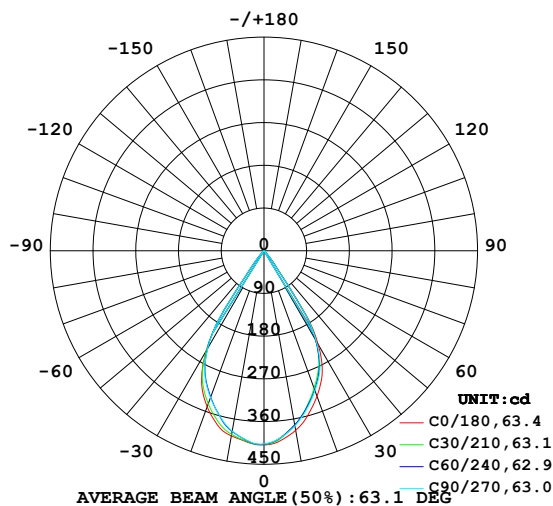


LUMINAIRE PHOTOMETRIC TEST REPORT

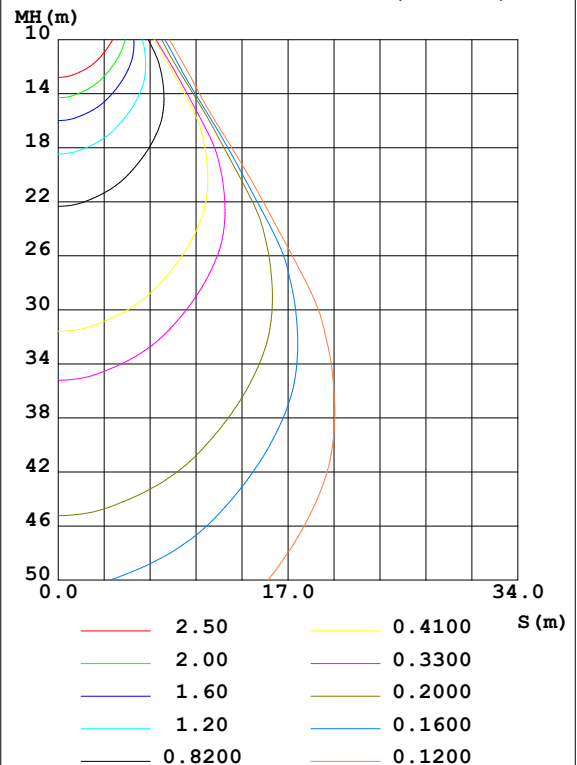
Test:U:109.90V I:0.0770A P:8.4000W PF:0.9900 Freq:60.00Hz Lamp Flux:348.767x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:2700K	DIM.:	SERIAL No.:
MFR.:	SUR.: ϕ 100mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 41.52 lm/W			
MODEL	RNG-P-9W-B	I _{max} (cd)	409.2	S/MH (C0/180)	0.93
NOMINAL POWER (W)	9	LOR (%)	100.0	S/MH (C90/270)	0.93
RATED VOLTAGE (V)	110	TOTAL FLUX (lm)	348.77	η UP,DN (C0-180)	0.0,48.5
NOMINAL FLUX (lm)	348.767	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,51.5
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	110	η down (%)	100.0	CIBSE SHR MAX	0.95

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Qin Meng
Test Date:2025-11-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:7.398m [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	384.3	373.0	374.8	382.4	396.0	388.8	385.9	390.4	0- 10	37.67	37.67	10.8,10.8
20	326.5	310.9	313.5	323.9	350.1	336.2	329.6	338.5	10- 20	100.8	138.5	39.7,39.7
30	229.2	219.7	220.1	230.3	243.3	239.2	237.9	239.8	20- 30	131.9	270.4	77.5,77.5
40	22.94	22.53	21.94	22.62	23.90	24.29	26.11	24.84	30- 40	66.84	337.2	96.7,96.7
50	3.871	4.079	3.923	3.876	3.786	3.547	3.786	3.888	40- 50	6.336	343.6	98.5,98.5
60	2.650	2.772	2.643	2.686	2.616	2.429	2.596	2.657	50- 60	2.910	346.5	99.3,99.3
70	1.105	1.137	1.026	1.078	1.074	0.9911	1.053	1.102	60- 70	1.881	348.4	99.9,99.9
80	0	0	0	0	0	0	0	0	70- 80	0.3932	348.8	100,100
90	0	0	0	0	0	0	0	0	80- 90	0	348.8	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 341.76 lm

%lum = 98.0%

%lamp = 98.0%

Conical surface Flux(120deg): 346.49 lm

%lum = 99.3%

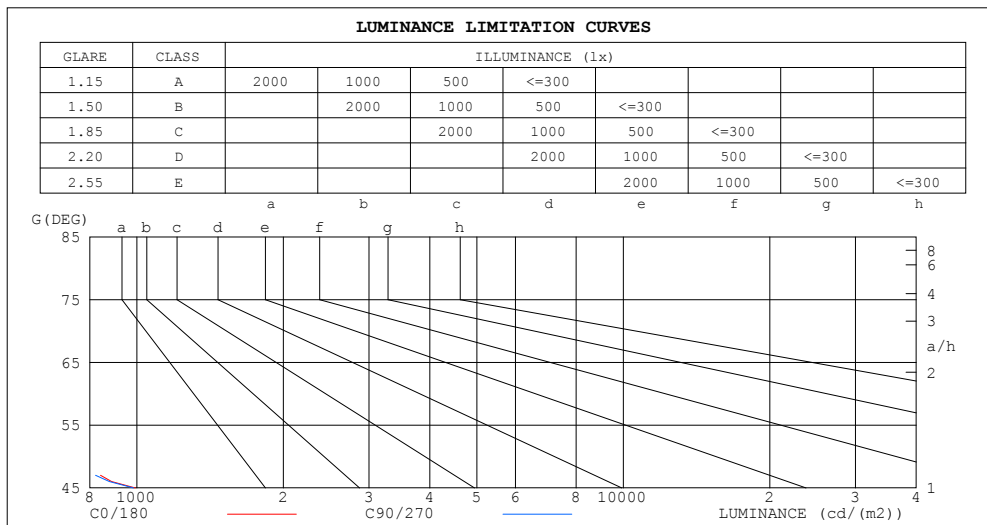
%lamp = 99.3%

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Qin Meng
 Test Date:2025-11-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.421
 Humidity:65.0%
 Test Distance:7.398m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:109.90V I:0.0770A P:8.4000W PF:0.9900 Freq:60.00Hz Lamp Flux:348.767x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:2700K	DIM.:	SERIAL No.:
MFR.:	SUR.: ϕ 100mm	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	0	0
80	0	0
75	170	136
70	409	380
65	590	577
60	671	669
55	727	730
50	762	773
45	993	984

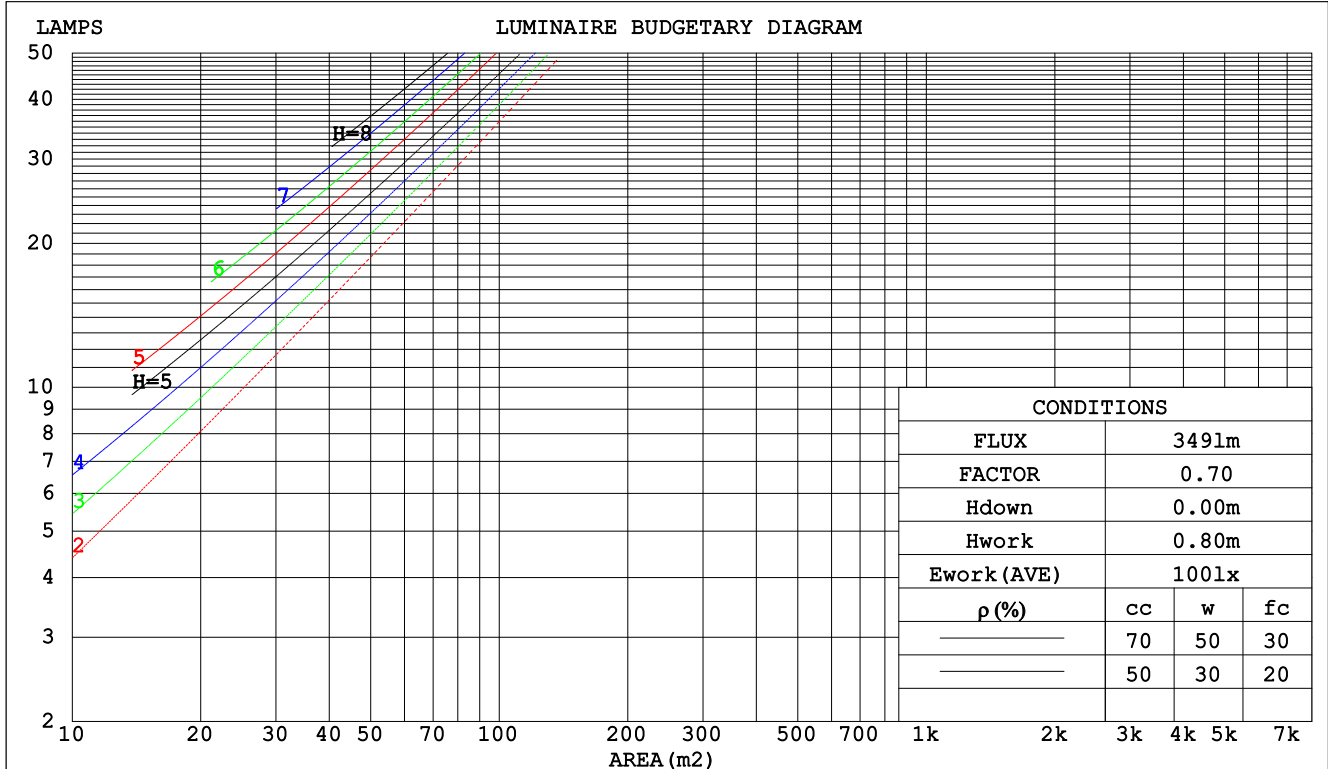
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Qin Meng
Test Date:2025-11-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:7.398m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:109.90V I:0.0770A P:8.4000W PF:0.9900 Freq:60.00Hz Lamp Flux:348.767x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:2700K	DIM.:	SERIAL No.:
MFR.:	SUR.: Φ 100mm	Shielding Angle:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			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	1.02	1.02	1.02	.00
1.0	1.11	1.09	1.06	1.09	1.07	1.05	1.05	1.03	1.02	1.01	.00	.98	.98	.97	.96	.94
2.0	1.04	.00	.96	1.02	.98	.95	.99	.96	.93	.96	.93	.91	.93	.91	.89	.88
3.0	.97	.92	.88	.96	.91	.88	.93	.89	.86	.91	.87	.85	.88	.86	.84	.82
4.0	.91	.86	.81	.90	.85	.81	.88	.83	.80	.86	.82	.79	.84	.81	.78	.77
5.0	.85	.80	.76	.84	.79	.75	.83	.78	.75	.81	.77	.74	.79	.76	.73	.72
6.0	.80	.75	.70	.80	.74	.70	.78	.73	.70	.77	.72	.69	.75	.72	.69	.67
7.0	.76	.70	.66	.75	.70	.66	.74	.69	.65	.73	.68	.65	.72	.68	.65	.63
8.0	.72	.66	.62	.71	.65	.62	.70	.65	.61	.69	.64	.61	.68	.64	.61	.60
9.0	.68	.62	.58	.67	.62	.58	.66	.61	.58	.65	.61	.58	.65	.60	.57	.56
10.0	.64	.59	.55	.64	.58	.55	.63	.58	.55	.62	.58	.54	.61	.57	.54	.53



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Qin Meng
Test Date:2025-11-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:7.398m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:109.90V I:0.0770A P:8.4000W PF:0.9900 Freq:60.00Hz Lamp Flux:348.767x1 lm								
NAME:			TYPE:			WEIGHT:		
SPEC.:2700K			DIM.:			SERIAL No.:		
MFR.:			SUR.:Φ100mm			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	.173	.098	.031	.166	.095	.030	.154	.088	.028	.142	.082	.026	.132	.076	.025		
2.0	.165	.091	.028	.160	.088	.027	.149	.083	.026	.139	.078	.024	.130	.074	.023		
3.0	.157	.084	.025	.153	.082	.025	.144	.078	.024	.135	.074	.023	.128	.071	.022		
4.0	.150	.078	.023	.146	.076	.023	.138	.073	.022	.131	.070	.021	.124	.068	.021		
5.0	.143	.073	.021	.140	.072	.021	.133	.069	.020	.127	.067	.020	.121	.064	.019		
6.0	.137	.069	.020	.134	.068	.019	.128	.065	.019	.122	.063	.019	.117	.062	.018		
7.0	.131	.065	.018	.128	.064	.018	.123	.062	.018	.118	.060	.018	.113	.059	.017		
8.0	.126	.061	.017	.123	.061	.017	.118	.059	.017	.114	.058	.017	.110	.056	.016		
9.0	.120	.058	.016	.118	.058	.016	.114	.056	.016	.110	.055	.016	.106	.054	.016		
10.0	.116	.056	.015	.114	.055	.015	.110	.054	.015	.106	.053	.015	.103	.052	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.155	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.143	.114	.090	.122	.098	.078	.084	.068	.055	.049	.040	.032	.016	.013	.011	
4.0	.132	.099	.073	.114	.085	.063	.078	.059	.045	.045	.035	.026	.015	.011	.009	
5.0	.124	.087	.060	.106	.075	.052	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.116	.078	.050	.100	.067	.044	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.110	.070	.042	.094	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.104	.064	.036	.090	.055	.032	.062	.039	.022	.036	.023	.013	.012	.008	.004	
9.0	.099	.059	.032	.085	.051	.027	.059	.036	.020	.034	.021	.012	.011	.007	.004	
10.0	.095	.054	.028	.082	.047	.024	.057	.033	.017	.033	.020	.010	.011	.006	.003	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Qin Meng
Test Date:2025-11-21

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:7.398m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:109.90V I:0.0770A P:8.4000W PF:0.9900 Freq:60.00Hz Lamp Flux:348.767x1 lm											
NAME:					TYPE:			WEIGHT:			
SPEC.:2700K					DIM.:			SERIAL No.:			
MFR.:					SUR.: ϕ 100mm			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	3H	13.3	14.2	13.5	14.3	14.5	13.1	14.0	13.3	14.1	14.3
	4H	13.1	14.0	13.4	14.2	14.4	12.9	13.8	13.2	14.0	14.2
	6H	13.1	13.9	13.3	14.1	14.3	12.9	13.7	13.1	13.9	14.1
	8H	13.0	13.7	13.3	14.0	14.2	12.8	13.5	13.1	13.8	14.0
	12H	12.9	13.6	13.2	13.9	14.2	12.7	13.4	13.0	13.7	14.0
	12H	12.9	13.6	13.2	13.8	14.1	12.7	13.4	13.0	13.6	13.9
4H	2H	13.0	13.8	13.3	14.1	14.3	12.8	13.6	13.1	13.9	14.1
	3H	12.9	13.6	13.2	13.9	14.1	12.7	13.4	13.0	13.7	13.9
	4H	12.8	13.5	13.2	13.7	14.1	12.6	13.2	13.0	13.5	13.9
	6H	12.7	13.3	13.1	13.6	14.0	12.5	13.1	12.9	13.4	13.8
	8H	12.7	13.2	13.1	13.5	13.9	12.5	13.0	12.9	13.3	13.7
	12H	12.6	13.1	13.0	13.5	13.9	12.4	12.9	12.8	13.3	13.7
8H	4H	12.7	13.2	13.1	13.5	13.9	12.5	13.0	12.9	13.3	13.7
	6H	12.6	13.0	13.0	13.4	13.8	12.4	12.8	12.8	13.2	13.6
	8H	12.5	12.9	13.0	13.3	13.8	12.3	12.7	12.8	13.1	13.6
	12H	12.5	12.8	12.9	13.2	13.7	12.3	12.6	12.7	13.0	13.5
12H	4H	12.6	13.1	13.0	13.5	13.9	12.4	12.9	12.8	13.3	13.7
	6H	12.5	12.9	13.0	13.3	13.8	12.3	12.7	12.8	13.1	13.6
	8H	12.5	12.8	12.9	13.2	13.7	12.3	12.6	12.7	13.0	13.5
Variations with the observer position at spacings:											
S = 1.0H	+ 3.6 / - 5.1					+ 3.4 / - 4.9					
1.5H	+ 6.1 / - 4.7					+ 5.8 / - 4.3					
2.0H	+ 1.0 / - 0.7					+ 0.7 / - 0.7					

CIE Pub.117, 348.8 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -3.7)
Area: 0.0079 m2

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Qin Meng
Test Date:2025-11-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:7.398m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:109.90V I:0.0770A P:8.4000W PF:0.9900 Freq:60.00Hz Lamp Flux:348.767x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:2700K	DIM.:	SERIAL No.:
MFR.:	SUR.: ϕ 100mm	Shielding Angle:

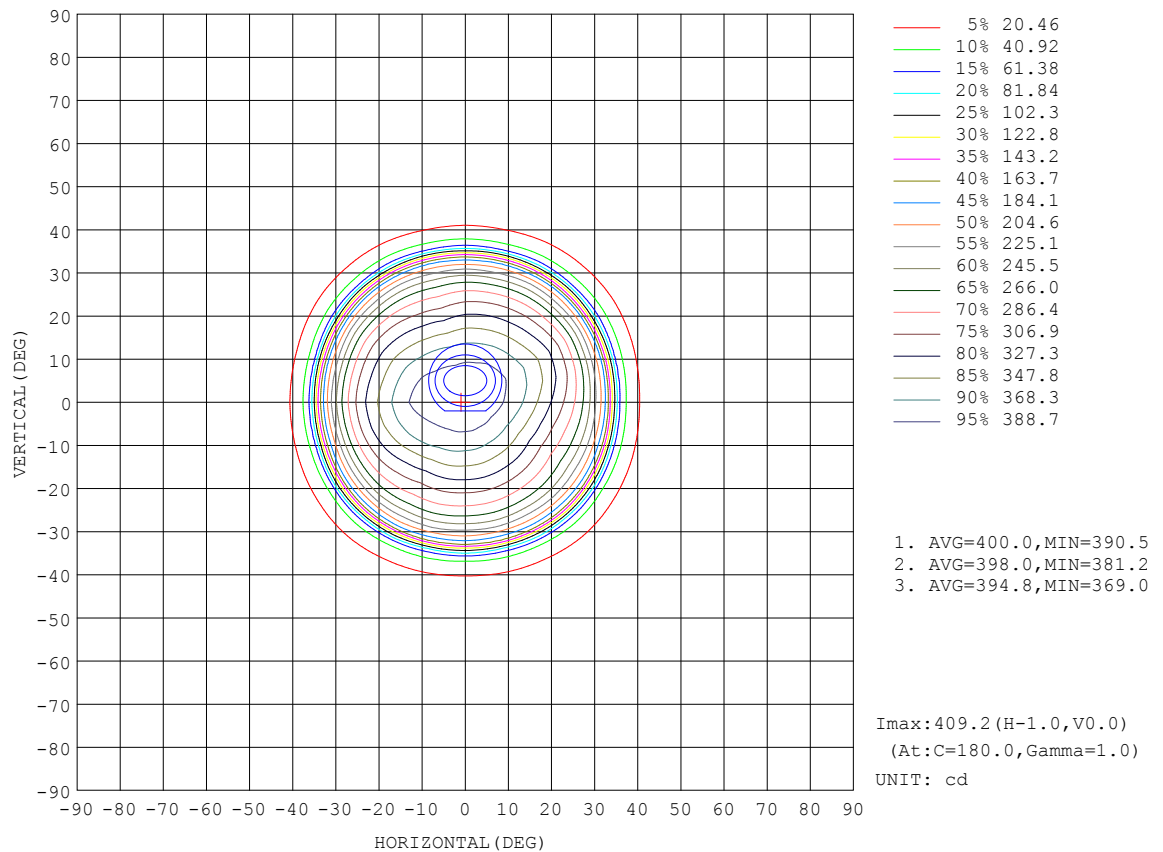
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	84	80	89	83	80	88	83	80	76
0.80	97	91	88	96	91	88	95	90	87	84
1.00	101	95	92	100	95	92	98	95	91	87
1.25	104	99	96	103	99	96	101	98	95	91
1.50	107	102	99	106	102	99	104	100	98	93
2.00	109	105	102	108	104	102	105	102	100	95
2.50	111	107	104	109	106	104	106	104	102	96
3.00	112	109	107	111	108	105	107	105	103	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	115	113	112	113	112	110	109	108	107	100
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Qin Meng
Test Date:2025-11-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:7.398m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:109.90V I:0.0770A P:8.4000W PF:0.9900 Freq:60.00Hz Lamp Flux:348.767x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:2700K	DIM.:	SERIAL No.:
MFR.:	SUR.:Φ100mm	Shielding Angle:

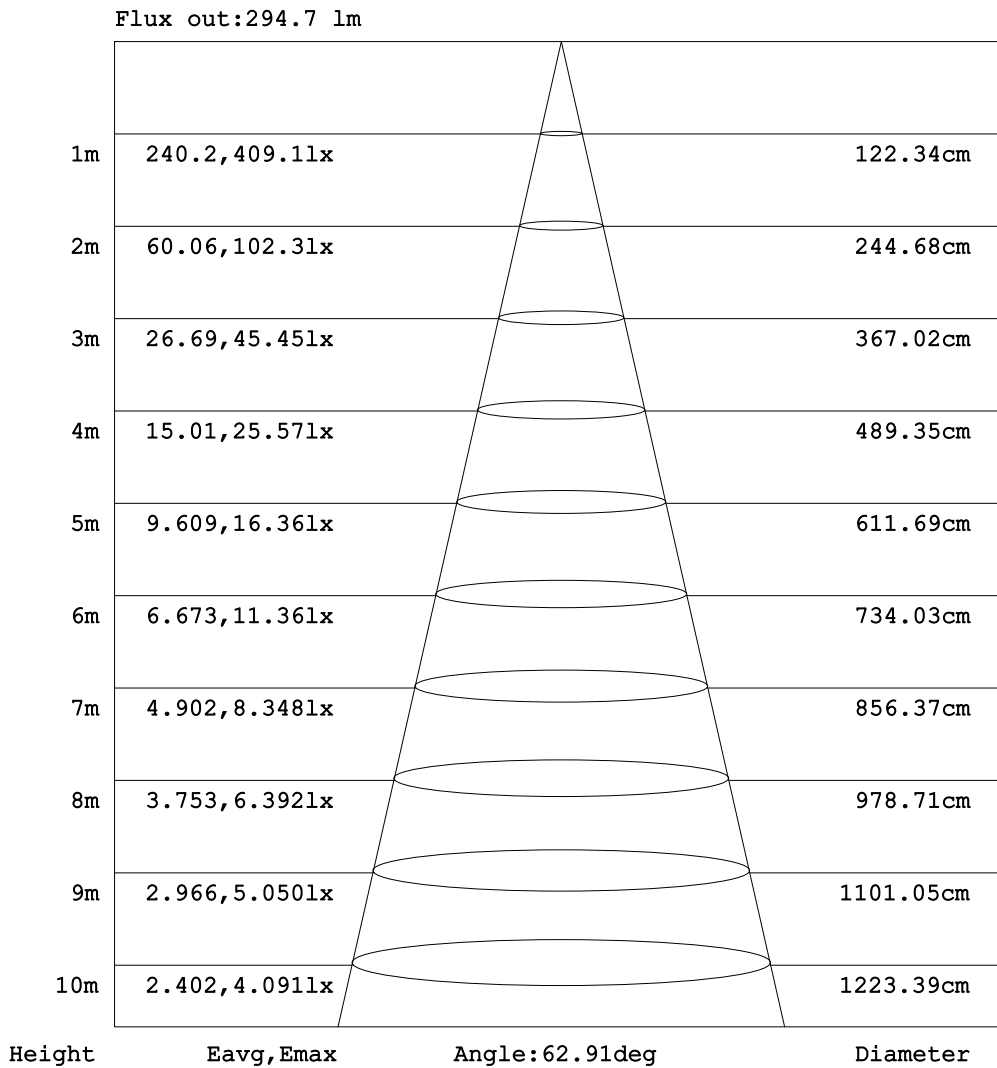


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Qin Meng
Test Date:2025-11-21

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:7.398m [K=1.0000]
Remarks:

AAI Figure

Test:U:109.90V I:0.0770A P:8.4000W PF:0.9900 Freq:60.00Hz Lamp Flux:348.767x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:2700K	DIM.:	SERIAL No.:
MFR.:	SUR.:Φ100mm	Shielding Angle:



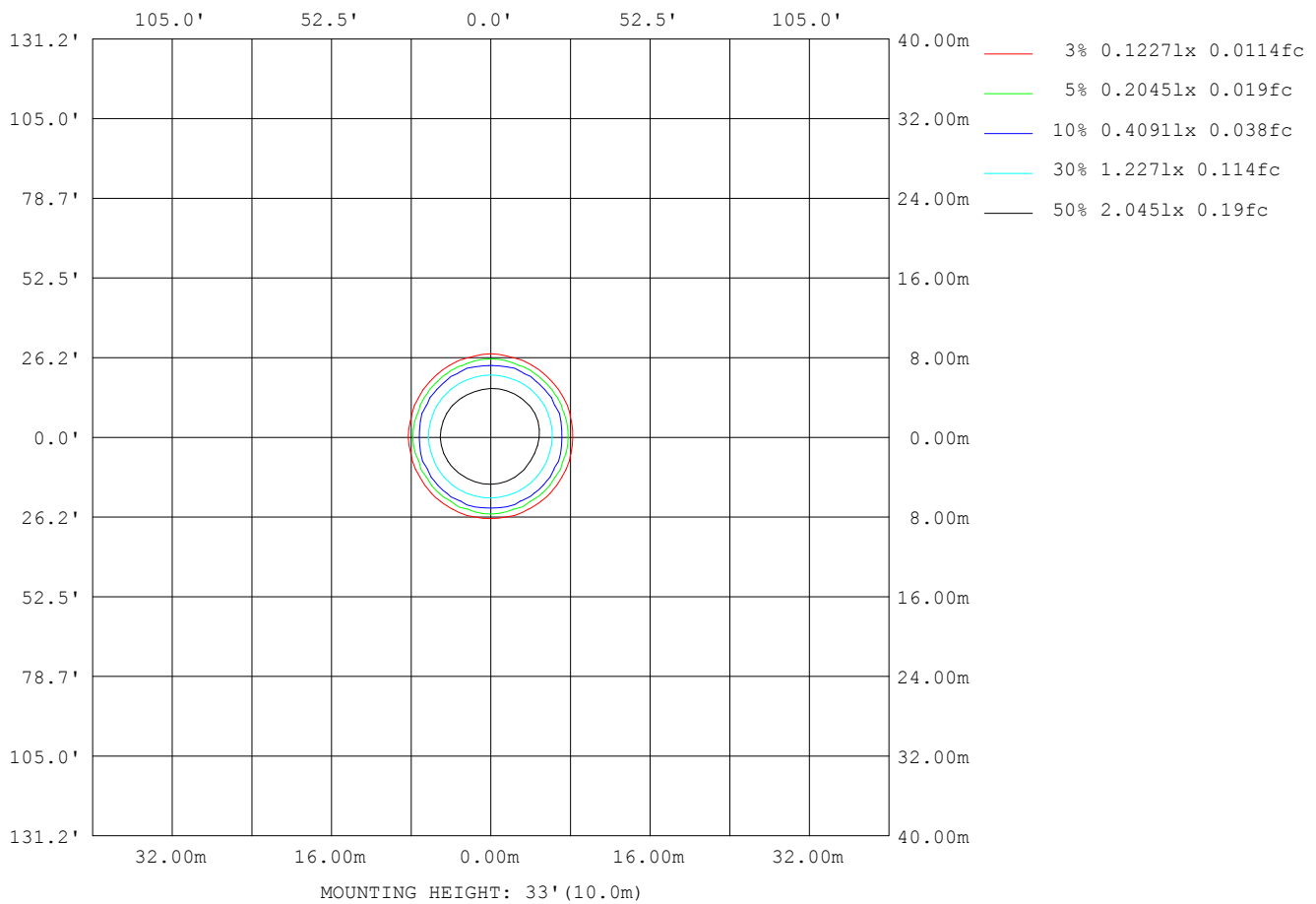
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Qin Meng
 Test Date:2025-11-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.421
 Humidity:65.0%
 Test Distance:7.398m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:109.90V I:0.0770A P:8.4000W PF:0.9900 Freq:60.00Hz Lamp Flux:348.767x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:2700K	DIM.:	SERIAL No.:
MFR.:	SUR.:Φ100mm	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Qin Meng
 Test Date:2025-11-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.421
 Humidity:65.0%
 Test Distance:7.398m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:109.90V I:0.0770A P:8.4000W PF:0.9900 Freq:60.00Hz Lamp Flux:348.767x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:2700K	DIM.:	SERIAL No.:
MFR.:	SUR.:Φ100mm	Shielding Angle:

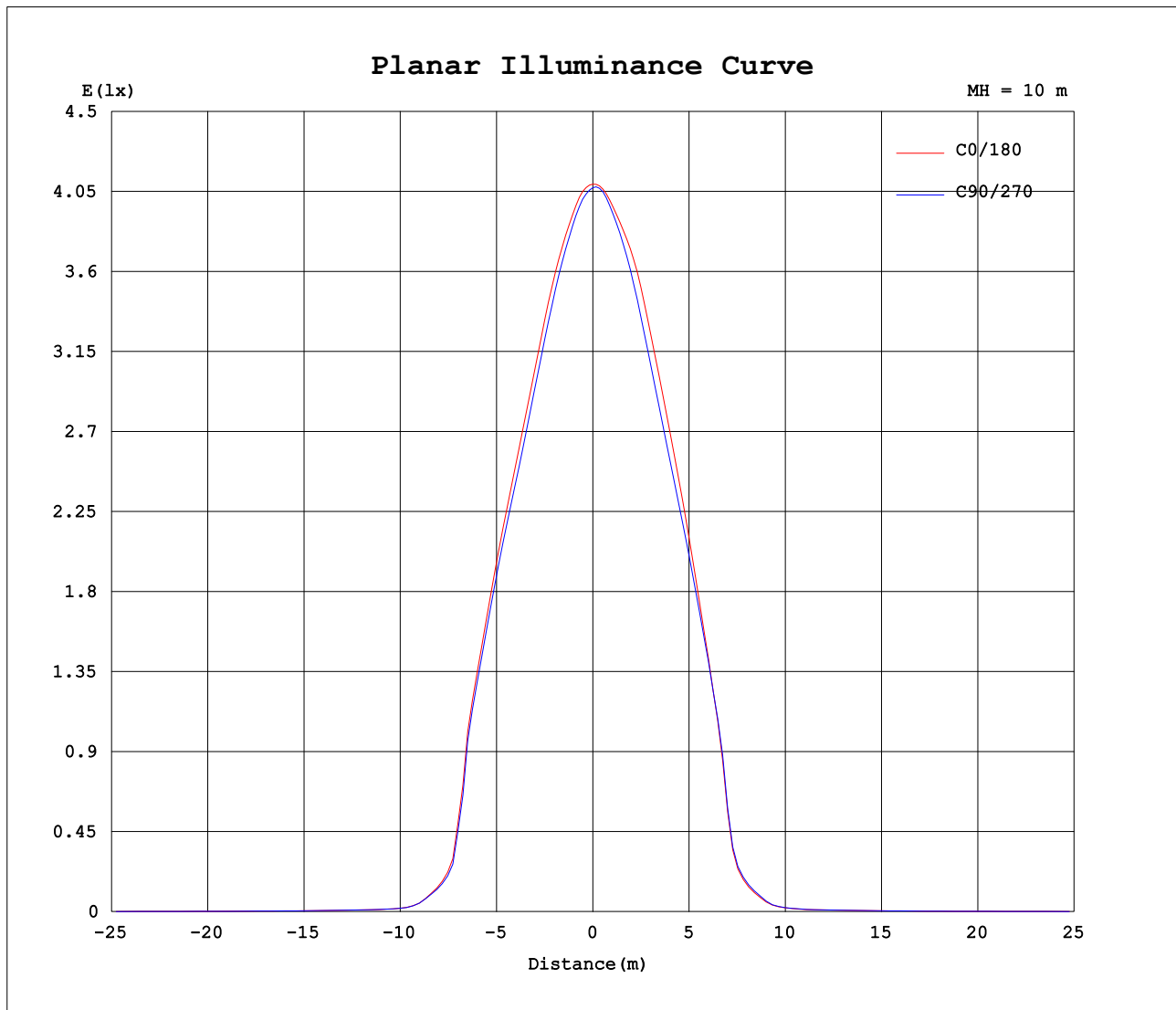
AvgL	cd/m2
L_0~180 (65) av	587
L_0~180 (75) av	161
L_0~180 (85) av	0
L_90~270 (65) av	576
L_90~270 (75) av	139
L_90~270 (85) av	0
L_45 (65) av	585
L_45 (75) av	156
L_45 (85) av	0

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Qin Meng
Test Date:2025-11-21

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:7.398m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Qin Meng
Test Date: 2025-11-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.421
Humidity: 65.0%
Test Distance: 7.398m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:7.398m [K=1.0000]
Remarks:

```

Test:U:109.90V I:0.0770A P:8.4000W PF:0.9900 Freq:60.00Hz Lamp Flux:348.767x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:2700K	DIM.:	SERIAL No.:
MFR.:	SUR.:φ100mm	Shielding Angle:

UNIT: cd

[illegible]

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.421
Humidity:65.0%
Test Distance:7.398m [K=1.0000]
Remarks:

```