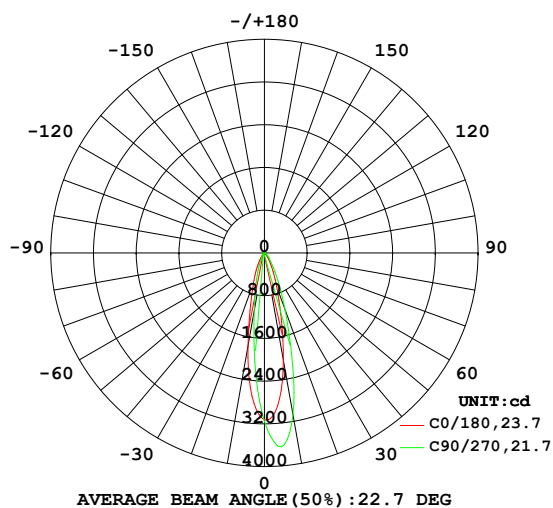


LUMINAIRE PHOTOMETRIC TEST REPORT

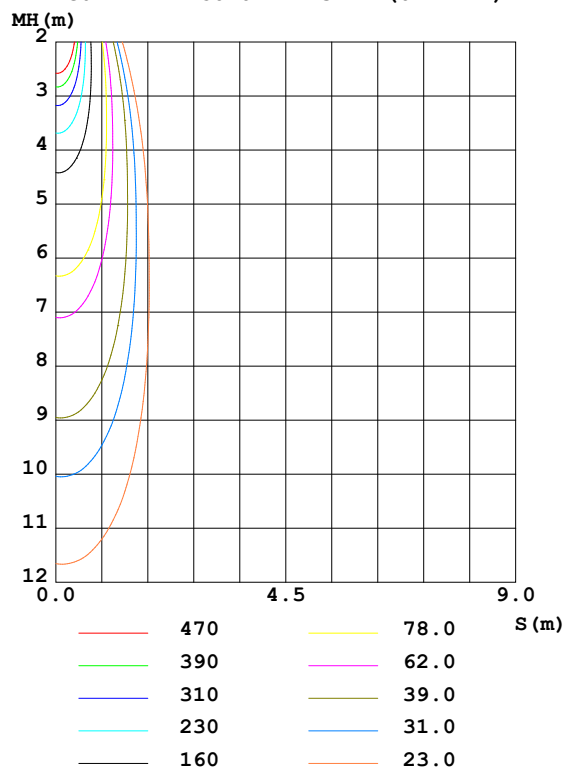
Test:U:220.8V I:0.0541A P:11.09W PF:0.9279 Freq:59.98Hz Lamp Flux:931.504x1 lm					
NAME: 1931LED		TYPE:		WEIGHT:	
SPEC.:P-1931LED-10W275-CI25036R90-JG000		DIM.:		SERIAL No.:	
MFR.: CETTIGA		SUR.:0.0003		Shielding Angle:	

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 84.02 lm/W
MODEL	CLU028-1202	I _{max} (cd)	3645	S/MH (C0/180)	0.38	
NOMINAL POWER (W)	10W	LOR (%)	100.0	S/MH (C90/270)	0.25	
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	931.50	η UP, DN (C0-180)	0.2, 63.9	
NOMINAL FLUX (lm)	931.504	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.2, 35.8	
LAMPS INSIDE	1	η up (%)	0.3	CIBSE SHR NOM	0.00	
TEST VOLTAGE (V)	220.2	η down (%)	99.7	CIBSE SHR MAX	1.00	

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: 2020-03-06

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 6.900m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

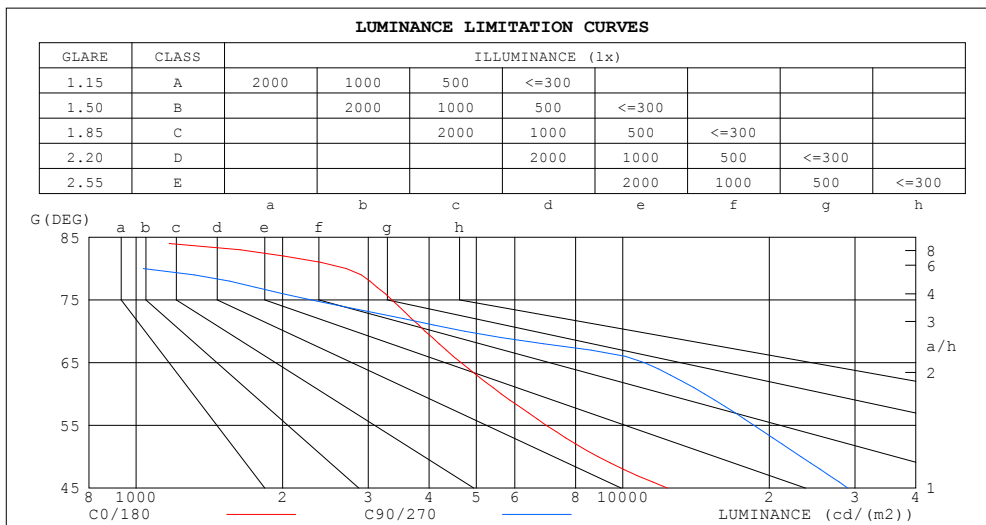
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	2043	3075	1774	1104					0- 10	241.6	241.6	25.9,25.9
20	671.1	1127	601.9	349.4					10- 20	333.7	575.3	61.8,61.8
30	218.6	366.4	220.3	103.4					20- 30	186.9	762.2	81.8,81.8
40	72.59	141.9	68.49	37.53					30- 40	84.88	847.1	90.9,90.9
50	28.60	74.68	25.72	16.91					40- 50	41.87	889.0	95.4,95.4
60	14.07	36.81	12.53	8.852					50- 60	23.38	912.4	97.9,97.9
70	6.710	8.100	6.343	4.242					60- 70	11.88	924.3	99.2,99.2
80	2.348	0.8983	2.453	1.087					70- 80	3.877	928.1	99.6,99.6
90	0.0117	0.0235	0.0174	0.0292					80- 90	0.5309	928.7	99.7,99.7
100	0.0116	0.0174	0.0175	0.0232					90-100	0.0222	928.7	99.7,99.7
110	0.0174	0.0290	0.0406	0.0232					100-110	0.0251	928.7	99.7,99.7
120	0.0174	0.0522	0.0754	0.1169					110-120	0.0425	928.7	99.7,99.7
130	0.1563	0.1103	0.1509	0.2135					120-130	0.0931	928.8	99.7,99.7
140	0.4699	0.2962	0.3369	0.4816					130-140	0.1950	929.0	99.7,99.7
150	1.357	0.8822	0.8824	1.323					140-150	0.4283	929.5	99.8,99.8
160	2.994	2.381	2.126	2.786					150-160	0.8134	930.3	99.9,99.9
170	3.876	3.871	3.244	3.247					160-170	0.8841	931.2	100,100
180	3.592	3.627	3.552	3.610					170-180	0.3421	931.5	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2020-03-06

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:6.900m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:220.8V I:0.0541A P:11.09W PF:0.9279 Freq:59.98Hz Lamp Flux:931.504x1 lm		
NAME: 1931LED	TYPE:	WEIGHT:
SPEC.:P-1931LED-10W275-CI25036R90-JG000	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:0.0003	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	765	80
80	2704	1035
75	3356	2290
70	3924	4737
65	4654	11071
60	5627	14725
55	6960	18598
50	8899	23237
45	12363	28996

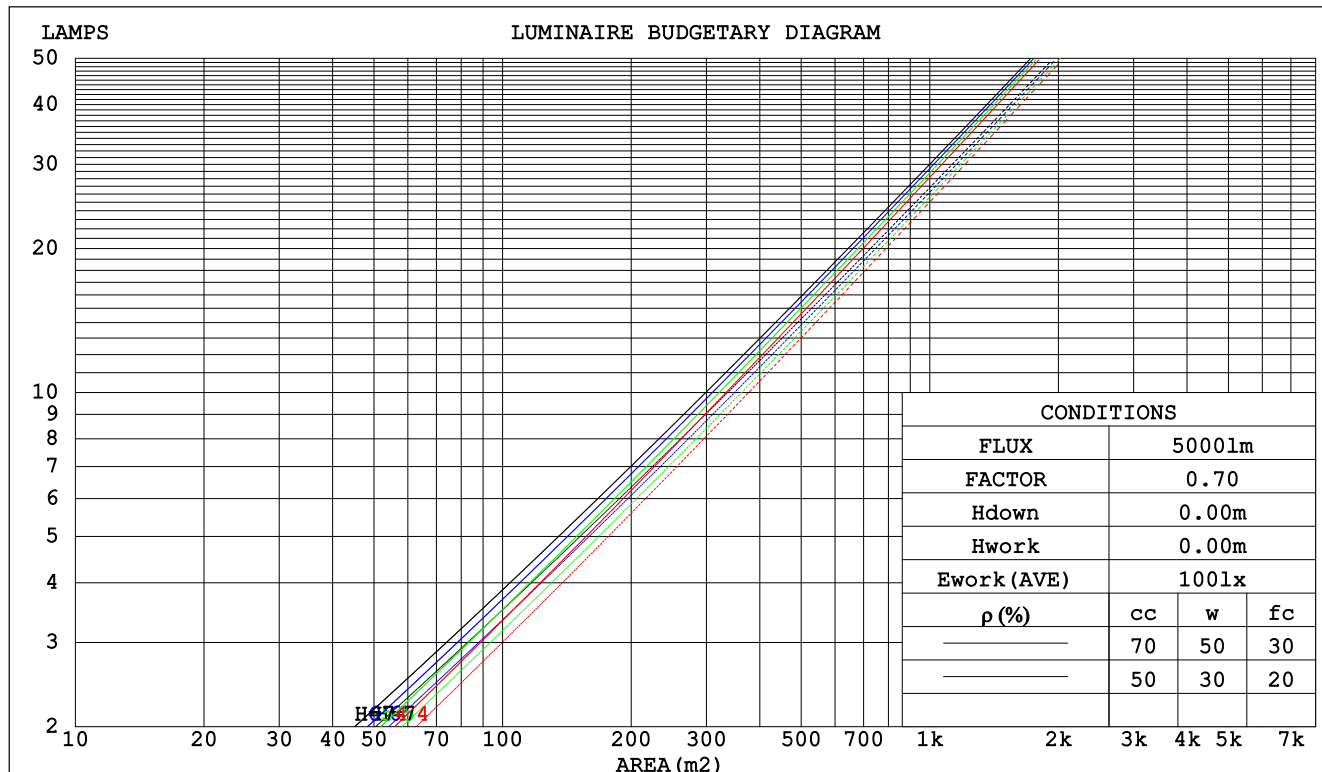
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2020-03-06

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.900m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.8V I:0.0541A P:11.09W PF:0.9279 Freq:59.98Hz Lamp Flux:931.504x1 lm		
NAME: 1931LED	TYPE:	WEIGHT:
SPEC.:P-1931LED-10W275-CI25036R90-JG000	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:0.0003	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	1.12	1.09	1.07	1.09	1.07	1.05	1.05	1.04	1.02	1.02	1.00	.99	.98	.97	.96	.94
2.0	1.05	1.01	.98	1.03	.99	.97	.99	.97	.95	.97	.95	.93	.94	.92	.91	.89
3.0	.99	.95	.91	.98	.94	.90	.95	.92	.89	.93	.90	.87	.90	.88	.86	.85
4.0	.94	.89	.85	.93	.88	.85	.91	.87	.84	.89	.85	.83	.87	.84	.82	.80
5.0	.89	.84	.80	.88	.84	.80	.86	.82	.79	.85	.81	.79	.83	.80	.78	.77
6.0	.85	.80	.76	.84	.79	.76	.83	.79	.75	.81	.78	.75	.80	.77	.74	.73
7.0	.81	.76	.73	.81	.76	.72	.80	.75	.72	.78	.75	.72	.77	.74	.71	.70
8.0	.78	.73	.70	.77	.73	.69	.76	.72	.69	.75	.72	.69	.75	.71	.69	.67
9.0	.75	.70	.67	.75	.70	.67	.74	.69	.66	.73	.69	.66	.72	.69	.66	.65
10.0	.72	.67	.64	.72	.67	.64	.71	.67	.64	.70	.66	.64	.70	.66	.64	.62



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2020-03-06

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:6.900m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:220.8V I:0.0541A P:11.09W PF:0.9279 Freq:59.98Hz Lamp Flux:931.504x1 lm					
NAME: 1931LED			TYPE:		WEIGHT:
SPEC.:P-1931LED-10W275-CI25036R90-JG000			DIM.:		SERIAL No.:
MFR.: CETTIGA			SUR.:0.0003		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	.162	.092	.029	.155	.089	.028	.143	.082	.026	.131	.076	.024	.120	.070	.022		
2.0	.153	.084	.026	.148	.081	.025	.137	.076	.024	.127	.071	.022	.118	.067	.021		
3.0	.144	.077	.023	.139	.075	.022	.130	.071	.021	.122	.067	.021	.114	.063	.020		
4.0	.136	.071	.021	.132	.069	.020	.124	.066	.020	.117	.063	.019	.110	.060	.018		
5.0	.128	.065	.019	.125	.064	.019	.118	.061	.018	.112	.059	.018	.106	.057	.017		
6.0	.121	.061	.017	.118	.060	.017	.113	.058	.017	.107	.056	.016	.102	.054	.016		
7.0	.115	.057	.016	.112	.056	.016	.107	.054	.016	.103	.053	.015	.098	.051	.015		
8.0	.110	.054	.015	.107	.053	.015	.103	.051	.015	.099	.050	.014	.095	.049	.014		
9.0	.105	.051	.014	.102	.050	.014	.098	.049	.014	.095	.047	.014	.091	.046	.013		
10.0	.100	.048	.013	.098	.047	.013	.094	.046	.013	.091	.045	.013	.088	.044	.013		

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	.112	.112	.112	.065	.065	.065	.021	.021	.021	
1.0	.172	.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	.122	.100	.082	.084	.069	.057	.048	.041	.034	.016	.013	.011	
4.0	.131	.101	.078	.113	.087	.067	.077	.061	.047	.045	.036	.028	.014	.012	.009	
5.0	.122	.089	.065	.104	.077	.056	.072	.054	.040	.042	.032	.024	.013	.010	.008	
6.0	.113	.079	.055	.097	.069	.048	.067	.048	.034	.039	.028	.020	.013	.009	.007	
7.0	.106	.071	.047	.091	.062	.041	.063	.043	.029	.037	.026	.017	.012	.008	.006	
8.0	.100	.065	.041	.086	.056	.036	.060	.040	.025	.035	.023	.015	.011	.008	.005	
9.0	.094	.059	.036	.081	.052	.031	.056	.036	.022	.033	.021	.013	.011	.007	.004	
10.0	.090	.055	.032	.077	.048	.028	.054	.034	.020	.031	.020	.012	.010	.007	.004	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2020-03-06

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.900m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:220.8V I:0.0541A P:11.09W PF:0.9279 Freq:59.98Hz Lamp Flux:931.504x1 lm												
NAME.: 1931LED						TYPE:			WEIGHT:			
SPEC.:P-1931LED-10W275-CI25036R90-JG000						DIM.:			SERIAL No.:			
MFR.: CETTIGA						SUR.:0.0003			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		16.6	17.4	16.8	17.6	17.8	19.6	20.4	19.8	20.6	20.7	
		3H	16.8	17.6	17.1	17.8	18.0	19.8	20.5	20.0	20.7	20.9
		4H	16.8	17.6	17.1	17.8	18.0	19.7	20.4	20.0	20.7	20.9
		6H	16.9	17.5	17.1	17.8	18.0	19.7	20.3	19.9	20.6	20.8
		8H	16.8	17.5	17.1	17.7	18.0	19.6	20.3	19.9	20.5	20.8
		12H	16.8	17.4	17.1	17.7	18.0	19.6	20.2	19.9	20.5	20.7
4H		2H	16.9	17.7	17.2	17.9	18.1	19.6	20.3	19.8	20.5	20.7
		3H	17.2	17.8	17.5	18.1	18.3	19.8	20.4	20.1	20.7	21.0
		4H	17.2	17.8	17.6	18.1	18.4	19.7	20.3	20.1	20.6	20.9
		6H	17.3	17.8	17.6	18.1	18.4	19.7	20.2	20.0	20.5	20.9
		8H	17.2	17.7	17.6	18.1	18.4	19.6	20.1	20.0	20.4	20.8
		12H	17.2	17.6	17.6	18.0	18.4	19.6	20.0	20.0	20.4	20.8
8H		4H	17.2	17.6	17.6	18.0	18.4	19.6	20.1	20.0	20.4	20.8
		6H	17.2	17.6	17.6	18.0	18.4	19.5	19.9	20.0	20.3	20.7
		8H	17.2	17.5	17.6	17.9	18.4	19.5	19.8	19.9	20.3	20.7
		12H	17.1	17.4	17.6	17.9	18.4	19.4	19.7	19.9	20.2	20.6
12H		4H	17.1	17.5	17.5	17.9	18.3	19.6	20.0	20.0	20.4	20.8
		6H	17.2	17.5	17.6	17.9	18.4	19.5	19.8	19.9	20.3	20.7
		8H	17.1	17.4	17.6	17.9	18.3	19.4	19.7	19.9	20.2	20.7
Variations with the observer position at spacings:												
S = 1.0H		+ 1.3 / - 2.1					+ 1.4 / - 1.5					
1.5H		+ 1.5 / - 2.1					+ 2.2 / - 1.7					
2.0H		+ 1.5 / - 2.8					+ 2.7 / - 2.3					

CIE Pub.117, 931.5 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -0.2$)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2020-03-06

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.900m [K=1.0000]
Remarks:

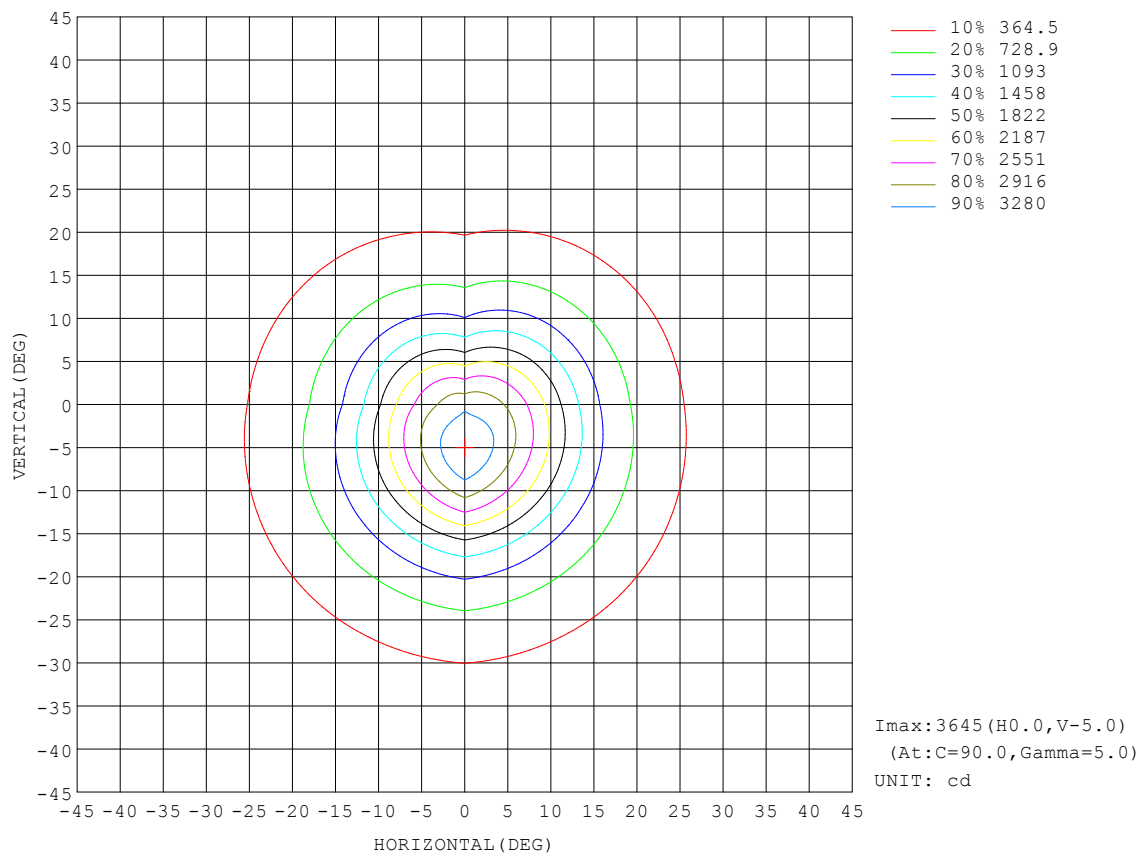
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γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.900m [K=1.0000]
Remarks:

```

ISOCANDELA DIAGRAM

Test:U:220.8V I:0.0541A P:11.09W PF:0.9279 Freq:59.98Hz Lamp Flux:931.504x1 lm		
NAME: 1931LED	TYPE:	WEIGHT:
SPEC.:P-1931LED-10W275-CI25036R90-JG000	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:0.0003	Shielding Angle:



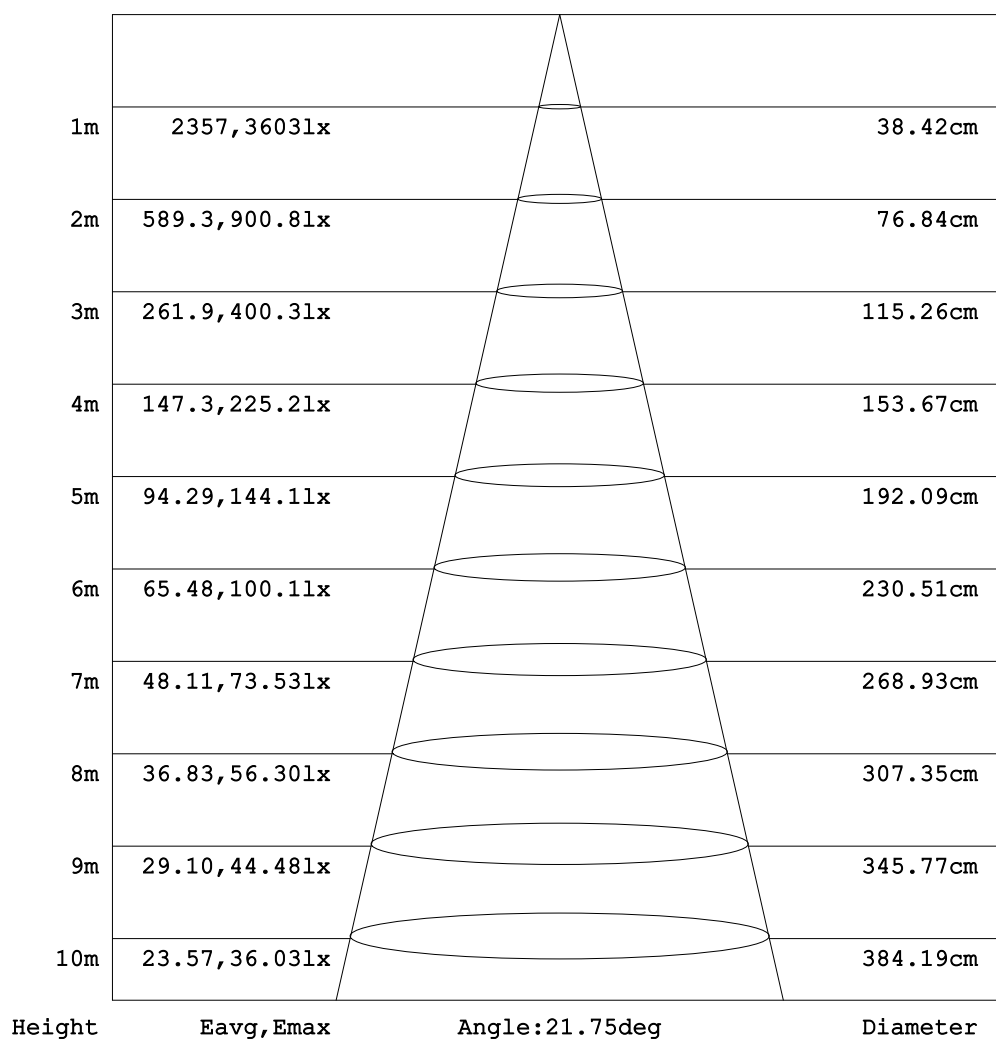
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2020-03-06

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.900m [K=1.0000]
Remarks:

AAI Figure

Test:U:220.8V I:0.0541A P:11.09W PF:0.9279 Freq:59.98Hz Lamp Flux:931.504x1 lm		
NAME: 1931LED	TYPE:	WEIGHT:
SPEC.:P-1931LED-10W275-CI25036R90-JG000	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:0.0003	Shielding Angle:

Flux out:279.8 lm



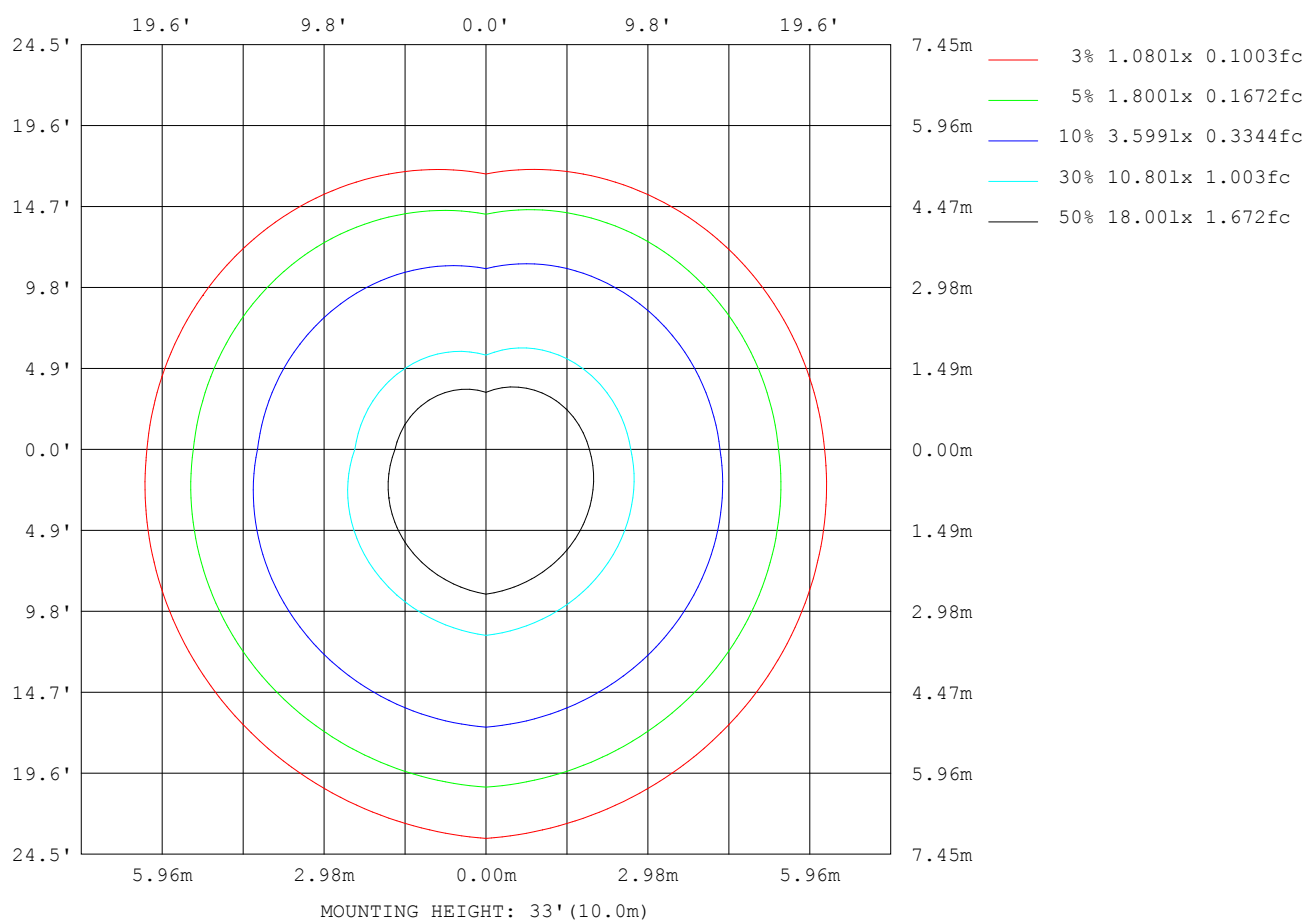
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2020-03-06

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:6.900m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:220.8V I:0.0541A P:11.09W PF:0.9279 Freq:59.98Hz Lamp Flux:931.504x1 lm		
NAME: 1931LED	TYPE:	WEIGHT:
SPEC.:P-1931LED-10W275-CI25036R90-JG000	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:0.0003	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2020-03-06

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.900m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:220.8V I:0.0541A P:11.09W PF:0.9279 Freq:59.98Hz Lamp Flux:931.504x1 lm		
NAME: 1931LED	TYPE:	WEIGHT:
SPEC.:P-1931LED-10W275-CI25036R90-JG000	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:0.0003	Shielding Angle:

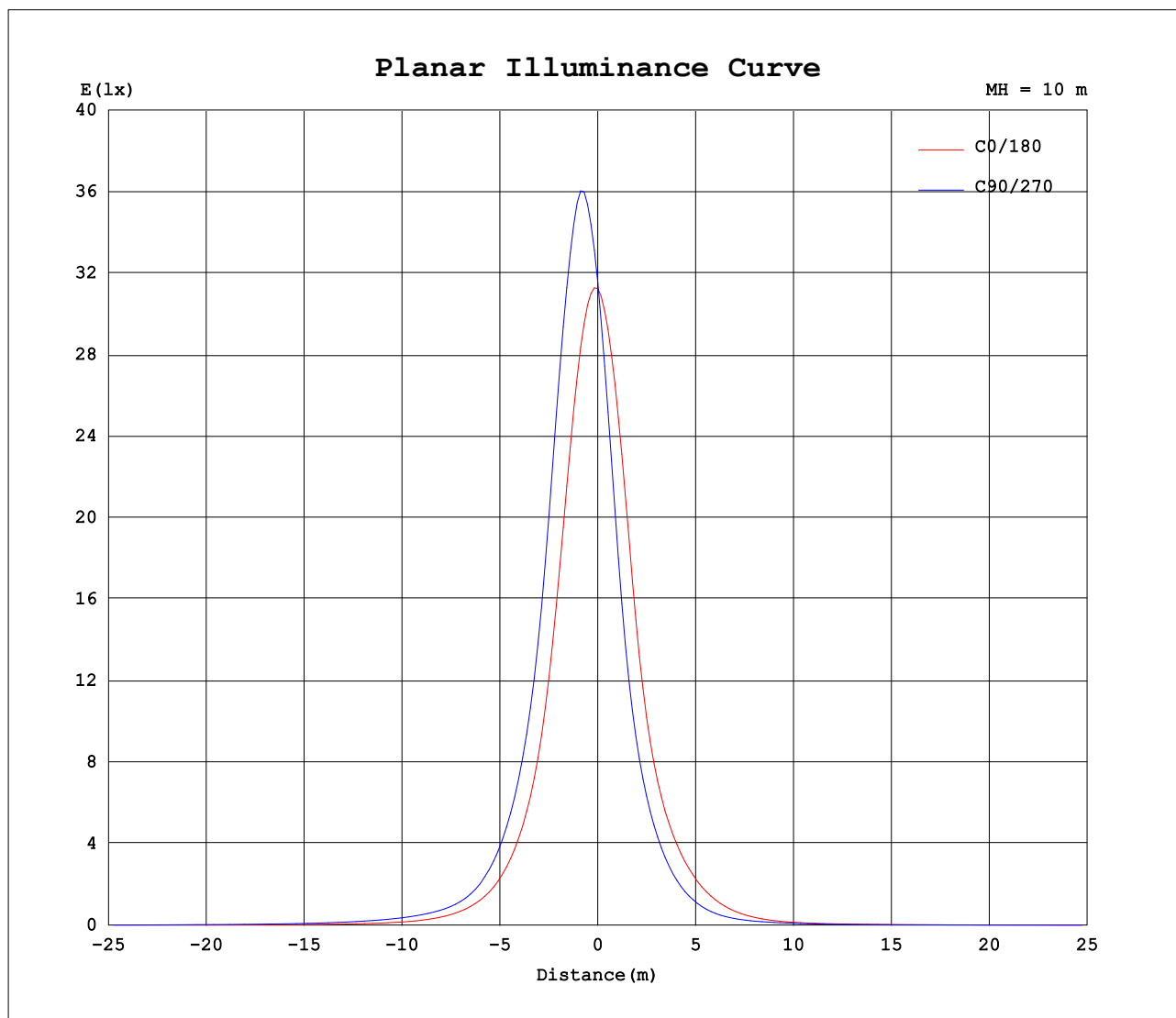
AvgL	cd/m2
L_0~180 (65) av	4443
L_0~180 (75) av	3322
L_0~180 (85) av	1160
L_90~270 (65) av	7055
L_90~270 (75) av	2066
L_90~270 (85) av	147
L_45 (65) av	6062
L_45 (75) av	2535
L_45 (85) av	551

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2020-03-06

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:6.900m [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: 2020-03-06

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 6.900m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.8V I:0.0541A P:11.09W PF:0.9279 Freq:59.98Hz Lamp Flux:931.504x1 lm		
NAME: 1931LED	TYPE:	WEIGHT:
SPEC.:P-1931LED-10W275-CI25036R90-JG000	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:0.0003	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	3123	3151	3123	3151															
5	2869	3645	2689	2062															
10	2043	3075	1774	1104															
15	1186	1979	999	618															
20	671	1127	602	349															
25	383	647	372	192															
30	219	366	220	103															
35	126	213	124	58.4															
40	72.6	142	68.5	37.5															
45	43.7	103	39.5	25.6															
50	28.6	74.7	25.7	16.9															
55	20.0	53.3	17.8	11.7															
60	14.1	36.8	12.5	8.85															
65	9.83	23.4	8.94	6.42															
70	6.71	8.10	6.34	4.24															
75	4.34	2.96	4.26	2.39															
80	2.35	0.90	2.45	1.09															
85	0.33	0.03	0.68	0.09															
90	0.01	0.02	0.02	0.03															
95	0.01	0.01	0.02	0.02															
100	0.01	0.02	0.02	0.02															
105	0.02	0.02	0.03	0.02															
110	0.02	0.03	0.04	0.02															
115	0.02	0.04	0.06	0.05															
120	0.02	0.05	0.08	0.12															
125	0.09	0.08	0.10	0.15															
130	0.16	0.11	0.15	0.21															
135	0.28	0.17	0.21	0.30															
140	0.47	0.30	0.34	0.48															
145	0.81	0.52	0.53	0.81															
150	1.36	0.88	0.88	1.32															
155	2.13	1.50	1.42	2.05															
160	2.99	2.38	2.13	2.79															
165	3.63	3.30	2.81	3.18															
170	3.88	3.87	3.24	3.25															
175	3.77	3.86	3.43	3.24															
180	3.59	3.63	3.55	3.61															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2020-03-06

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.900m [K=1.0000]
Remarks: