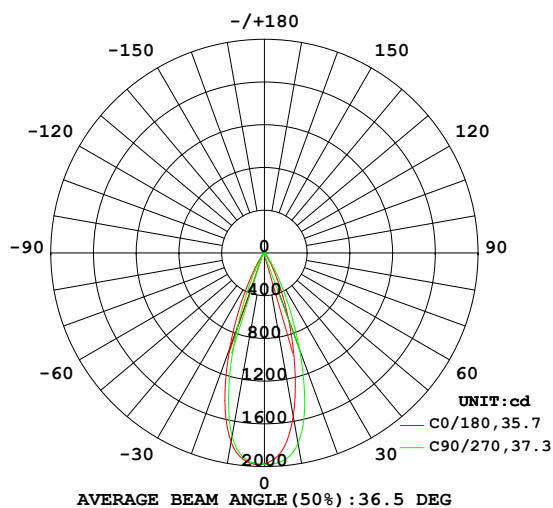


LUMINAIRE PHOTOMETRIC TEST REPORT

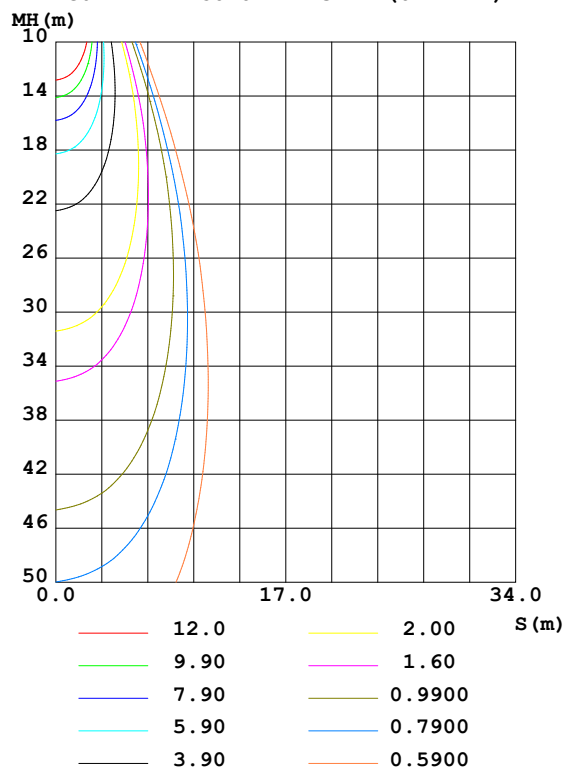
Test:U:232.43V I:0.0887A P:10.858W PF:0.5267 Freq:50.00Hz Lamp Flux:813.493x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-10W3036-CI30031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 74.92 lm/W			
MODEL	CLU701 1002	I _{max} (cd)	1982	S/MH (C0/180)	0.61
NOMINAL POWER (W)	10W	LOR (%)	100.0	S/MH (C90/270)	0.55
RATED VOLTAGE (V)		TOTAL FLUX (lm)	813.49	η UP, DN (C0-180)	0.2, 49.0
NOMINAL FLUX (lm)	813.493	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.1, 50.6
LAMPS INSIDE	1	η up (%)	0.3	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	220.2	η down (%)	99.7	CIBSE SHR MAX	0.60

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Xie Bi
Test Date: 2023-11-15

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity: 65.0%
Test Distance: 6.810m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum,lamp
10	1552	1810	1797	1745					0- 10	177.9	177.9	21.9,21.9
20	658.5	957.2	951.6	737.3					10- 20	355.3	533.2	65.5,65.5
30	133.4	235.7	222.1	130.9					20- 30	199.0	732.2	90,90
40	31.82	46.37	43.34	30.07					30- 40	53.22	785.4	96.6,96.6
50	14.26	14.04	17.41	12.03					40- 50	18.40	803.8	98.8,98.8
60	2.096	0.4863	4.809	0.3794					50- 60	6.450	810.3	99.6,99.6
70	0.0105	0.0104	0.1041	0.0262					60- 70	0.5032	810.8	99.7,99.7
80	0	0	0	0.0052					70- 80	0.0083	810.8	99.7,99.7
90	0	0	0	0					80- 90	0.0001	810.8	99.7,99.7
100	0	0	0	0					90-100	0	810.8	99.7,99.7
110	0	0	0	0					100-110	0.0013	810.8	99.7,99.7
120	0.0750	0.1691	0.0366	0.1343					110-120	0.0595	810.9	99.7,99.7
130	0.1811	0.1430	0.0785	0.1151					120-130	0.0972	811.0	99.7,99.7
140	0.6763	0.4486	0.2375	0.3609					130-140	0.1856	811.1	99.7,99.7
150	1.710	1.402	0.7292	1.028					140-150	0.4785	811.6	99.8,99.8
160	2.851	2.622	1.672	2.080					150-160	0.8078	812.4	99.9,99.9
170	3.442	3.315	2.578	2.800					160-170	0.7518	813.2	100,100
180	3.453	3.634	3.447	3.641					170-180	0.3092	813.5	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 796.32 lm

%lum = 97.9%

%lamp = 97.9%

Conical surface Flux(120deg): 810.29 lm

%lum = 99.6%

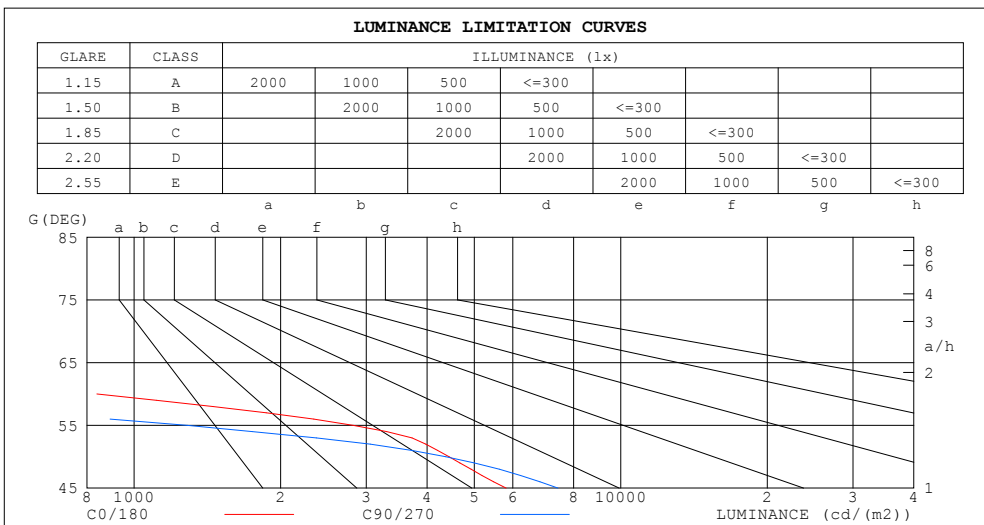
%lamp = 99.6%

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2023-11-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity:65.0%
 Test Distance:6.810m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:232.43V I:0.0887A P:10.858W PF:0.5267 Freq:50.00Hz Lamp Flux:813.493x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-10W3036-CI30031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	0	0
80	0	0
75	0	3
70	6	6
65	106	35
60	839	195
55	2819	1286
50	4436	4369
45	5811	7428

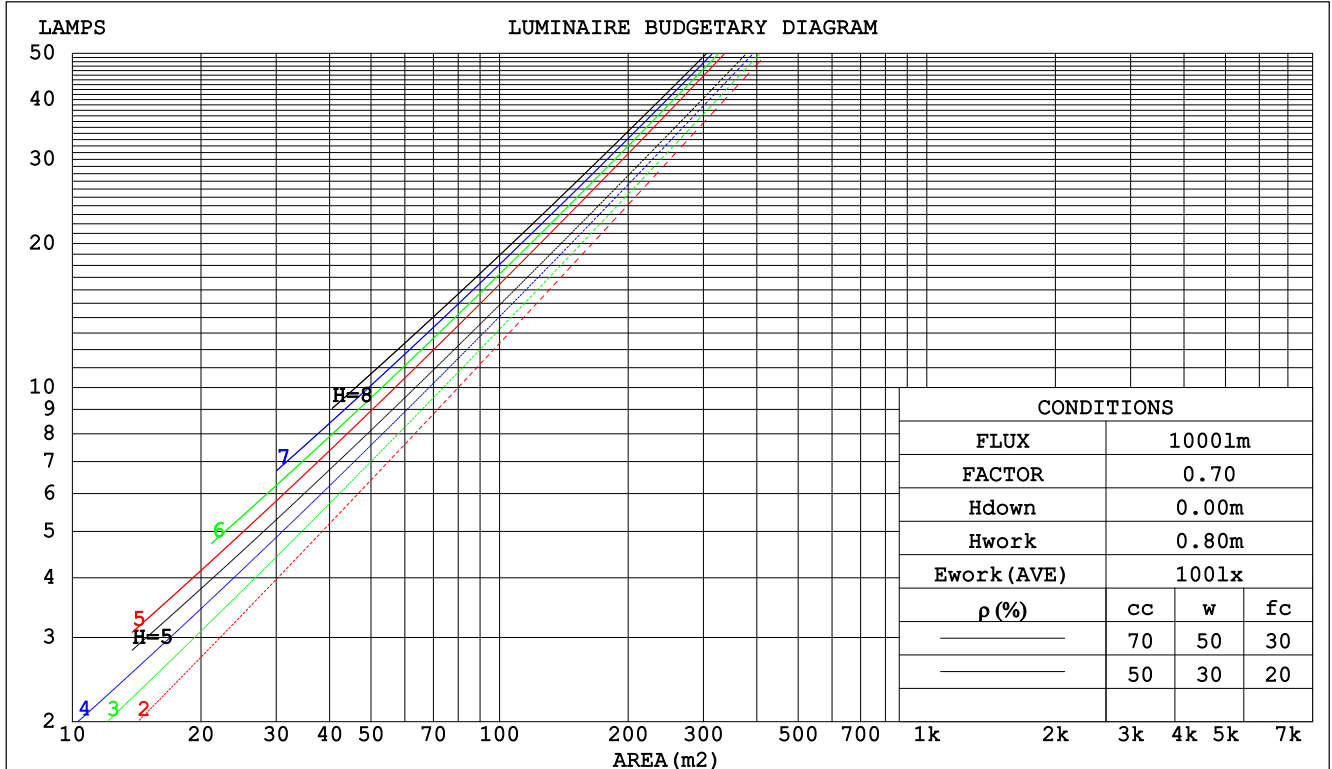
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2023-11-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:232.43V I:0.0887A P:10.858W PF:0.5267 Freq:50.00Hz Lamp Flux:813.493x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-10W3036-CI30031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	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	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	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97	.95
2.0	1.06	1.03	.00	1.04	1.01	.99	1.01	.99	.96	.98	.96	.94	.95	.94	.92	.91
3.0	1.00	.96	.93	.99	.95	.92	.97	.93	.91	.94	.92	.89	.92	.90	.88	.87
4.0	.96	.91	.88	.94	.90	.87	.92	.89	.86	.90	.87	.85	.89	.86	.84	.83
5.0	.91	.86	.83	.90	.86	.83	.89	.85	.82	.87	.84	.81	.85	.83	.80	.79
6.0	.87	.82	.79	.86	.82	.79	.85	.81	.78	.84	.80	.77	.82	.79	.77	.76
7.0	.83	.79	.75	.83	.78	.75	.82	.78	.75	.81	.77	.74	.79	.76	.74	.73
8.0	.80	.75	.72	.80	.75	.72	.79	.74	.72	.78	.74	.71	.77	.73	.71	.70
9.0	.77	.72	.69	.77	.72	.69	.76	.72	.69	.75	.71	.68	.74	.71	.68	.67
10.0	.74	.69	.66	.74	.69	.66	.73	.69	.66	.72	.69	.66	.72	.68	.66	.65



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2023-11-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity:65.0%
 Test Distance:6.810m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:232.43V I:0.0887A P:10.858W PF:0.5267 Freq:50.00Hz Lamp Flux:813.493x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-10W3036-CI30031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	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	.152	.086	.027	.145	.083	.026	.132	.076	.024	.121	.070	.022	.110	.064	.021		
2.0	.143	.078	.024	.137	.075	.023	.127	.070	.022	.117	.066	.021	.108	.061	.019		
3.0	.134	.072	.021	.130	.069	.021	.121	.065	.020	.113	.062	.019	.105	.058	.018		
4.0	.127	.066	.019	.123	.064	.019	.115	.061	.018	.108	.058	.018	.102	.055	.017		
5.0	.121	.061	.018	.117	.060	.018	.111	.058	.017	.104	.055	.016	.099	.053	.016		
6.0	.115	.057	.016	.112	.056	.016	.106	.054	.016	.101	.052	.015	.096	.050	.015		
7.0	.109	.054	.015	.107	.053	.015	.102	.051	.015	.097	.050	.014	.093	.048	.014		
8.0	.105	.051	.014	.102	.050	.014	.098	.049	.014	.094	.047	.014	.090	.046	.013		
9.0	.100	.049	.014	.098	.048	.013	.094	.047	.013	.091	.045	.013	.087	.044	.013		
10.0	.096	.046	.013	.094	.046	.013	.091	.045	.013	.088	.043	.012	.084	.042	.012		

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	.193	.193	.193	.165	.165	.165	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.172	.160	.149	.147	.137	.129	.101	.095	.089	.058	.055	.052	.019	.018	.017	
2.0	.155	.135	.119	.133	.116	.103	.091	.081	.072	.052	.047	.042	.017	.015	.014	
3.0	.141	.116	.096	.121	.100	.083	.083	.069	.058	.048	.041	.034	.015	.013	.011	
4.0	.129	.101	.079	.111	.087	.069	.076	.061	.048	.044	.036	.029	.014	.012	.009	
5.0	.120	.089	.066	.103	.077	.058	.071	.054	.041	.041	.032	.024	.013	.010	.008	
6.0	.111	.079	.056	.096	.069	.049	.066	.048	.034	.038	.028	.021	.012	.009	.007	
7.0	.104	.071	.048	.090	.062	.042	.062	.043	.030	.036	.025	.018	.012	.008	.006	
8.0	.098	.065	.042	.084	.056	.036	.058	.039	.026	.034	.023	.015	.011	.008	.005	
9.0	.093	.059	.037	.080	.051	.032	.055	.036	.023	.032	.021	.013	.010	.007	.004	
10.0	.088	.055	.032	.076	.047	.028	.053	.033	.020	.031	.020	.012	.010	.006	.004	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2023-11-15

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:232.43V I:0.0887A P:10.858W PF:0.5267 Freq:50.00Hz Lamp Flux:813.493x1 lm											
NAME: 89014LED						TYPE:			WEIGHT:		
SPEC.:P-89014LED-10W3036-CI30031R90-HEK700						DIM.:			SERIAL No.:		
MFR.: CETTIGA						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	2H	10.7	11.5	11.0	11.7	11.8	12.3	13.1	12.6	13.3	13.4
	3H	10.6	11.3	10.8	11.5	11.7	12.2	12.9	12.4	13.1	13.3
	4H	10.5	11.2	10.8	11.4	11.6	12.1	12.8	12.4	13.0	13.2
	6H	10.4	11.0	10.7	11.3	11.5	12.0	12.6	12.3	12.9	13.1
	8H	10.4	11.0	10.7	11.2	11.5	12.0	12.6	12.3	12.8	13.1
	12H	10.3	10.9	10.6	11.2	11.4	11.9	12.5	12.2	12.8	13.0
4H	2H	10.5	11.2	10.8	11.4	11.6	12.1	12.8	12.4	13.0	13.2
	3H	10.3	10.9	10.7	11.2	11.5	11.9	12.5	12.3	12.8	13.1
	4H	10.3	10.8	10.6	11.1	11.4	11.8	12.4	12.2	12.7	13.0
	6H	10.2	10.6	10.5	11.0	11.3	11.7	12.2	12.1	12.5	12.9
	8H	10.1	10.5	10.5	10.9	11.3	11.7	12.1	12.1	12.5	12.9
	12H	10.0	10.4	10.5	10.8	11.2	11.6	12.0	12.1	12.4	12.8
8H	4H	10.1	10.5	10.5	10.9	11.3	11.7	12.1	12.1	12.5	12.9
	6H	10.0	10.3	10.4	10.7	11.2	11.6	11.9	12.0	12.3	12.8
	8H	9.9	10.2	10.4	10.7	11.1	11.5	11.8	12.0	12.3	12.7
	12H	9.9	10.1	10.3	10.6	11.1	11.5	11.7	11.9	12.2	12.7
12H	4H	10.0	10.4	10.5	10.8	11.2	11.6	12.0	12.1	12.4	12.8
	6H	9.9	10.2	10.4	10.7	11.1	11.5	11.8	12.0	12.3	12.7
	8H	9.9	10.1	10.3	10.6	11.1	11.5	11.7	11.9	12.2	12.7
Variations with the observer position at spacings:											
S = 1.0H		+ 2.4 / - 7.4					+ 3.6 / -14.9				
1.5H		+ 2.7 / - 4.8					+ 4.9 / - 7.9				
2.0H		+ 4.5 / -20.6					+ 6.0 / -22.4				

CIE Pub.117, 813.5 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.7)
Area: 0.005 m2

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2023-11-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:232.43V I:0.0887A P:10.858W PF:0.5267 Freq:50.00Hz Lamp Flux:813.493x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-10W3036-CI30031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

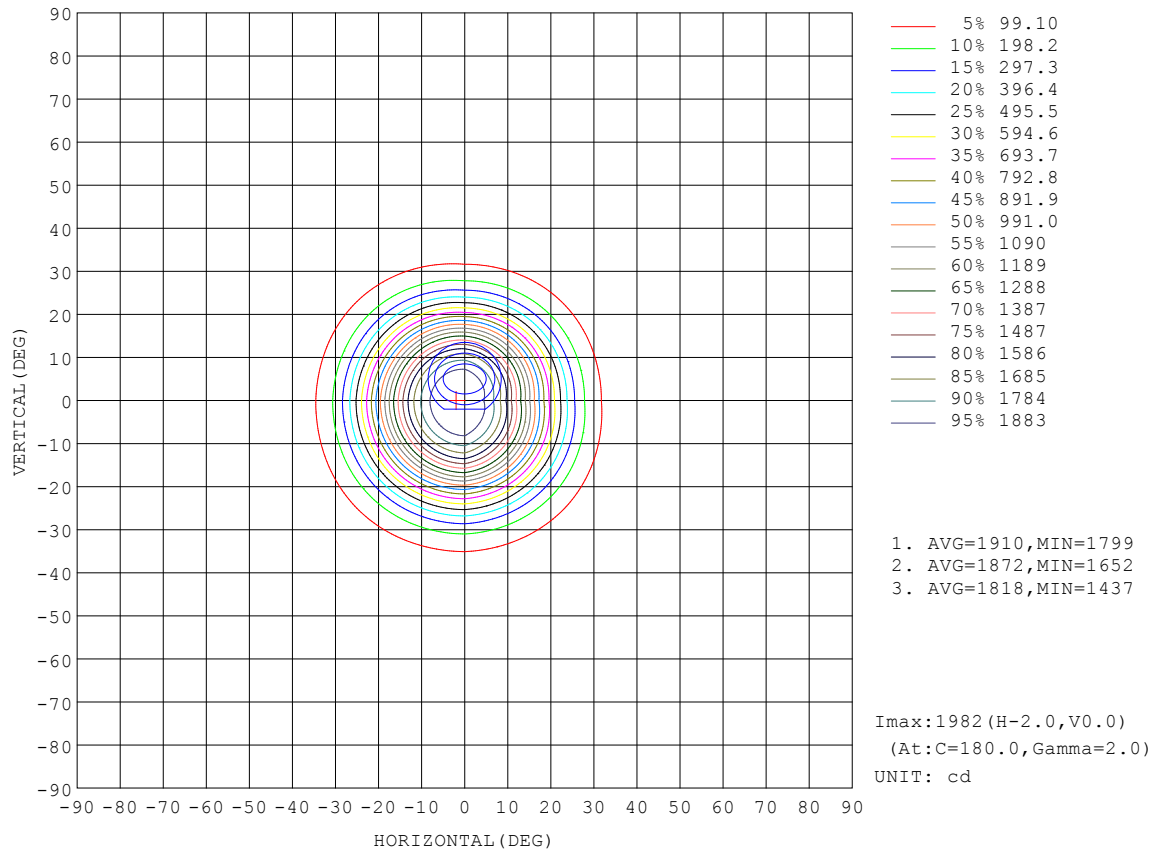
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	80	89	83	80	88	83	80	76
0.80	97	91	88	96	91	87	95	90	87	84
1.00	101	95	92	100	95	92	98	95	91	87
1.25	104	100	96	103	99	96	101	98	95	91
1.50	107	103	99	106	102	99	103	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	110	108	105	107	105	103	97
4.00	114	112	110	112	110	108	108	107	105	98
5.00	115	113	112	113	111	110	109	108	107	99
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:25.3DEG
Operators:Xie Bi
Test Date:2023-11-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:232.43V I:0.0887A P:10.858W PF:0.5267 Freq:50.00Hz Lamp Flux:813.493x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-10W3036-CI30031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

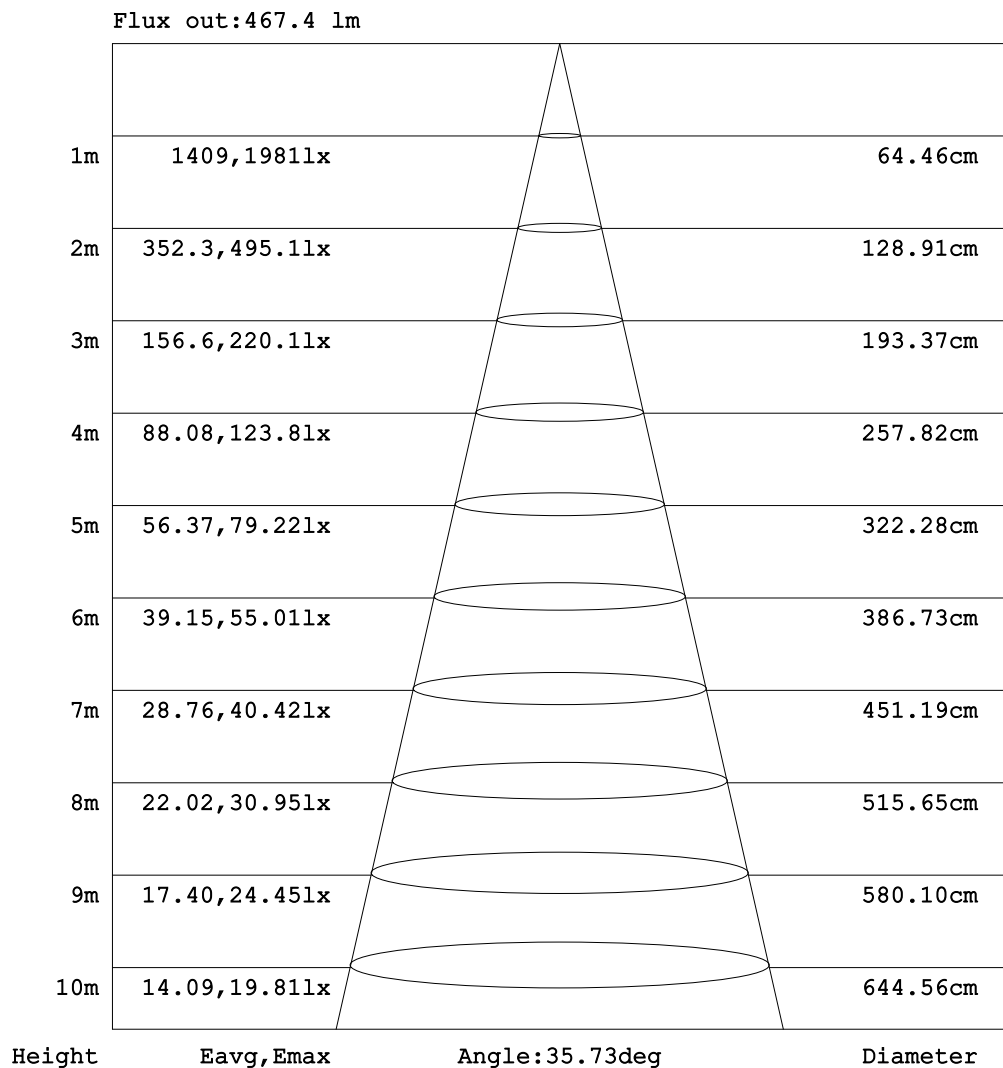


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2023-11-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity:65.0%
 Test Distance:6.810m [K=1.0000]
 Remarks:

AAI Figure

Test:U:232.43V I:0.0887A P:10.858W PF:0.5267 Freq:50.00Hz Lamp Flux:813.493x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-10W3036-CI30031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:



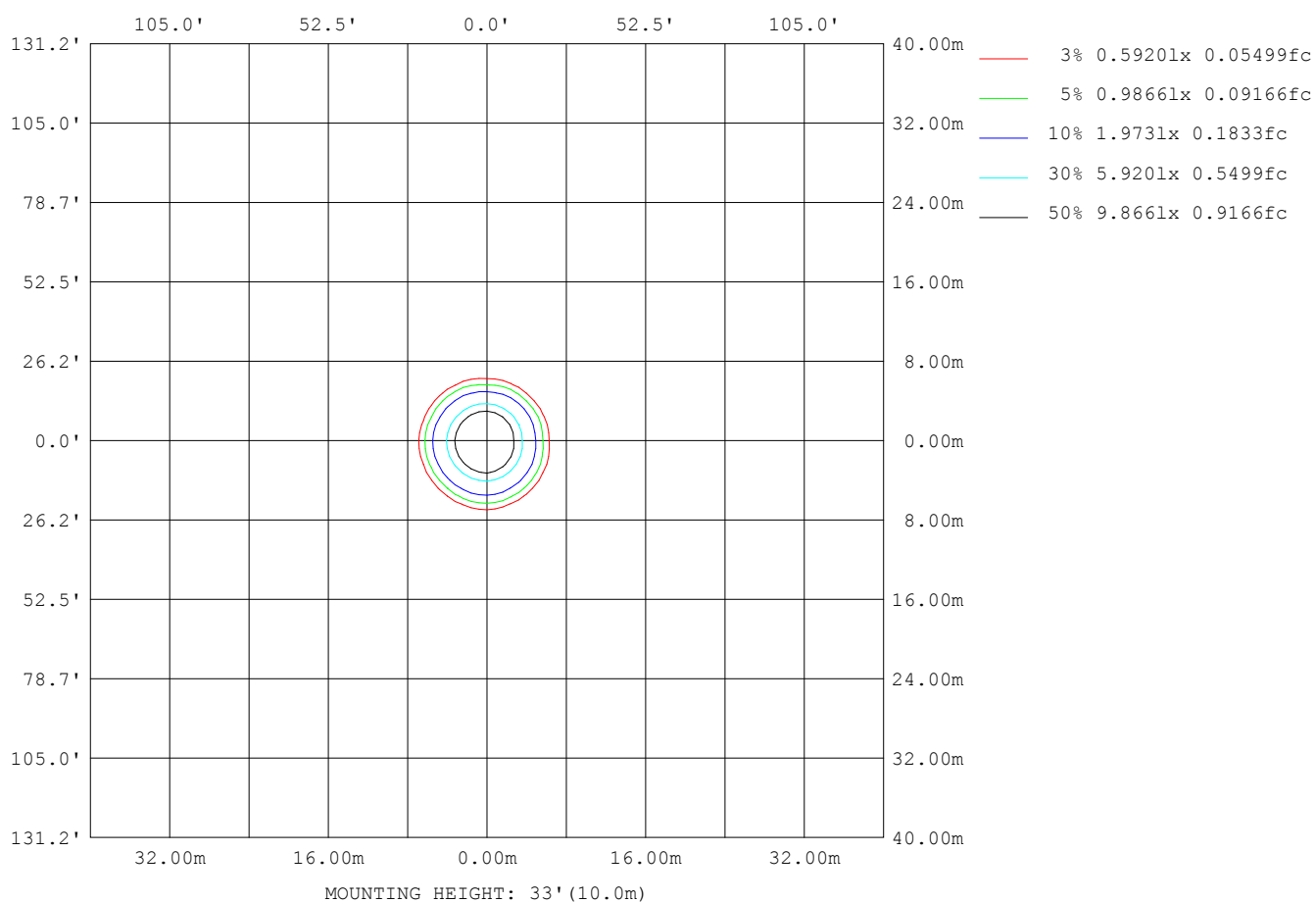
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Xie Bi
Test Date: 2023-11-15

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity: 65.0%
Test Distance: 6.810m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:232.43V I:0.0887A P:10.858W PF:0.5267 Freq:50.00Hz Lamp Flux:813.493x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-10W3036-CI30031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2023-11-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity:65.0%
 Test Distance:6.810m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:232.43V I:0.0887A P:10.858W PF:0.5267 Freq:50.00Hz Lamp Flux:813.493x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-10W3036-CI30031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

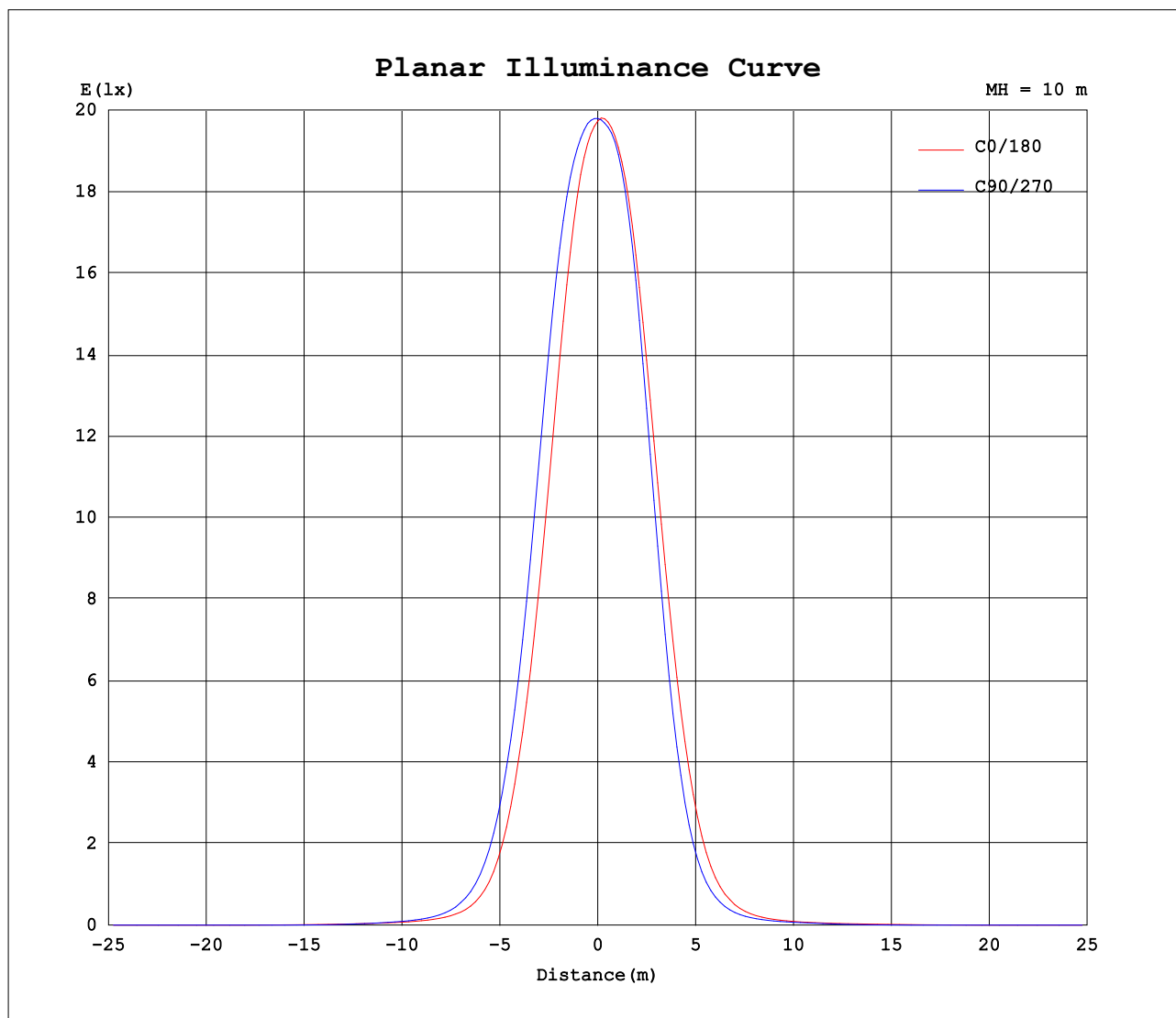
AvgL	cd/m2
L_0~180 (65) av	197
L_0~180 (75) av	0
L_0~180 (85) av	0
L_90~270 (65) av	38
L_90~270 (75) av	7
L_90~270 (85) av	0
L_45 (65) av	103
L_45 (75) av	4
L_45 (85) av	0

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2023-11-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity:65.0%
 Test Distance:6.810m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Xie Bi
Test Date: 2023-11-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity: 65.0%
Test Distance: 6.810m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:232.43V I:0.0887A P:10.858W PF:0.5267 Freq:50.00Hz Lamp Flux:813.493x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-10W3036-CI30031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	1973	1979	1973	1979															
5	1863	1953	1958	1944															
10	1552	1810	1797	1745															
15	1098	1459	1430	1282															
20	659	957	952	737															
25	323	520	512	331															
30	133	236	222	131															
35	58.3	101	91.2	56.5															
40	31.8	46.4	43.3	30.1															
45	20.5	26.3	25.6	19.9															
50	14.3	14.0	17.4	12.0															
55	8.08	3.69	12.2	3.55															
60	2.10	0.49	4.81	0.38															
65	0.22	0.08	0.61	0.09															
70	0.01	0.01	0.10	0.03															
75	0.00	0.00	0.00	0.01															
80	0.00	0.00	0.00	0.01															
85	0.00	0.00	0.00	0.00															
90	0.00	0.00	0.00	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	0.06	0.18	0.02	0.16															
120	0.07	0.17	0.04	0.13															
125	0.10	0.15	0.05	0.12															
130	0.18	0.14	0.08	0.12															
135	0.36	0.23	0.13	0.19															
140	0.68	0.45	0.24	0.36															
145	1.10	0.86	0.40	0.60															
150	1.71	1.40	0.73	1.03															
155	2.32	2.07	1.18	1.60															
160	2.85	2.62	1.67	2.08															
165	3.22	3.00	2.14	2.40															
170	3.44	3.32	2.58	2.80															
175	3.53	3.55	3.04	3.26															
180	3.45	3.63	3.45	3.64															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
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γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
Humidity:65.0%
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