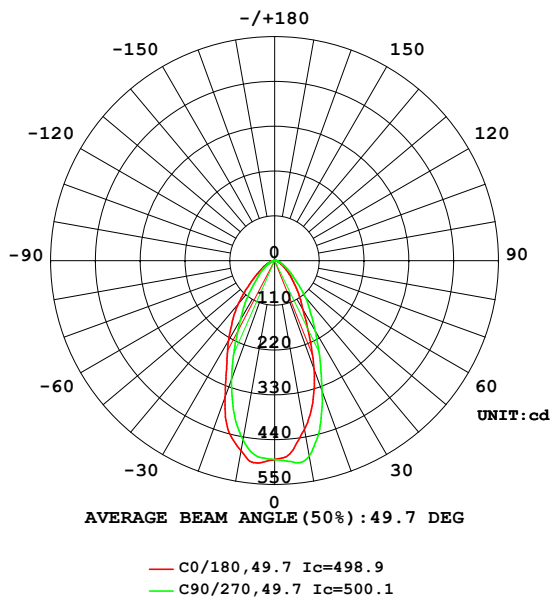


LUMINAIRE PHOTOMETRIC TEST REPORT

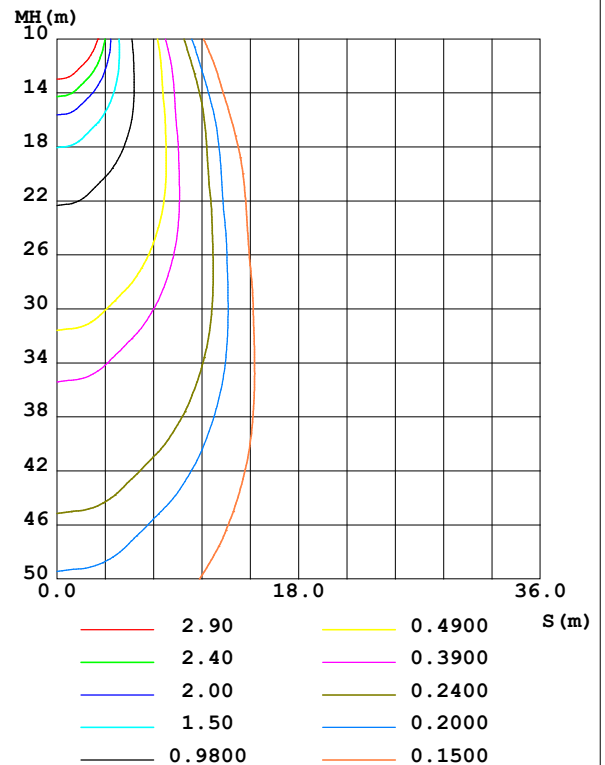
Test:U:230.17V I:0.0247A P:4.0000W PF:0.7446 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:450 x1 lm		
NAME: 0017440229 SOLIS 4W 6500K 450LM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: LIT by Cardi	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 112.5 m/W			
MODEL		Imax (cd)	500.1	S/MH(C0/180)	0.84
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	0.76
RATED VOLTAGE(V)		TOTAL FLUX(lm)	450	η UP,DN(C0-180)	0.0,47.7
NOMINAL FLUX(lm)	450	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,52.3
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)		η down (%)	100.0	CIBSE SHR MAX	0.85

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25°C
Operators: YHX
Test Date:

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.456
Humidity: 55%
Test Distance: 1.160m [K=1.0000]
Remarks:

Checker: YHX

Assessor: ZQQ

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	420.8	487.5	474.4	447.5					0- 10	45.59	45.59	9.54,9.54
20	284.2	341.2	356.5	310.5					10- 20	110.9	156.5	32.8,32.8
30	140.4	200.5	227.1	168.8					20- 30	112.2	268.7	56.3,56.3
40	77.27	117.9	140.1	87.42					30- 40	88.68	357.4	74.8,74.8
50	41.55	57.48	66.06	45.42					40- 50	58.30	415.7	87,87
60	21.48	29.51	31.09	22.57					50- 60	33.84	449.6	94.1,94.1
70	9.499	12.99	14.27	10.55					60- 70	18.04	467.6	97.9,97.9
80	2.876	4.469	5.237	3.707					70- 80	7.975	475.6	99.6,99.6
90	0	0.0697	0.4153	0					80- 90	1.927	477.5	100,100
100	0	0	0	0					90-100	0.0085	477.5	100,100
110	0	0	0	0					100-110	0	477.5	100,100
120	0	0	0	0					110-120	0	477.5	100,100
130	0.0246	0.0055	0	0.0039					120-130	0.0019	477.5	100,100
140	0.0651	0.0435	0.0590	0.0658					130-140	0.0244	477.5	100,100
150	0.1089	0.0867	0.1267	0.1305					140-150	0.0533	477.6	100,100
160	0.1361	0.1218	0.1718	0.1726					150-160	0.0620	477.6	100,100
170	0.1144	0.1174	0.1656	0.1637					160-170	0.0429	477.7	100,100
180	0.0043	0.0012	0.0129	0.0075					170-180	0.0106	477.7	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 390.37 lm

%lum = 81.7%

%lamp = 81.7%

Conical surface Flux(120deg): 449.55 lm

%lum = 94.1%

%lamp = 94.1%

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25°C
 Operators:YHX
 Test Date:

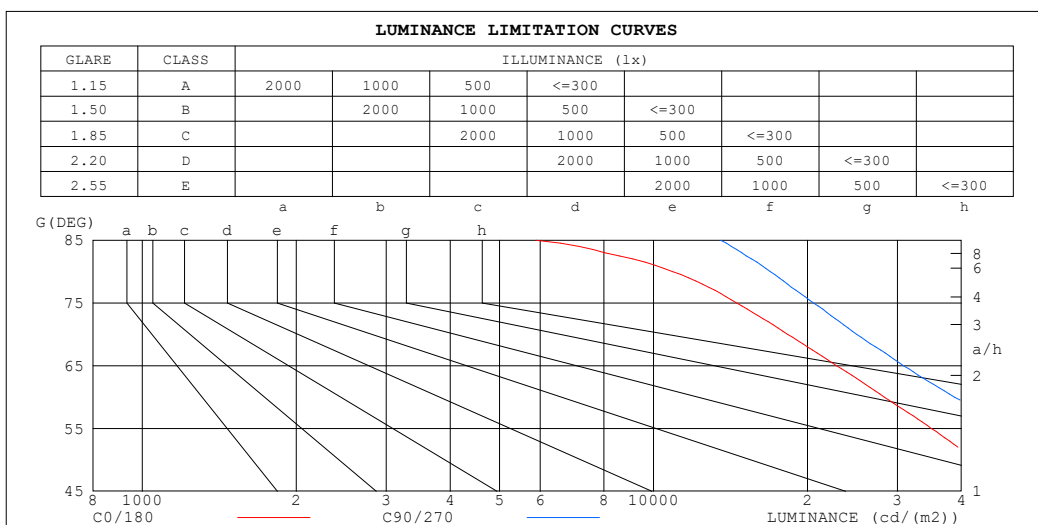
γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.456
 Humidity:55%
 Test Distance:1.160m [K=1.0000]
 Remarks:

Checker: YHX

Assessor: ZQQ

LUMINANCE LIMITATION CURVES

Test:U:230.17V I:0.0247A P:4.2278W PF:0.7446 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:477.695x1 lm		
NAME: 0017440229 SOLIS 4W 6500K 450LM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLITE	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	5902	13534
80	10907	16916
75	14551	20570
70	18288	24963
65	22809	30852
60	28287	38794
55	34973	48340
50	42565	58782
45	53420	76423

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25°C
Operators:YHX
Test Date:

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.456
Humidity:55%
Test Distance:1.160m [K=1.0000]
Remarks:

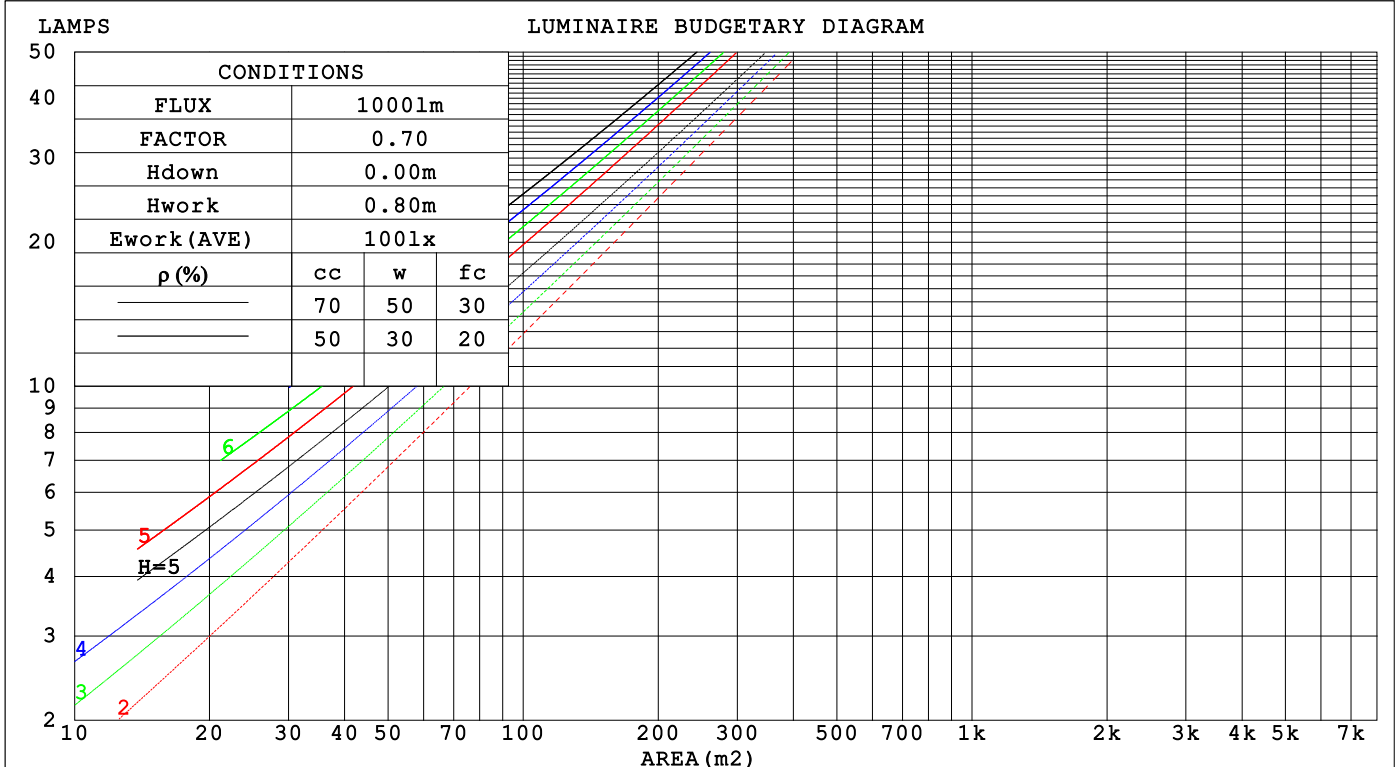
Checker: YHX

Assessor: ZQQ

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.17V I:0.0247A P:4.2278W PF:0.7446 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:477.695x1 lm		
NAME: 0017440229 SOLIS 4W 6500K 450LM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLITE	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															



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25°C
Operators:YHX
Test Date:

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.456
Humidity:55%
Test Distance:1.160m [K=1.0000]
Remarks:

Checker: YHX

Assessor: ZQQ

WEC AND CCEC

Test:U:230.17V I:0.0247A P:4.2278W PF:0.7446 Freq:49.99Hz			UTHDi:0.00% ITHDi:0.00% KDisp:0			Lamp Flux:477.695x1 lm		
NAME: 0017440229 SOLIS 4W 6500K 450LM			TYPE:			WEIGHT:		
SPEC.:			DIM.:			SERIAL No.:		
MFR.: KLITE			SUR.:			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	.215	.122	.039	.208	.118	.038	.195	.112	.036	.183	.106	.034	.172	.100	.032															
2.0	.206	.113	.035	.200	.110	.034	.189	.105	.033	.179	.100	.031	.170	.096	.030															
3.0	.195	.104	.031	.190	.102	.031	.180	.098	.030	.171	.094	.029	.163	.090	.028															
4.0	.184	.095	.028	.179	.094	.028	.171	.091	.027	.163	.088	.026	.156	.085	.026															
5.0	.173	.088	.026	.169	.087	.025	.162	.084	.025	.155	.082	.024	.149	.080	.024															
6.0	.163	.082	.023	.160	.081	.023	.154	.079	.023	.148	.077	.023	.142	.075	.022															
7.0	.155	.076	.022	.152	.076	.022	.146	.074	.021	.141	.072	.021	.136	.070	.021															
8.0	.147	.072	.020	.144	.071	.020	.139	.069	.020	.134	.068	.020	.130	.067	.019															
9.0	.139	.067	.019	.137	.067	.019	.132	.065	.019	.128	.064	.018	.124	.063	.018															
10.0	.133	.064	.018	.130	.063	.018	.126	.062	.017	.122	.061	.017	.119	.060	.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	.191	.191	.191	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.174	.157	.142	.149	.135	.122	.102	.093	.085	.059	.054	.049	.019	.017	.016	
2.0	.161	.133	.109	.138	.114	.094	.095	.079	.066	.055	.046	.038	.017	.015	.013	
3.0	.150	.114	.085	.129	.098	.074	.088	.068	.052	.051	.040	.031	.016	.013	.010	
4.0	.141	.100	.068	.121	.086	.059	.083	.060	.042	.048	.035	.025	.015	.011	.008	
5.0	.133	.089	.056	.114	.077	.049	.079	.054	.034	.046	.031	.020	.015	.010	.007	
6.0	.126	.080	.047	.108	.069	.041	.074	.048	.029	.043	.028	.017	.014	.009	.006	
7.0	.119	.072	.040	.102	.063	.034	.071	.044	.024	.041	.026	.015	.013	.008	.005	
8.0	.113	.066	.034	.097	.057	.030	.067	.040	.021	.039	.024	.013	.013	.008	.004	
9.0	.108	.061	.030	.093	.053	.026	.064	.037	.018	.037	.022	.011	.012	.007	.004	
10.0	.103	.057	.026	.089	.049	.023	.062	.035	.016	.036	.021	.010	.012	.007	.003	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25°C
Operators:YHX
Test Date:

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.456
Humidity:55%
Test Distance:1.160m [K=1.0000]
Remarks:

Checker: YHX

Assessor: ZQQ

UGR(Unified Glare Rating) Table

Test:U:230.17V I:0.0247A P:4.2278W PF:0.7446 Freq:49.99Hz										
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:477.695x1 lm										
NAME: 0017440229 SOLIS 4W 6500K 450LM						TYPE:		WEIGHT:		
SPEC.:						DIM.:		SERIAL No.:		
MFR.: KLITE						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	25.6	26.7	25.9	26.9	27.1	26.9	28.1	27.2	28.2	28.4
3H	26.0	27.1	26.3	27.3	27.5	27.4	28.4	27.7	28.7	28.9
4H	26.2	27.1	26.4	27.4	27.6	27.6	28.5	27.8	28.8	29.0
6H	26.2	27.1	26.5	27.4	27.6	27.6	28.6	28.0	28.8	29.1
8H	26.2	27.1	26.5	27.3	27.6	27.7	28.5	28.0	28.8	29.1
12H	26.2	27.0	26.5	27.3	27.6	27.6	28.5	28.0	28.8	29.1
4H 2H	25.9	26.9	26.2	27.1	27.3	27.0	28.0	27.3	28.3	28.5
3H	26.4	27.3	26.8	27.6	27.9	27.6	28.5	28.0	28.8	29.0
4H	26.6	27.4	27.0	27.7	28.0	27.9	28.6	28.2	28.9	29.3
6H	26.7	27.4	27.1	27.8	28.1	28.0	28.7	28.4	29.0	29.4
8H	26.7	27.4	27.1	27.7	28.1	28.1	28.7	28.5	29.0	29.4
12H	26.7	27.3	27.1	27.7	28.1	28.1	28.7	28.5	29.0	29.4
8H 4H	26.7	27.3	27.1	27.7	28.1	27.9	28.5	28.3	28.8	29.2
6H	26.9	27.4	27.3	27.8	28.2	28.1	28.6	28.5	29.0	29.4
8H	26.9	27.4	27.3	27.8	28.2	28.2	28.6	28.6	29.0	29.5
12H	26.9	27.3	27.4	27.7	28.2	28.2	28.6	28.7	29.0	29.5
12H 4H	26.7	27.2	27.1	27.6	28.0	27.8	28.4	28.2	28.8	29.2
6H	26.9	27.3	27.3	27.7	28.2	28.1	28.5	28.5	28.9	29.4
8H	26.9	27.3	27.4	27.7	28.2	28.1	28.5	28.6	29.0	29.5
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.8 / - 1.1					+ 0.8 / - 1.0				
1.5H	+ 0.8 / - 0.9					+ 1.2 / - 0.7				
2.0H	+ 1.3 / - 1.3					+ 1.8 / - 1.4				

CIE Pub.117, 477.7 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -2.6)
Area: 0.00152 m2

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25°C
Operators:YHX
Test Date:

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.456
Humidity:55%
Test Distance:1.160m [K=1.0000]
Remarks:

Checker: YHX

Assessor: ZQQ

UTILIZATION FACTORS TABLE

Test:U:230.17V I:0.0247A P:4.2278W PF:0.7446 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:477.695x1 lm		
NAME: 0017440229 SOLIS 4W 6500K 450LM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLITE	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) $k(RI) \times RCR = 5$									
$k = 0.60$	76	67	62	75	67	62	74	67	62	57
0.80	85	77	71	84	76	71	82	75	71	66
1.00	91	83	78	90	83	78	88	83	78	72
1.25	96	89	84	95	89	84	93	87	83	78
1.50	100	93	89	98	93	88	96	91	87	82
2.00	104	98	94	103	97	93	100	95	92	86
2.50	106	101	97	105	100	97	101	98	95	88
3.00	109	104	101	107	103	99	103	100	97	90
4.00	111	108	105	109	106	103	105	103	100	93
5.00	113	110	107	111	108	106	106	104	102	94
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:25°C
Operators:YHX
Test Date:

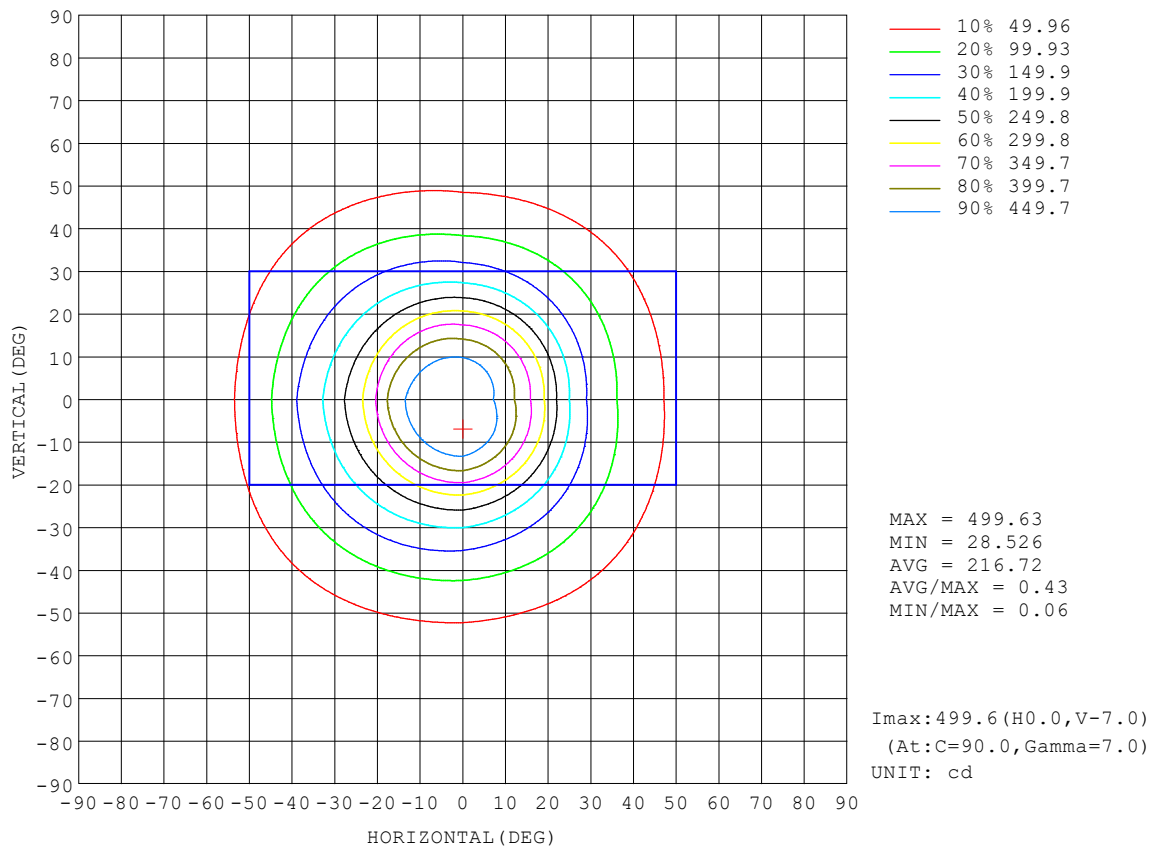
Checker: YHX

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.456
Humidity:55%
Test Distance:1.160m [K=1.0000]
Remarks:

Assessor: ZQQ

ISOCANDELA DIAGRAM

Test:U:230.17V I:0.0247A P:4.2278W PF:0.7446 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:477.695x1 lm		
NAME: 0017440229 SOLIS 4W 6500K 450LM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLITE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25°C
 Operators:YHX
 Test Date:

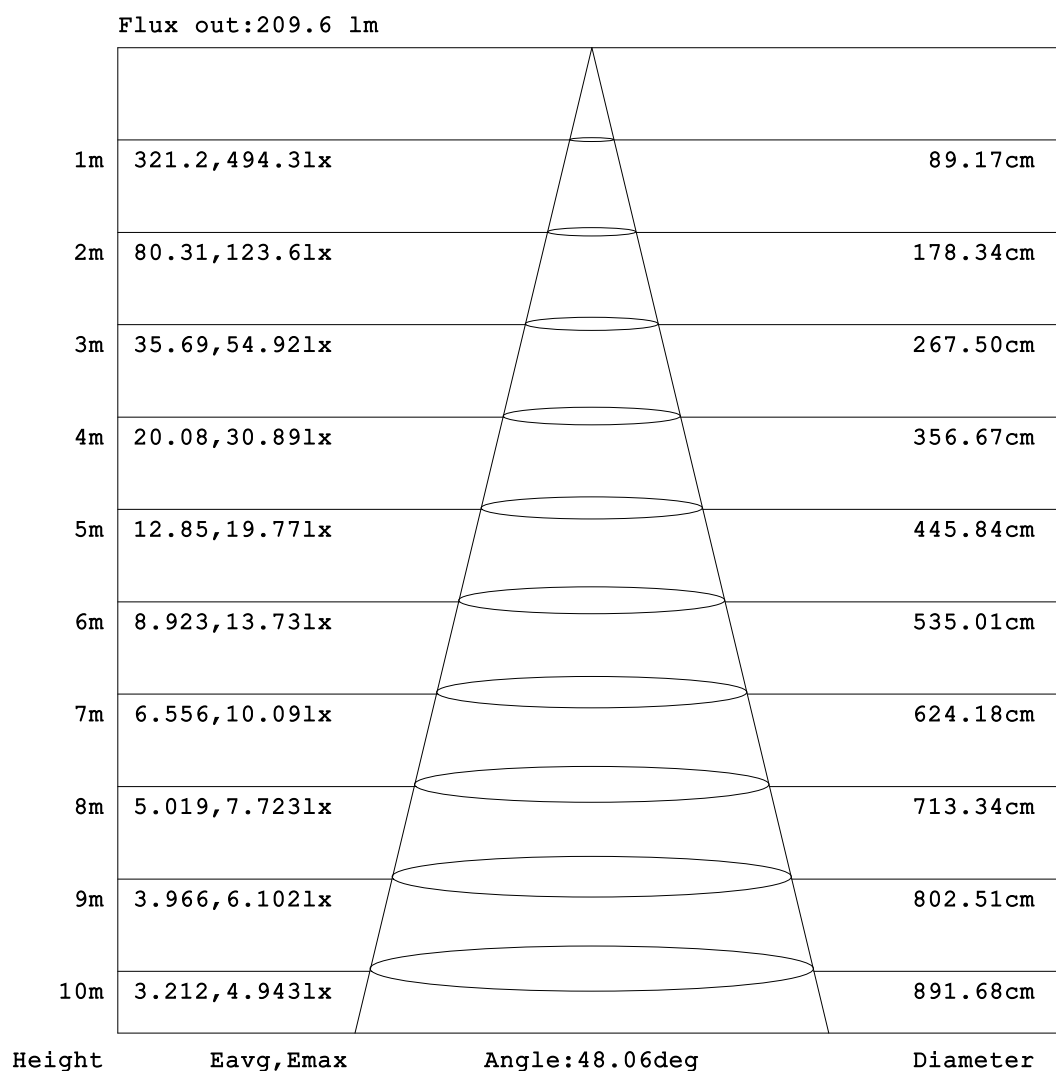
Checker: YHX

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.456
 Humidity:55%
 Test Distance:1.160m [K=1.0000]
 Remarks:

Assessor: ZQQ

AAI Figure

Test:U:230.17V I:0.0247A P:4.2278W PF:0.7446 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:477.695x1 lm		
NAME: 0017440229 SOLIS 4W 6500K 450LM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLITE	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: 25°C
 Operators: YHX
 Test Date:

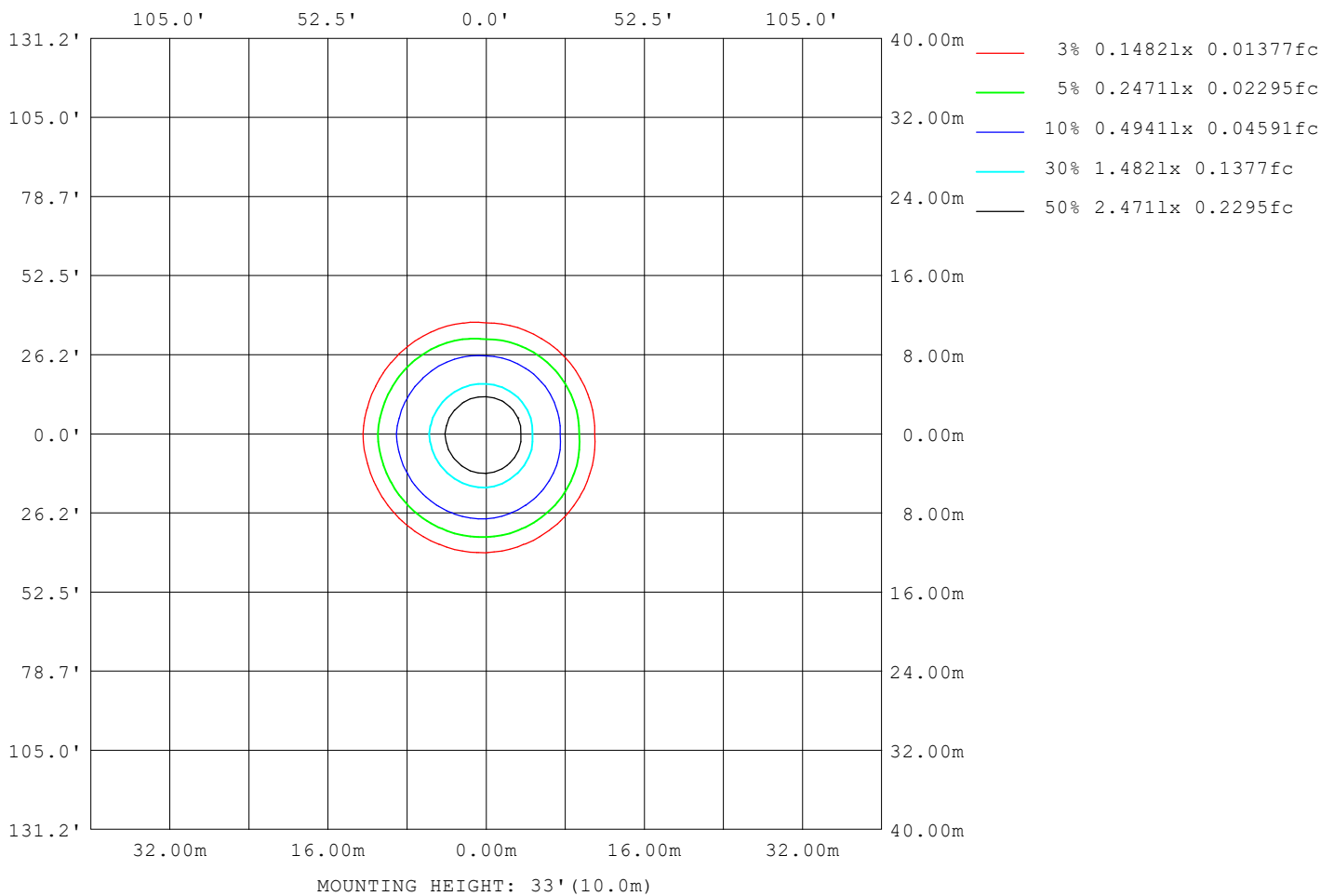
γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.456
 Humidity: 55%
 Test Distance: 1.160m [K=1.0000]
 Remarks:

Checker: YHX

Assessor: ZQQ

ISOLUX DIAGRAM

Test: U:230.17V I:0.0247A P:4.2278W PF:0.7446 Freq:49.99Hz UTHDi: 0.00% ITHDi: 0.00% KDisp: 0 Lamp Flux: 477.695x1 lm		
NAME: 0017440229 SOLIS 4W 6500K 450LM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLITE	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25°C
 Operators: YHX
 Test Date:

Checker: YHX

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.456
 Humidity: 55%
 Test Distance: 1.160m [K=1.0000]
 Remarks:

Assessor: ZQQ

LED Avg.L Report

Test:U:230.17V I:0.0247A P:4.2278W PF:0.7446 Freq:49.99Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:477.695x1 lm		
NAME: 0017440229 SOLIS 4W 6500K 450LM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLITE	SUR.:	Shielding Angle:

AvgL	cd/m2
L_0~180 (65) av	28114
L_0~180 (75) av	18807
L_0~180 (85) av	12426
L_90~270 (65) av	27611
L_90~270 (75) av	18699
L_90~270 (85) av	12072
L_45 (65) av	28133
L_45 (75) av	19006
L_45 (85) av	12612

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25℃
Operators:YHX
Test Date:

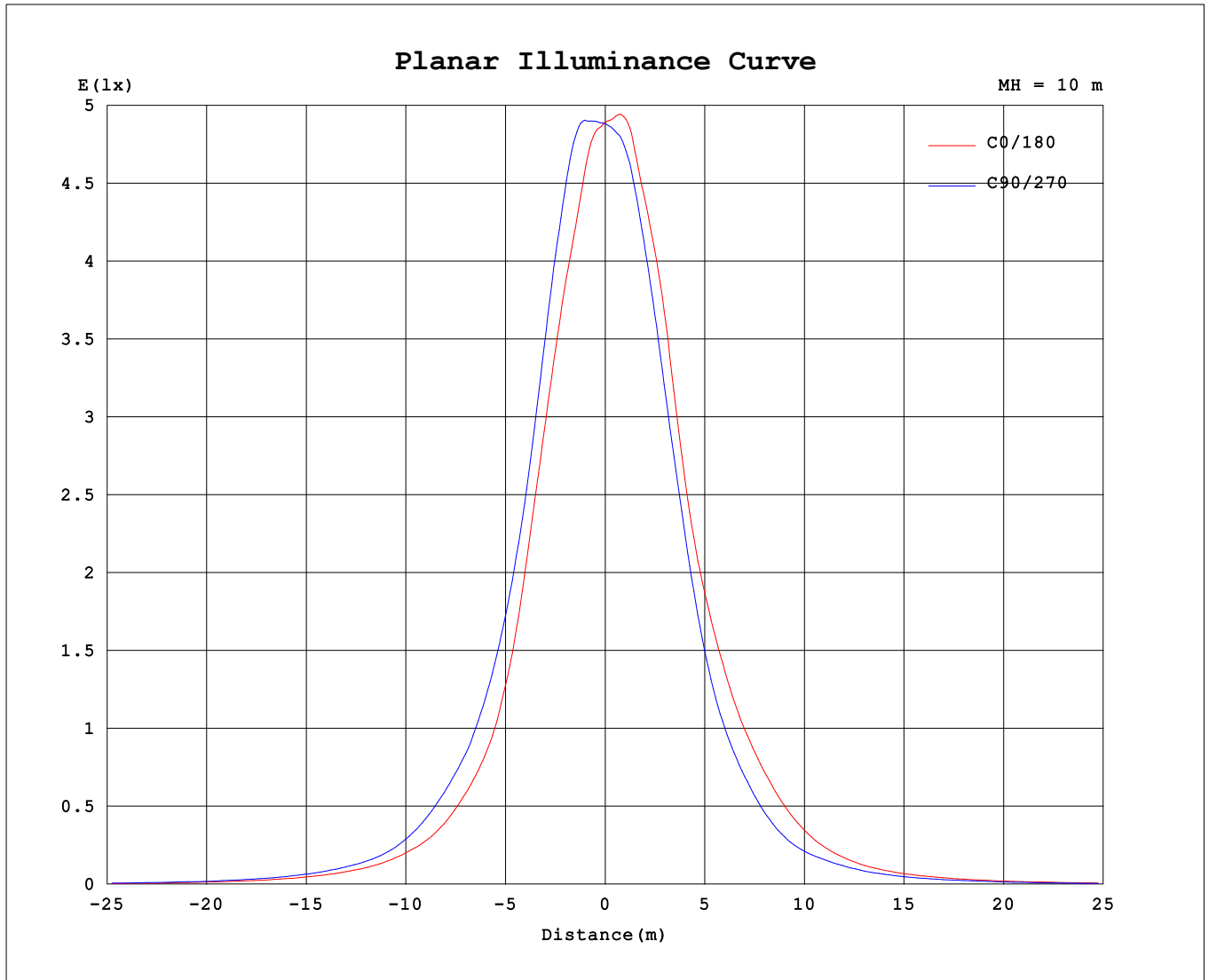
Checker: YHX

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.456
Humidity:55%
Test Distance:1.160m [K=1.0000]
Remarks:

Assessor: ZQQ



Planar Illuminance Curve



C Range: 0 - 360DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature: 25°C

Operators: YHX

Test Date:

Checker: YHX

 γ Range: 0 - 180DEG γ Interval: 0.5DEG

Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.456

Humidity: 55%

Test Distance: 1.160m [K=1.0000]

Remarks:

Assessor: ZQQ

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.17V I:0.0247A P:4.2278W PF:0.7446 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:477.695x1 lm		
NAME: 0017440229 SOLIS 4W 6500K 450LM	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: KLITE	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	489	489	489	489															
5	472	496	499	483															
10	421	488	474	447															
15	362	428	436	387															
20	284	341	357	311															
25	199	262	278	232															
30	140	200	227	169															
35	106	153	181	126															
40	77.3	118	140	87.4															
45	57.4	82.2	98.1	60.2															
50	41.6	57.5	66.1	45.4															
55	30.5	42.2	44.5	32.0															
60	21.5	29.5	31.1	22.6															
65	14.6	19.8	21.5	15.6															
70	9.50	13.0	14.3	10.5															
75	5.72	8.10	9.08	6.61															
80	2.88	4.47	5.24	3.71															
85	0.78	1.79	2.51	1.40															
90	0.00	0.07	0.42	0.00															
95	0.00	0.00	0.00	0.00															
100	0.00	0.00	0.00	0.00															
105	0.00	0.00	0.00	0.00															
110	0.00	0.00	0.00	0.00															
115	0.00	0.00	0.00	0.00															
120	0.00	0.00	0.00	0.00															
125	0.01	0.00	0.00	0.00															
130	0.02	0.01	0.00	0.00															
135	0.04	0.02	0.03	0.03															
140	0.07	0.04	0.06	0.07															
145	0.09	0.06	0.09	0.10															
150	0.11	0.09	0.13	0.13															
155	0.13	0.11	0.16	0.16															
160	0.14	0.12	0.17	0.17															
165	0.13	0.13	0.18	0.18															
170	0.11	0.12	0.17	0.16															
175	0.07	0.08	0.12	0.12															
180	0.00	0.00	0.01	0.01															

C Range: 0 - 360DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25°C

Operators:YHX

Test Date:

γ Range: 0 - 180DEG

γ Interval: 0.5DEG

Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.456

Humidity:55%

Test Distance:1.160m [K=1.0000]

Remarks:

Checker: YHX

Assessor: ZQQ