out:125.3 lm



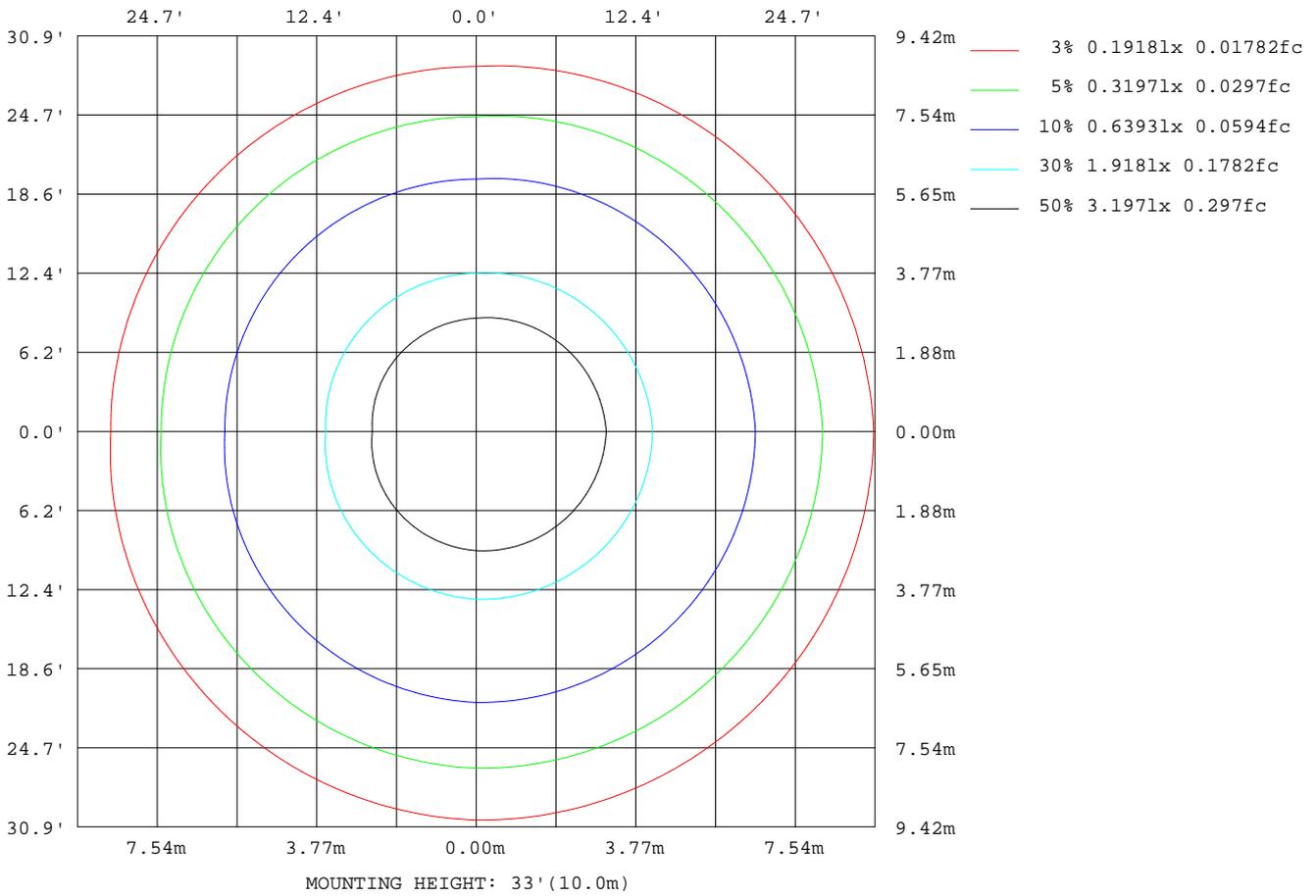
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:6.045V I:0.5070A P:3.065W PF:0.9997 Freq:0Hz Lamp Flux:362.187x1 lm		
NAME: MR16 3W 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:6.045V I:0.5070A P:3.065W PF:0.9997 Freq:0Hz Lamp Flux:362.187x1 lm		
NAME: MR16 3W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

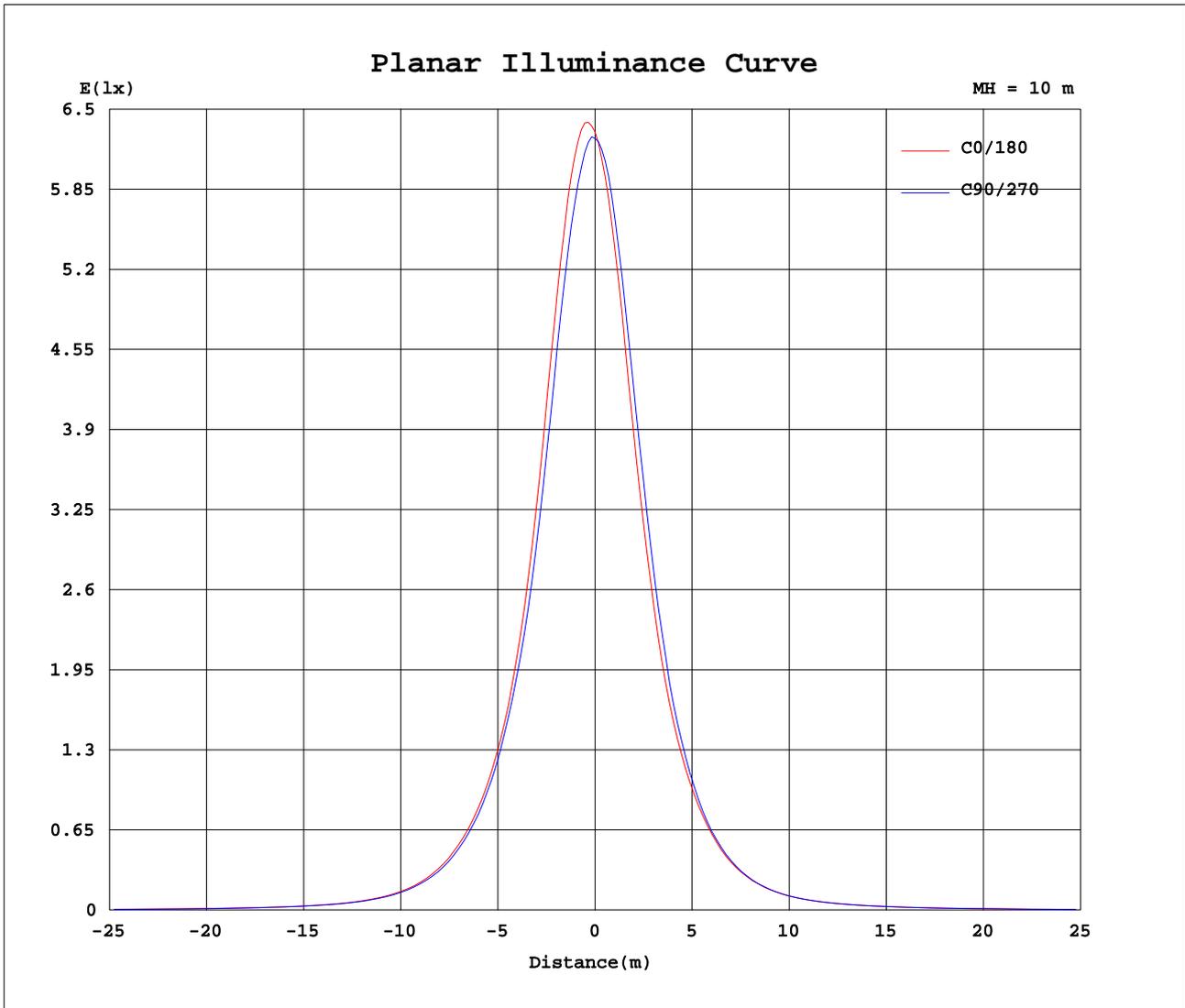
AvgL	cd/m2
L_0~180(65)av	2946
L_0~180(75)av	2656
L_0~180(85)av	1888
L_90~270(65)av	2891
L_90~270(75)av	2416
L_90~270(85)av	1762
L_45(65)av	2891
L_45(75)av	2474
L_45(85)av	1762

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:6.045V I:0.5070A P:3.065W PF:0.9997 Freq:0Hz Lamp Flux:362.187x1 lm		
NAME: MR16 3W 6V	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	90	180	270															
0	629	629	629	629															
5	628	599	560	587															
10	550	508	441	482															
15	419	382	321	359															
20	294	271	221	249															
25	203	193	153	168															
30	141	134	106	111															
35	97.0	91.9	70.5	73.3															
40	64.7	61.0	47.4	48.2															
45	42.7	40.9	32.3	32.6															
50	29.0	27.8	23.2	23.7															
55	21.0	20.3	17.9	18.1															
60	16.5	15.7	14.1	14.8															
65	13.9	12.0	11.0	12.4															
70	11.6	8.79	8.21	10.00															
75	8.20	5.76	5.54	6.74															
80	5.11	3.26	3.10	4.10															
85	2.31	1.50	0.98	1.57															
90	0.81	0.05	0.05	0.09															
95	0.05	0.08	0.06	0.05															
100	0.05	0.10	0.09	0.05															
105	0.05	0.12	0.11	0.05															
110	0.09	0.15	0.16	0.08															
115	0.11	0.21	0.21	0.11															
120	0.20	0.28	0.28	0.22															
125	0.27	0.38	0.38	0.29															
130	0.40	0.52	0.53	0.41															
135	0.57	0.70	0.71	0.58															
140	0.77	0.92	0.92	0.82															
145	1.02	1.17	1.16	1.02															
150	1.27	1.39	1.37	1.25															
155	1.47	1.59	1.53	1.43															
160	1.66	1.75	1.69	1.57															
165	1.79	1.85	1.82	1.69															
170	1.84	1.90	1.88	1.79															
175	1.88	1.92	1.92	1.82															
180	1.94	1.92	1.95	1.86															

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: