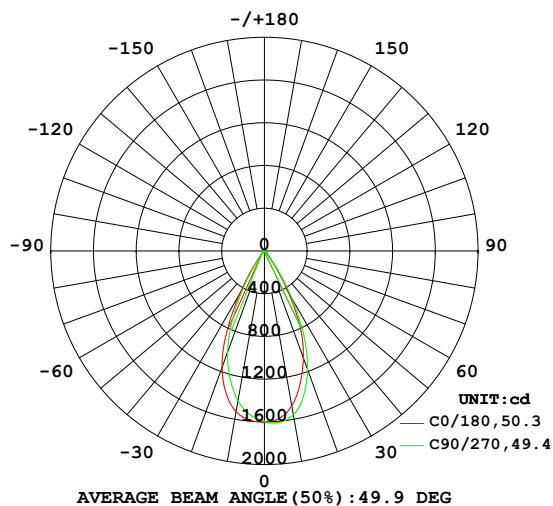


LUMINAIRE PHOTOMETRIC TEST REPORT

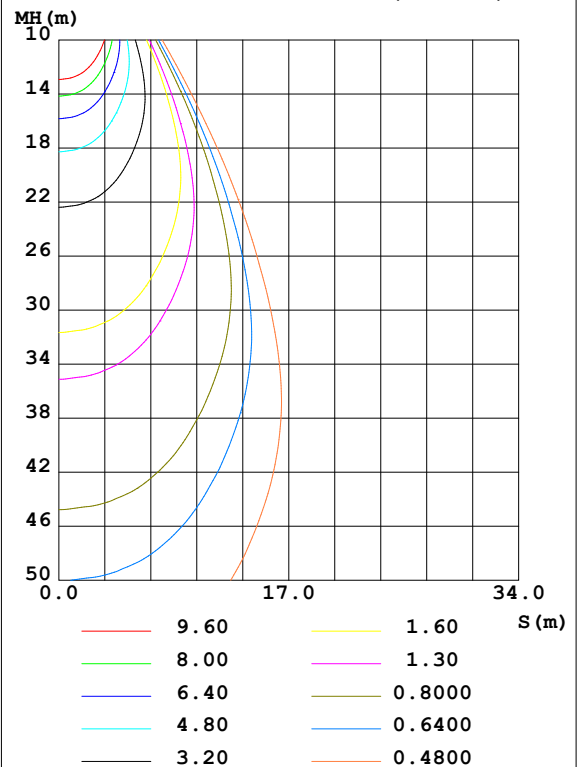
Test:U:232.37V I:0.1217A P:14.787W PF:0.5228 Freq:50.00Hz Lamp Flux:1035.98x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-15W3050-CI40031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 70.06 lm/W			
MODEL	CLU701 1002	I _{max} (cd)	1612	S/MH (C0/180)	0.76
NOMINAL POWER (W)	15W	LOR (%)	100.0	S/MH (C90/270)	0.73
RATED VOLTAGE (V)		TOTAL FLUX (lm)	1036.0	η UP, DN (C0-180)	0.2, 51.6
NOMINAL FLUX (lm)	1035.98	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.1, 48.1
LAMPS INSIDE	1	η up (%)	0.3	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	220.2	η down (%)	99.7	CIBSE SHR MAX	0.80

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: 2024-01-17

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.417
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	1472	1558	1527	1425					0- 10	148.1	148.1	14.3,14.3
20	1067	1179	1160	1008					10- 20	368.3	516.4	49.9,49.9
30	451.1	517.2	456.6	380.7					20- 30	357.6	874.1	84.4,84.4
40	54.49	78.10	58.75	47.19					30- 40	124.4	998.5	96.4,96.4
50	17.47	20.89	18.13	16.38					40- 50	24.31	1023	98.7,98.7
60	3.732	2.519	3.614	1.939					50- 60	9.247	1032	99.6,99.6
70	0.0524	0.0087	0.0449	0.0209					60- 70	0.6631	1033	99.7,99.7
80	0	0	0	0.0017					70- 80	0.0048	1033	99.7,99.7
90	0	0	0	0					80- 90	0.0000	1033	99.7,99.7
100	0	0	0	0					90-100	0.0341	1033	99.7,99.7
110	0	0.0122	0.0070	0.1226					100-110	0.0340	1033	99.7,99.7
120	0.0174	0.0262	0.0227	0.0349					110-120	0.0193	1033	99.7,99.7
130	0.2350	0.2041	0.1082	0.1550					120-130	0.0694	1033	99.7,99.7
140	0.9552	0.8481	0.5097	0.6224					130-140	0.3155	1033	99.7,99.7
150	1.980	1.770	1.258	1.396					140-150	0.7155	1034	99.8,99.8
160	2.898	2.759	2.093	2.255					150-160	0.9464	1035	99.9,99.9
170	3.491	3.404	2.867	3.008					160-170	0.7937	1036	100,100
180	3.690	3.774	3.699	3.768					170-180	0.3266	1036	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 1013.7 lm

%lum = 97.8%

%lamp = 97.8%

Conical surface Flux(120deg): 1032.1 lm

%lum = 99.6%

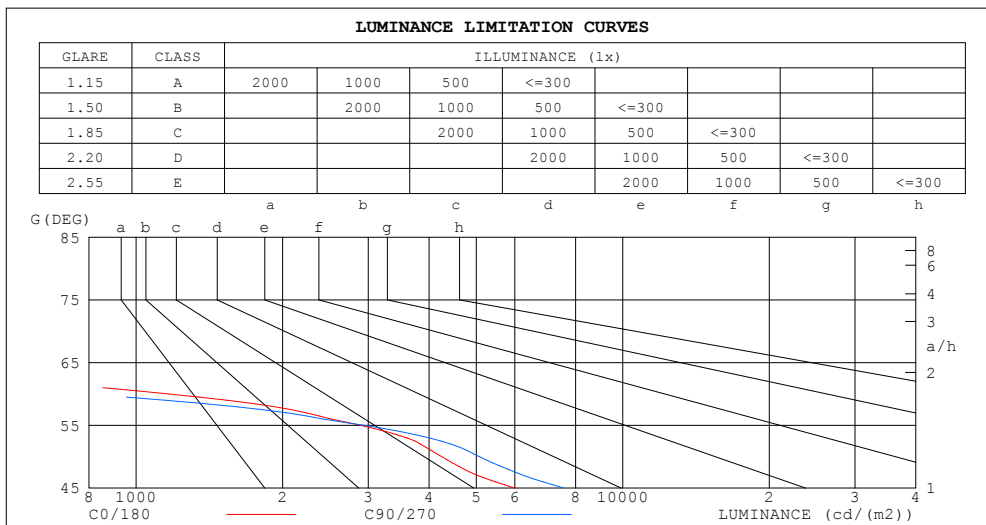
%lamp = 99.6%

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2024-01-17

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
 Humidity:65.0%
 Test Distance:6.810m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:232.37V I:0.1217A P:14.787W PF:0.5228 Freq:50.00Hz Lamp Flux:1035.98x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-15W3050-CI40031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:



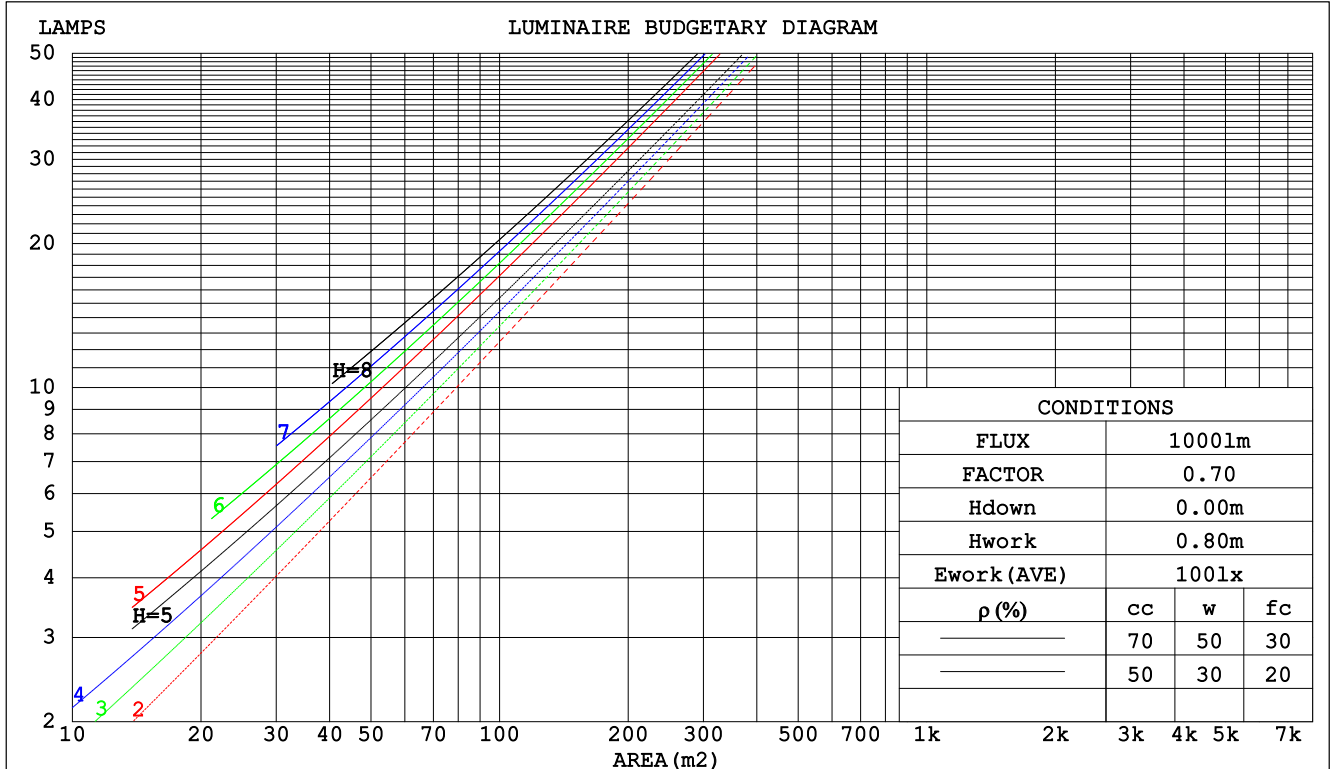
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2024-01-17

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:232.37V I:0.1217A P:14.787W PF:0.5228 Freq:50.00Hz Lamp Flux:1035.98x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-15W3050-CI40031R90-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)															
	RCR:Room Cavity Ratio															
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	1.07	1.09	1.07	1.05	1.05	1.04	1.02	1.01	1.00	.99	.98	.97	.96	.94
2.0	1.05	1.01	.98	1.03	.90	.97	.90	.97	.95	.97	.94	.93	.94	.92	.91	.89
3.0	.98	.94	.90	.97	.93	.90	.94	.91	.88	.92	.89	.87	.90	.87	.85	.84
4.0	.93	.88	.84	.92	.87	.84	.90	.86	.83	.88	.84	.82	.86	.83	.81	.79
5.0	.88	.83	.79	.87	.82	.78	.85	.81	.78	.83	.80	.77	.82	.79	.76	.75
6.0	.83	.78	.74	.82	.77	.74	.81	.76	.73	.79	.76	.73	.78	.75	.72	.71
7.0	.79	.73	.70	.78	.73	.70	.77	.72	.69	.76	.72	.69	.75	.71	.68	.67
8.0	.75	.70	.66	.74	.69	.66	.73	.69	.65	.72	.68	.65	.71	.68	.65	.64
9.0	.71	.66	.63	.71	.66	.62	.70	.65	.62	.69	.65	.62	.68	.65	.62	.61
10.0	.68	.63	.59	.68	.63	.59	.67	.62	.59	.66	.62	.59	.65	.62	.59	.58



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2024-01-17

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:232.37V I:0.1217A P:14.787W PF:0.5228 Freq:50.00Hz Lamp Flux:1035.98x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-15W3050-CI40031R90-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	.164	.093	.029	.157	.090	.028	.144	.083	.026	.133	.076	.025	.122	.071	.023		
2.0	.155	.085	.026	.150	.083	.025	.139	.077	.024	.129	.073	.023	.120	.068	.021		
3.0	.148	.079	.024	.143	.076	.023	.134	.072	.022	.125	.069	.021	.118	.065	.020		
4.0	.140	.073	.021	.136	.071	.021	.128	.068	.020	.121	.065	.020	.114	.062	.019		
5.0	.134	.068	.020	.130	.067	.019	.123	.064	.019	.117	.062	.018	.111	.059	.018		
6.0	.128	.064	.018	.124	.063	.018	.119	.061	.018	.113	.059	.017	.108	.057	.017		
7.0	.122	.060	.017	.119	.059	.017	.114	.058	.017	.109	.056	.016	.105	.054	.016		
8.0	.117	.057	.016	.114	.056	.016	.110	.055	.016	.105	.053	.015	.101	.052	.015		
9.0	.112	.054	.015	.110	.054	.015	.106	.052	.015	.102	.051	.015	.098	.050	.014		
10.0	.108	.052	.014	.106	.051	.014	.102	.050	.014	.099	.049	.014	.095	.048	.014		

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	.173	.160	.148	.148	.137	.128	.101	.094	.088	.058	.055	.051	.019	.018	.017	
2.0	.156	.135	.117	.134	.116	.101	.092	.080	.071	.053	.047	.041	.017	.015	.013	
3.0	.143	.116	.094	.123	.100	.082	.084	.069	.057	.049	.041	.034	.016	.013	.011	
4.0	.132	.101	.077	.114	.087	.067	.078	.061	.047	.045	.036	.028	.015	.012	.009	
5.0	.123	.089	.064	.106	.077	.056	.073	.054	.039	.042	.032	.023	.014	.010	.008	
6.0	.116	.080	.054	.099	.069	.047	.069	.048	.033	.040	.028	.020	.013	.009	.007	
7.0	.109	.072	.046	.094	.062	.040	.065	.044	.029	.038	.026	.017	.012	.008	.006	
8.0	.103	.066	.040	.089	.057	.035	.061	.040	.025	.036	.024	.015	.012	.008	.005	
9.0	.098	.060	.035	.084	.052	.031	.058	.037	.022	.034	.022	.013	.011	.007	.004	
10.0	.093	.056	.031	.081	.049	.027	.056	.034	.019	.033	.020	.011	.011	.007	.004	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2024-01-17

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:232.37V I:0.1217A P:14.787W PF:0.5228 Freq:50.00Hz Lamp Flux:1035.98x1 lm											
NAME: 89014LED						TYPE:		WEIGHT:			
SPEC.:P-89014LED-15W3050-CI40031R90-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	14.3	15.1	14.5	15.3	15.5	15.2	16.1	15.4	16.2	16.4
	3H	14.1	14.9	14.4	15.1	15.3	15.1	15.8	15.3	16.0	16.2
	4H	14.0	14.8	14.3	15.0	15.2	15.0	15.7	15.2	15.9	16.2
	6H	13.9	14.6	14.2	14.9	15.1	14.9	15.6	15.2	15.8	16.1
	8H	13.9	14.6	14.2	14.8	15.1	14.8	15.5	15.1	15.8	16.0
	12H	13.9	14.5	14.2	14.8	15.0	14.8	15.4	15.1	15.7	16.0
4H	2H	14.1	14.8	14.3	15.0	15.2	15.0	15.7	15.3	15.9	16.2
	3H	13.9	14.5	14.2	14.8	15.1	14.8	15.4	15.1	15.7	16.0
	4H	13.8	14.4	14.1	14.7	15.0	14.7	15.3	15.1	15.6	15.9
	6H	13.7	14.2	14.1	14.5	14.9	14.6	15.1	15.0	15.5	15.8
	8H	13.6	14.1	14.0	14.5	14.8	14.6	15.0	15.0	15.4	15.8
	12H	13.6	14.0	14.0	14.4	14.8	14.5	14.9	14.9	15.3	15.7
8H	4H	13.6	14.1	14.0	14.5	14.8	14.6	15.0	15.0	15.4	15.8
	6H	13.5	13.9	13.9	14.3	14.7	14.4	14.8	14.9	15.2	15.7
	8H	13.5	13.8	13.9	14.2	14.7	14.4	14.7	14.8	15.2	15.6
	12H	13.4	13.7	13.9	14.1	14.6	14.3	14.6	14.8	15.1	15.6
12H	4H	13.6	14.0	14.0	14.4	14.8	14.5	14.9	14.9	15.3	15.7
	6H	13.5	13.8	13.9	14.2	14.7	14.4	14.7	14.8	15.2	15.6
	8H	13.4	13.7	13.9	14.1	14.6	14.3	14.6	14.8	15.1	15.6
Variations with the observer position at spacings:											
S = 1.0H		+ 3.4 / - 8.3					+ 4.2 / -10.4				
1.5H		+ 5.1 / - 4.9					+ 6.1 / - 6.5				
2.0H		+ 4.0 / -16.2					+ 4.9 / -18.2				

CIE Pub.117, 1036 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.1)
Area: 0.0064 m2

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2024-01-17

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:232.37V I:0.1217A P:14.787W PF:0.5228 Freq:50.00Hz Lamp Flux:1035.98x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-15W3050-CI40031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

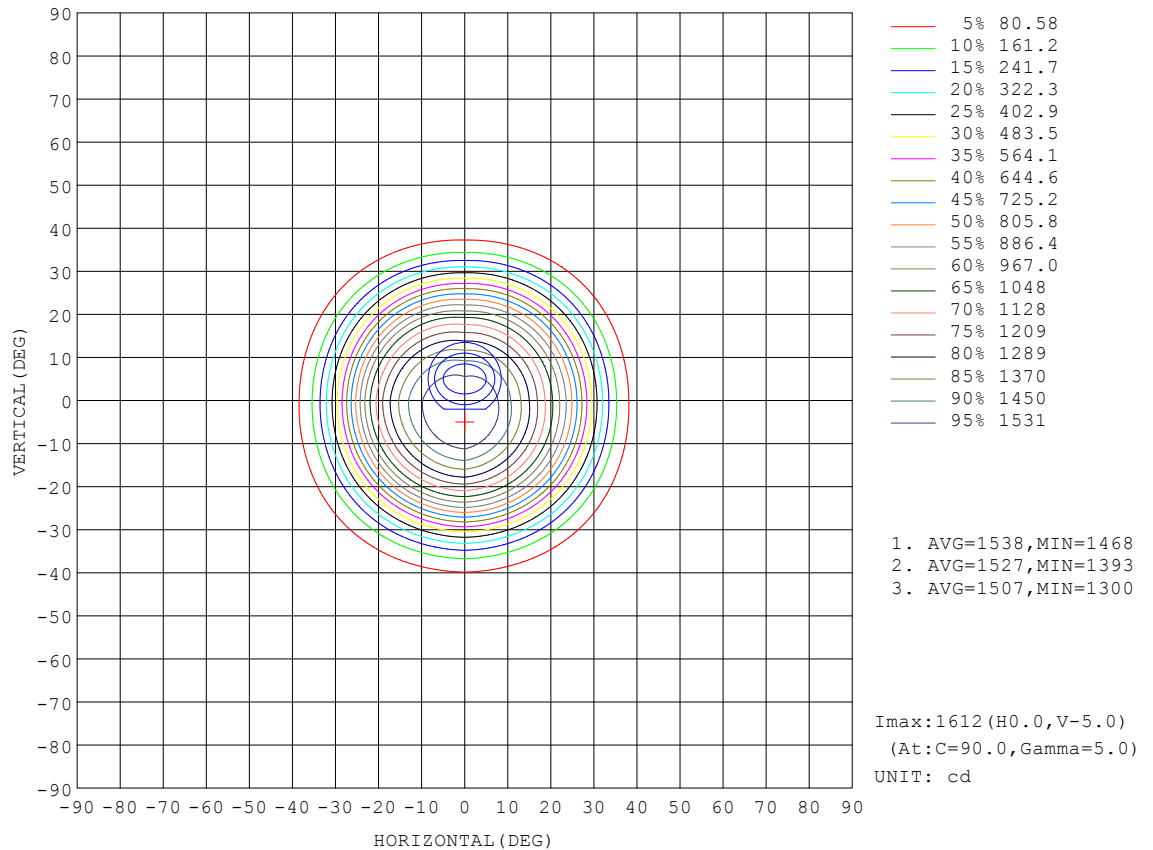
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	80	89	83	80	88	83	79	76
0.80	96	91	87	96	91	87	95	90	87	83
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	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	106	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:2024-01-17

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:232.37V I:0.1217A P:14.787W PF:0.5228 Freq:50.00Hz Lamp Flux:1035.98x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-15W3050-CI40031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:



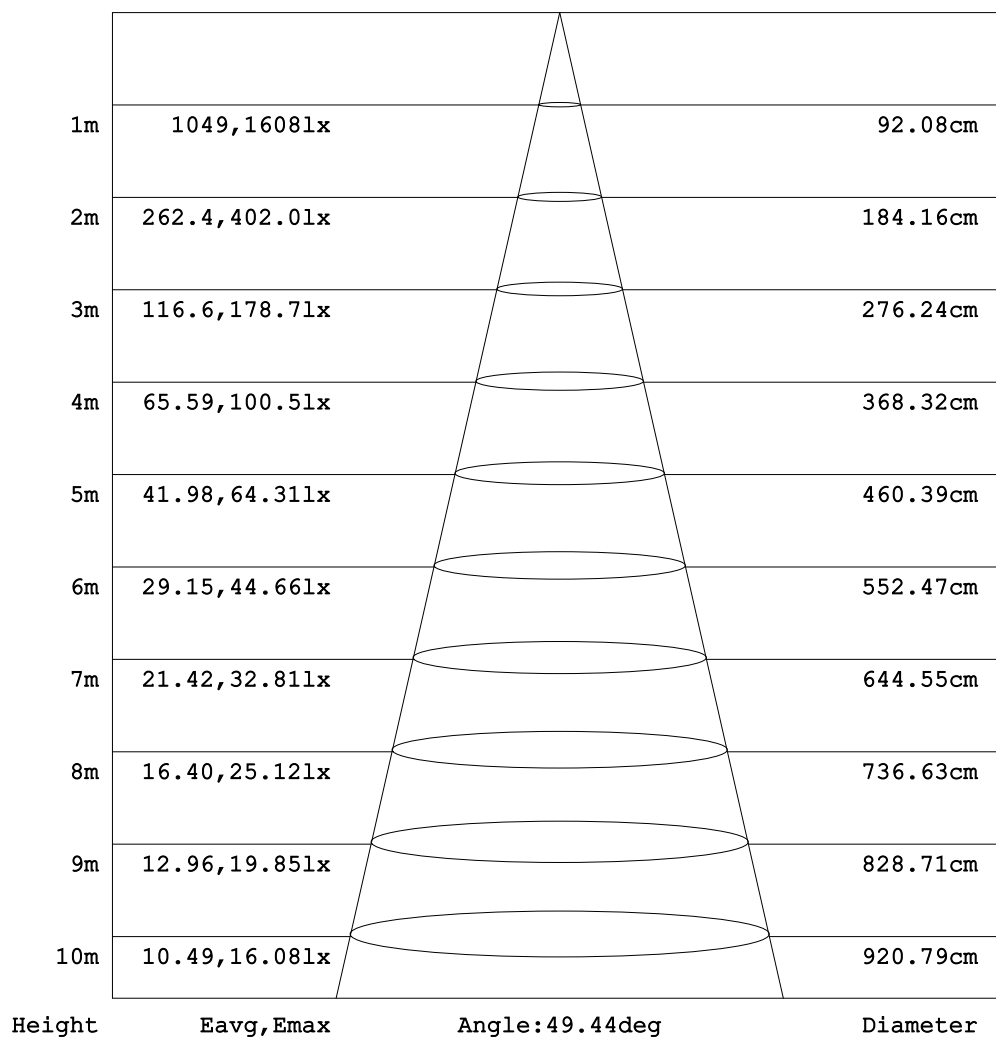
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2024-01-17

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

AAI Figure

Test:U:232.37V I:0.1217A P:14.787W PF:0.5228 Freq:50.00Hz Lamp Flux:1035.98x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-15W3050-CI40031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

Flux out:716.9 lm



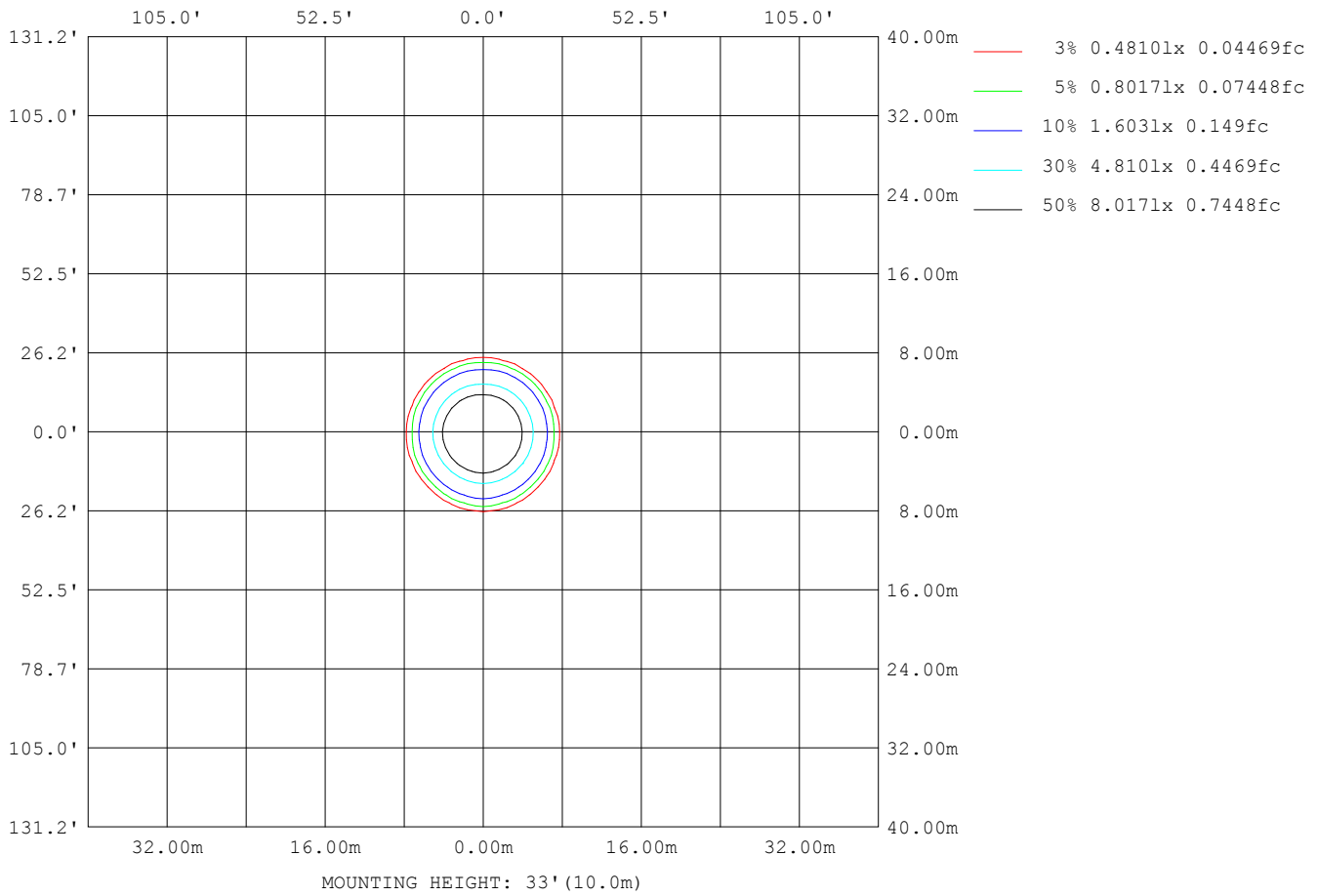
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2024-01-17

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:232.37V I:0.1217A P:14.787W PF:0.5228 Freq:50.00Hz Lamp Flux:1035.98x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-15W3050-CI40031R90-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:2024-01-17

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:232.37V I:0.1217A P:14.787W PF:0.5228 Freq:50.00Hz Lamp Flux:1035.98x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-15W3050-CI40031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

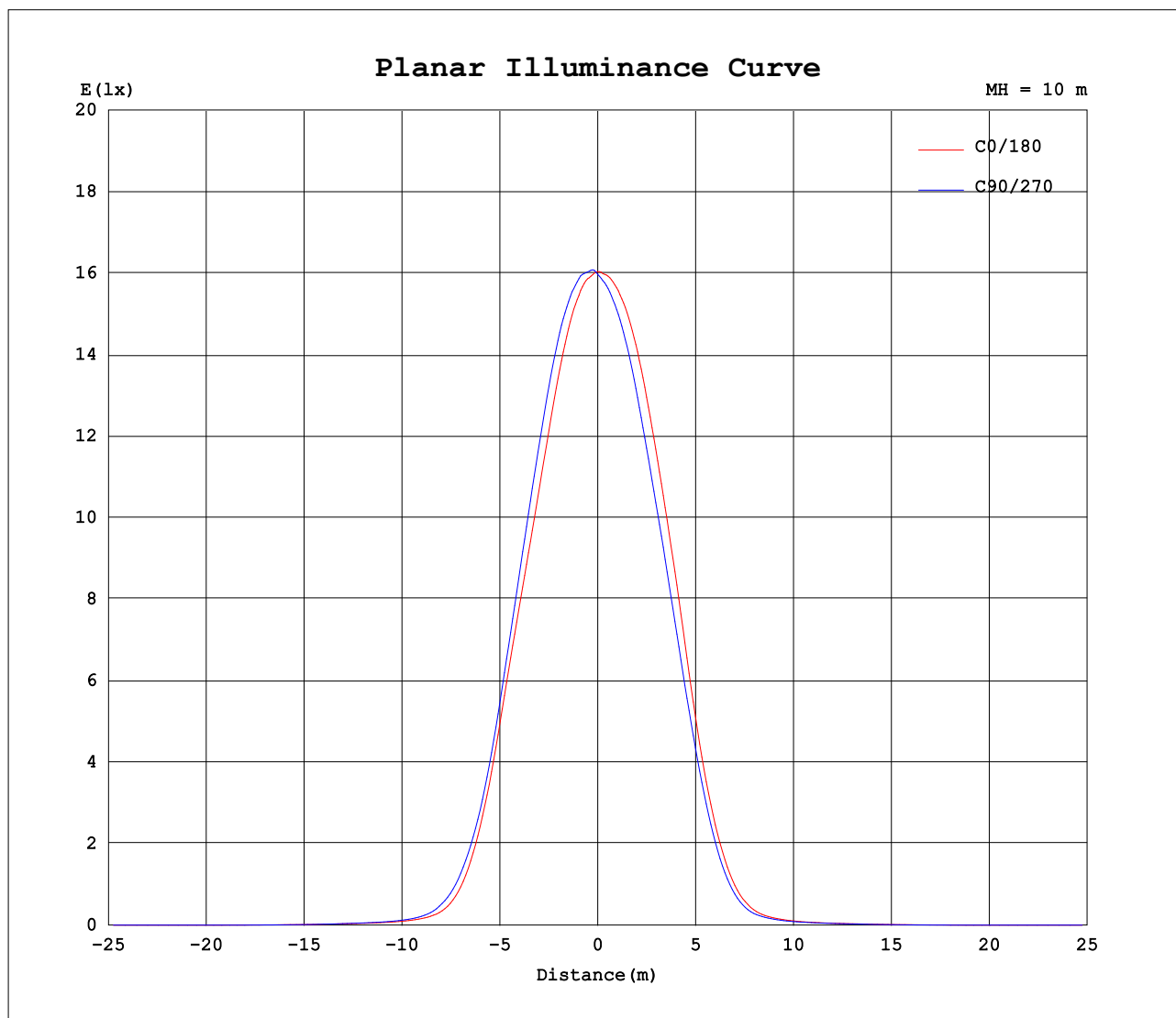
AvgL	cd/m2
L_0~180 (65) av	141
L_0~180 (75) av	0
L_0~180 (85) av	0
L_90~270 (65) av	98
L_90~270 (75) av	3
L_90~270 (85) av	0
L_45 (65) av	114
L_45 (75) av	2
L_45 (85) av	0

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2024-01-17

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
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: 2024-01-17

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.417
Humidity: 65.0%
Test Distance: 6.810m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:232.37V I:0.1217A P:14.787W PF:0.5228 Freq:50.00Hz Lamp Flux:1035.98x1 lm		
NAME: 89014LED	TYPE:	WEIGHT:
SPEC.:P-89014LED-15W3050-CI40031R90-HEK700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	1603	1596	1603	1596															
5	1575	1612	1589	1540															
10	1472	1558	1527	1425															
15	1288	1411	1383	1241															
20	1067	1179	1160	1008															
25	798	877	830	707															
30	451	517	457	381															
35	171	232	178	139															
40	54.5	78.1	58.7	47.2															
45	27.1	34.2	29.1	24.8															
50	17.5	20.9	18.1	16.4															
55	10.6	10.8	10.6	8.89															
60	3.73	2.52	3.61	1.94															
65	0.39	0.28	0.37	0.25															
70	0.05	0.01	0.04	0.02															
75	0.00	0.00	0.00	0.01															
80	0.00	0.00	0.00	0.00															
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	0.22															
100	0.00	0.00	0.00	0.00															
105	0.00	0.02	0.00	0.28															
110	0.00	0.01	0.01	0.12															
115	0.01	0.01	0.02	0.02															
120	0.02	0.03	0.02	0.03															
125	0.08	0.07	0.05	0.07															
130	0.24	0.20	0.11	0.16															
135	0.53	0.46	0.25	0.34															
140	0.96	0.85	0.51	0.62															
145	1.46	1.32	0.85	0.97															
150	1.98	1.77	1.26	1.40															
155	2.50	2.32	1.68	1.88															
160	2.90	2.76	2.09	2.25															
165	3.17	3.07	2.42	2.55															
170	3.49	3.40	2.87	3.01															
175	3.68	3.66	3.34	3.46															
180	3.69	3.77	3.70	3.77															

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2024-01-17

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.417
 Humidity:65.0%
 Test Distance:6.810m [K=1.0000]
 Remarks: