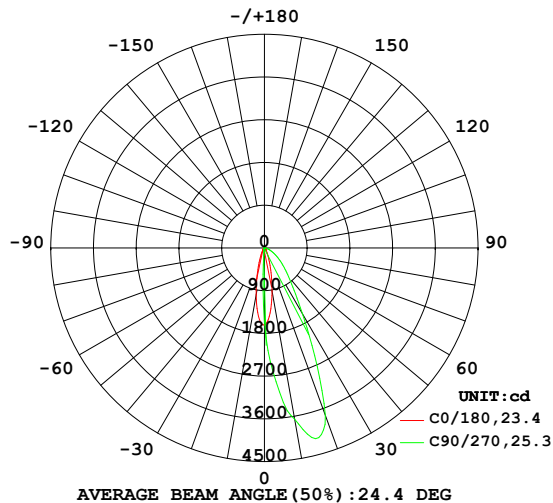


LUMINAIRE PHOTOMETRIC TEST REPORT

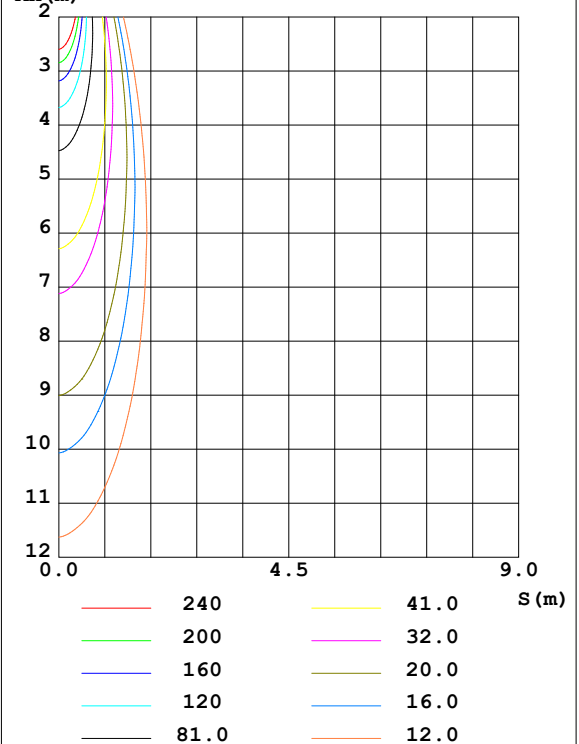
Test:U:231.3V I:0.1215A P:27.20W PF:0.9683 Freq:49.37Hz Lamp Flux:1321.48x1 lm		
NAME: 19691LED	TYPE:	WEIGHT:
SPEC.:P-19691LED-30W278-OS70036R90-JG700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 48.58 lm/W			
MODEL	OS 2835	I _{max} (cd)	4160	S/MH (C0/180)	0.41
NOMINAL POWER (W)	30W	LOR (%)	100.0	S/MH (C90/270)	0.08
RATED VOLTAGE (V)	220.0	TOTAL FLUX (lm)	1321.5	η UP, DN (C0-180)	0.3, 90.1
NOMINAL FLUX (lm)	1321.48	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.2, 9.4
LAMPS INSIDE	1	η up (%)	0.5	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	220.2	η down (%)	99.5	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: 2023-05-26

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 6.810m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

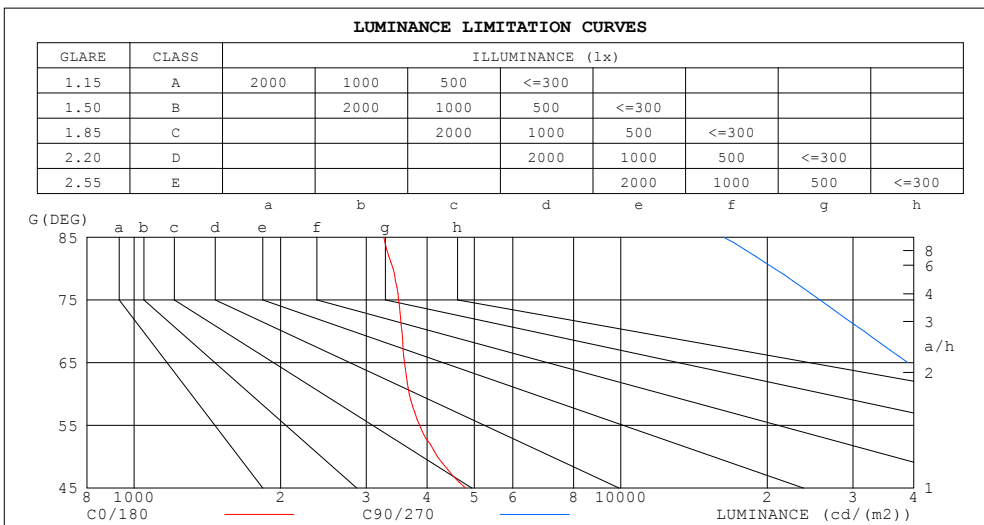
γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	924.8	3662	1001	10.99					0- 10	138.8	138.8	10.5,10.5
20	302.6	3752	331.1	0.0454					10- 20	362.9	501.7	38,38
30	98.82	1607	105.1	0.0122					20- 30	331.3	833.0	63,63
40	44.28	793.1	43.45	0.0052					30- 40	195.2	1028	77.8,77.8
50	26.47	447.5	24.31	0.0052					40- 50	128.8	1157	87.5,87.5
60	18.01	234.5	15.82	0.0017					50- 60	83.47	1240	93.9,93.9
70	11.90	106.1	9.736	0.0017					60- 70	47.36	1288	97.4,97.4
80	5.796	35.21	3.943	0.0017					70- 80	21.77	1310	99.1,99.1
90	0.1458	3.624	0.0553	0.0383					80- 90	5.470	1315	99.5,99.5
100	0.0296	2.316	0.0366	0.1360					90-100	0.7611	1316	99.6,99.6
110	0.0714	1.500	0.0802	0.3224					100-110	0.6647	1316	99.6,99.6
120	0.1517	2.810	0.1413	0.6103					110-120	0.6243	1317	99.7,99.7
130	0.3537	2.016	0.2547	1.084					120-130	0.8844	1318	99.7,99.7
140	0.8106	0.1975	0.4956	2.002					130-140	0.8820	1319	99.8,99.8
150	1.564	0	0.9977	3.680					140-150	0.7300	1320	99.9,99.9
160	2.476	0.4022	1.885	4.403					150-160	0.8849	1320	99.9,99.9
170	3.266	2.376	2.850	3.845					160-170	0.7433	1321	100,100
180	3.458	4.246	3.456	4.244					170-180	0.3257	1321	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:2023-05-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:6.810m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:231.3V I:0.1215A P:27.20W PF:0.9683 Freq:49.37Hz Lamp Flux:1321.48x1 lm		
NAME: 19691LED	TYPE:	WEIGHT:
SPEC.:P-19691LED-30W278-OS70036R90-JG700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3259	16258
80	3406	20688
75	3495	25674
70	3552	31649
65	3595	38868
60	3675	47848
55	3863	58438
50	4202	71045
45	4799	86039

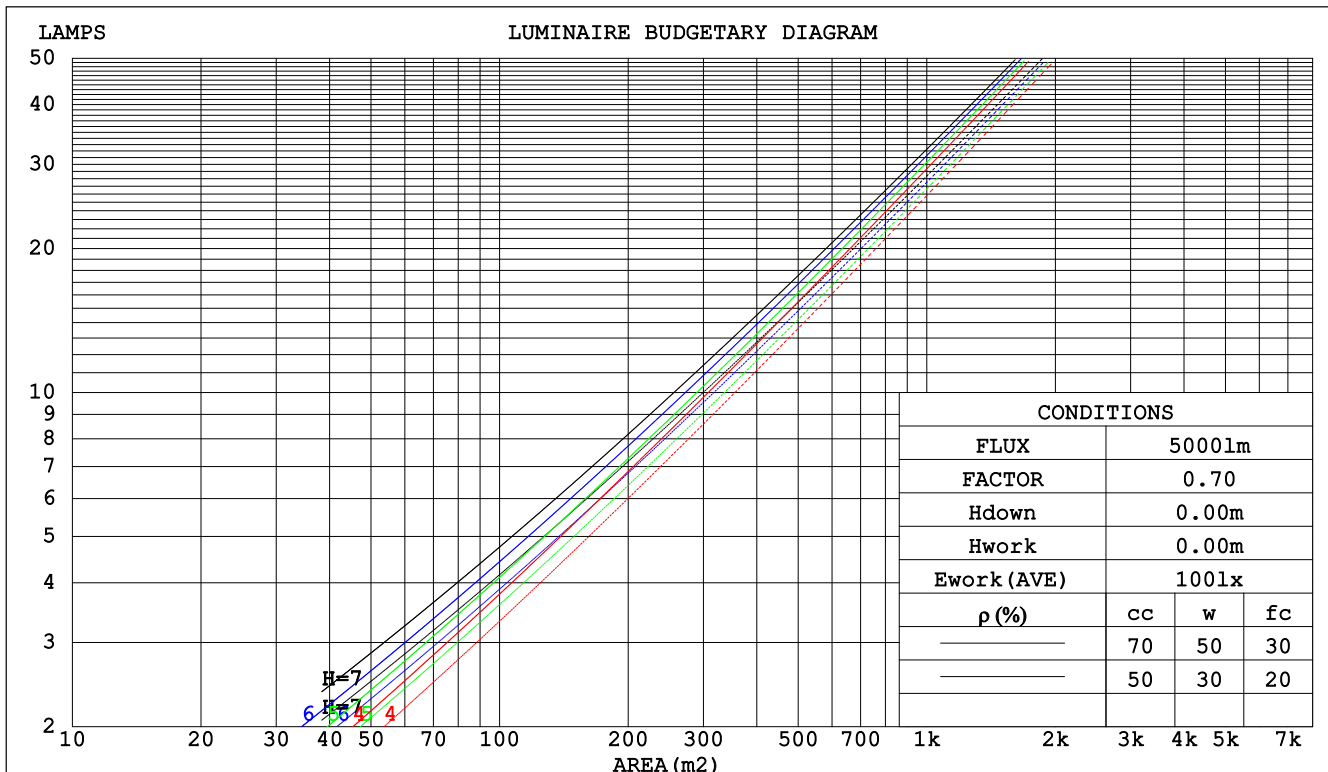
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2023-05-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:231.3V I:0.1215A P:27.20W PF:0.9683 Freq:49.37Hz Lamp Flux:1321.48x1 lm		
NAME: 19691LED	TYPE:	WEIGHT:
SPEC.:P-19691LED-30W278-OS70036R90-JG700	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	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	1.09	1.06	1.04	1.07	1.04	1.02	1.03	1.01	.99	.99	.97	.96	.95	.94	.93	.91
2.0	1.00	.95	.92	.98	.94	.90	.95	.91	.88	.92	.89	.86	.89	.87	.84	.83
3.0	.92	.87	.82	.91	.86	.81	.88	.84	.80	.85	.82	.79	.83	.80	.77	.76
4.0	.85	.79	.74	.84	.78	.74	.82	.77	.73	.80	.75	.72	.78	.74	.71	.69
5.0	.79	.73	.68	.78	.72	.68	.76	.71	.67	.75	.70	.66	.73	.69	.66	.64
6.0	.74	.68	.63	.73	.67	.63	.72	.66	.62	.70	.65	.62	.69	.64	.61	.60
7.0	.69	.63	.58	.69	.63	.58	.67	.62	.58	.66	.61	.57	.65	.60	.57	.56
8.0	.65	.59	.54	.65	.59	.54	.64	.58	.54	.62	.57	.54	.61	.57	.53	.52
9.0	.62	.55	.51	.61	.55	.51	.60	.55	.51	.59	.54	.50	.58	.54	.50	.49
10.0	.58	.52	.48	.58	.52	.48	.57	.51	.48	.56	.51	.48	.55	.51	.47	.46



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2023-05-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:231.3V I:0.1215A P:27.20W PF:0.9683 Freq:49.37Hz Lamp Flux:1321.48x1 lm					
NAME: 19691LED			TYPE:		WEIGHT:
SPEC.:P-19691LED-30W278-OS70036R90-JG700			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	.208	.118	.037	.201	.114	.036	.188	.108	.034	.176	.101	.033	.165	.095	.031	
2.0	.198	.108	.033	.192	.106	.033	.181	.101	.031	.171	.096	.030	.161	.091	.029	
3.0	.187	.099	.030	.182	.097	.029	.172	.093	.028	.163	.089	.027	.155	.086	.027	
4.0	.176	.091	.027	.171	.090	.027	.163	.086	.026	.155	.083	.025	.148	.080	.024	
5.0	.166	.084	.024	.162	.083	.024	.154	.080	.024	.148	.078	.023	.141	.075	.023	
6.0	.156	.078	.022	.153	.077	.022	.146	.075	.022	.140	.073	.021	.135	.071	.021	
7.0	.148	.073	.021	.145	.072	.021	.139	.070	.020	.134	.069	.020	.129	.067	.020	
8.0	.140	.069	.019	.138	.068	.019	.132	.066	.019	.128	.065	.019	.123	.063	.018	
9.0	.133	.064	.018	.131	.064	.018	.126	.062	.018	.122	.061	.017	.118	.060	.017	
10.0	.127	.061	.017	.125	.060	.017	.121	.059	.017	.117	.058	.016	.113	.057	.016	

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	.194	.194	.194	.166	.166	.166	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.177	.161	.146	.151	.138	.126	.104	.095	.087	.060	.055	.051	.019	.018	.016	
2.0	.164	.136	.113	.140	.117	.098	.096	.081	.068	.055	.047	.040	.018	.015	.013	
3.0	.152	.118	.090	.131	.101	.078	.090	.070	.055	.052	.041	.032	.017	.013	.011	
4.0	.143	.103	.073	.122	.089	.063	.084	.062	.045	.049	.036	.026	.016	.012	.009	
5.0	.134	.092	.061	.115	.079	.053	.079	.056	.037	.046	.033	.022	.015	.011	.007	
6.0	.127	.083	.051	.109	.072	.045	.075	.050	.032	.044	.030	.019	.014	.010	.006	
7.0	.120	.075	.044	.103	.065	.038	.071	.046	.027	.041	.027	.016	.013	.009	.005	
8.0	.114	.069	.038	.098	.060	.033	.068	.042	.024	.040	.025	.014	.013	.008	.005	
9.0	.109	.064	.034	.094	.056	.030	.065	.039	.021	.038	.023	.013	.012	.008	.004	
10.0	.104	.060	.030	.089	.052	.026	.062	.036	.019	.036	.022	.011	.012	.007	.004	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2023-05-26

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:231.3V I:0.1215A P:27.20W PF:0.9683 Freq:49.37Hz Lamp Flux:1321.48x1 lm											
NAME: 19691LED					TYPE:			WEIGHT:			
SPEC.:P-19691LED-30W278-OS70036R90-JG700					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		19.5	20.5	19.7	20.7	20.9	26.4	27.5	26.6	27.6	27.8
	3H	19.7	20.7	20.0	20.9	21.1	27.1	28.0	27.3	28.3	28.5
	4H	19.8	20.7	20.0	20.9	21.2	27.3	28.2	27.6	28.4	28.7
	6H	19.8	20.6	20.1	20.9	21.2	27.4	28.3	27.7	28.5	28.8
	8H	19.7	20.6	20.1	20.9	21.1	27.4	28.3	27.8	28.6	28.8
	12H	19.7	20.5	20.1	20.8	21.1	27.4	28.3	27.8	28.5	28.8
4H	2H	20.7	21.6	21.0	21.9	22.1	26.4	27.3	26.6	27.5	27.8
	3H	21.1	21.9	21.5	22.2	22.5	27.1	27.9	27.5	28.2	28.5
	4H	21.3	22.0	21.6	22.3	22.6	27.4	28.2	27.8	28.5	28.8
	6H	21.3	22.0	21.7	22.3	22.7	27.7	28.3	28.1	28.7	29.0
	8H	21.3	21.9	21.7	22.3	22.7	27.7	28.3	28.1	28.7	29.1
	12H	21.3	21.9	21.7	22.3	22.7	27.8	28.3	28.2	28.7	29.1
8H	4H	21.7	22.3	22.1	22.6	23.0	27.4	28.0	27.8	28.4	28.7
	6H	21.9	22.3	22.3	22.8	23.2	27.7	28.2	28.1	28.6	29.0
	8H	21.9	22.3	22.4	22.8	23.2	27.8	28.2	28.2	28.6	29.1
	12H	21.9	22.3	22.4	22.7	23.2	27.8	28.2	28.3	28.7	29.1
12H	4H	21.7	22.3	22.1	22.6	23.0	27.3	27.9	27.8	28.3	28.7
	6H	21.9	22.4	22.4	22.8	23.3	27.6	28.1	28.1	28.5	29.0
	8H	22.0	22.4	22.5	22.8	23.3	27.7	28.1	28.2	28.6	29.1
Variations with the observer position at spacings:											
S = 1.0H	+ 1.2 / - 1.1					+ 1.0 / - 0.6					
1.5H	+ 1.3 / - 1.7					+ 1.6 / - 1.4					
2.0H	+ 1.8 / - 2.4					+ 2.3 / - 1.9					

CIE Pub.117, 1321 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.0)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2023-05-26

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

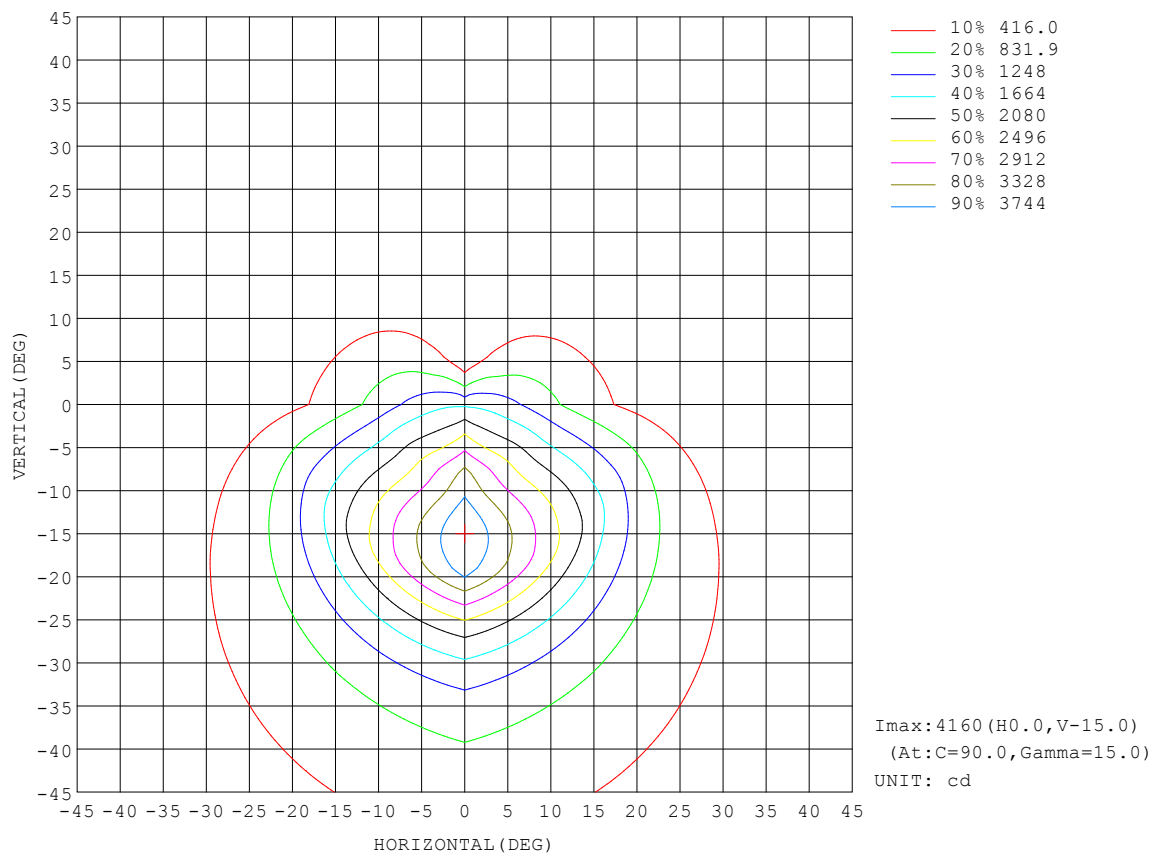
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γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

```

ISOCANDELA DIAGRAM

Test:U:231.3V I:0.1215A P:27.20W PF:0.9683 Freq:49.37Hz Lamp Flux:1321.48x1 lm		
NAME: 19691LED	TYPE:	WEIGHT:
SPEC.:P-19691LED-30W278-OS70036R90-JG700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:



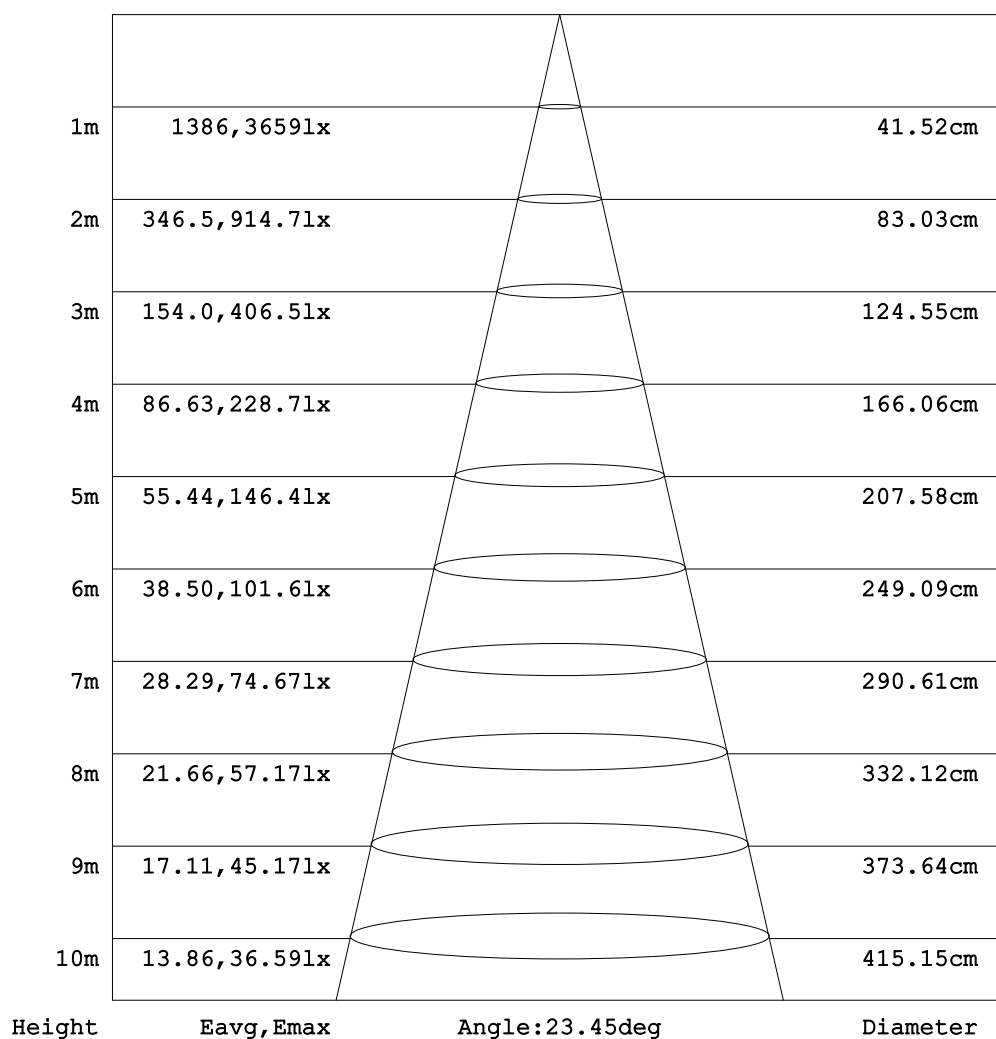
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Xie Bi
Test Date: 2023-05-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 6.810m [K=1.0000]
Remarks:

AAI Figure

Test:U:231.3V I:0.1215A P:27.20W PF:0.9683 Freq:49.37Hz Lamp Flux:1321.48x1 lm		
NAME: 19691LED	TYPE:	WEIGHT:
SPEC.:P-19691LED-30W278-OS70036R90-JG700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

Flux out:196.7 lm



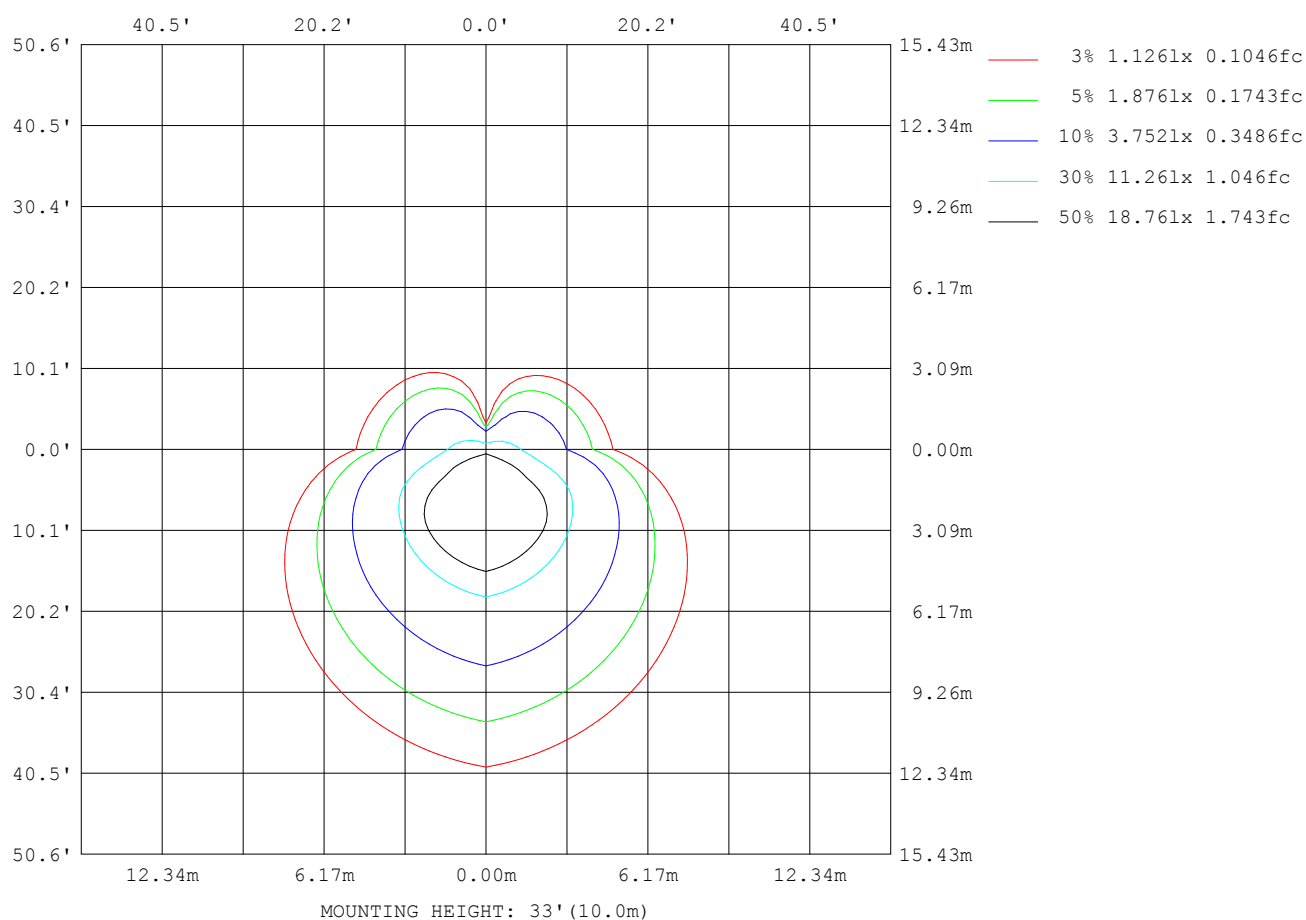
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Xie Bi
 Test Date:2023-05-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:6.810m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:231.3V I:0.1215A P:27.20W PF:0.9683 Freq:49.37Hz Lamp Flux:1321.48x1 lm		
NAME: 19691LED	TYPE:	WEIGHT:
SPEC.:P-19691LED-30W278-OS70036R90-JG700	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:2023-05-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:231.3V I:0.1215A P:27.20W PF:0.9683 Freq:49.37Hz Lamp Flux:1321.48x1 lm		
NAME: 19691LED	TYPE:	WEIGHT:
SPEC.:P-19691LED-30W278-OS70036R90-JG700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

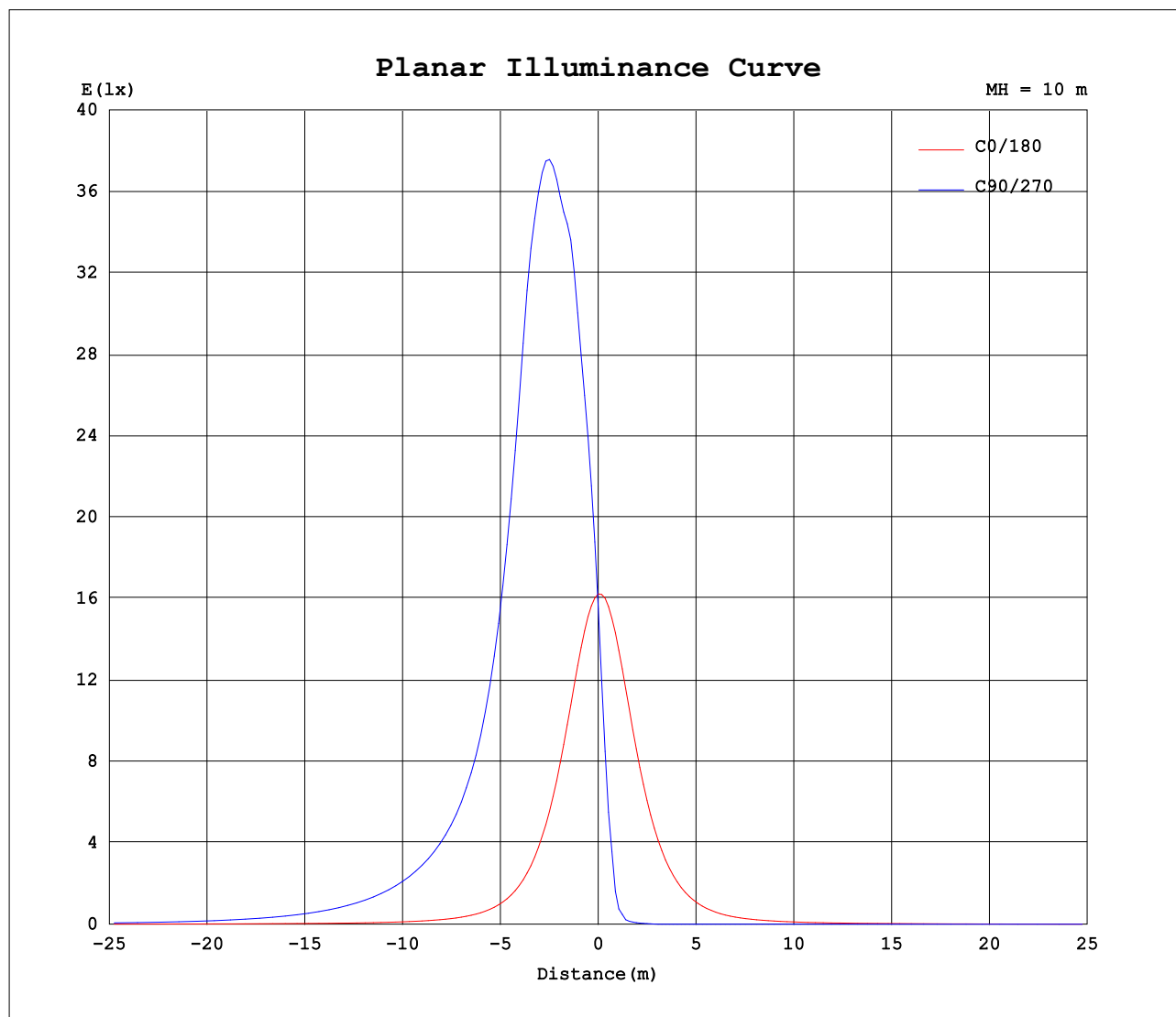
AvgL	cd/m2
L_0~180 (65) av	3329
L_0~180 (75) av	3091
L_0~180 (85) av	2436
L_90~270 (65) av	19434
L_90~270 (75) av	12837
L_90~270 (85) av	8138
L_45 (65) av	13611
L_45 (75) av	9235
L_45 (85) av	6024

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2023-05-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
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: 2023-05-26

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 6.810m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:231.3V I:0.1215A P:27.20W PF:0.9683 Freq:49.37Hz Lamp Flux:1321.48x1 lm		
NAME: 19691LED	TYPE:	WEIGHT:
SPEC.:P-19691LED-30W278-OS70036R90-JG700	DIM.:	SERIAL No.:
MFR.: CETTIGA	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	1622	1551	1622	1551															
5	1374	2829	1449	164															
10	925	3662	1001	11.0															
15	542	4160	594	2.23															
20	303	3752	331	0.05															
25	168	2506	182	0.02															
30	98.8	1607	105	0.01															
35	63.2	1091	64.1	0.01															
40	44.3	793	43.5	0.01															
45	33.3	596	31.6	0.01															
50	26.5	448	24.3	0.01															
55	21.7	328	19.4	0.00															
60	18.0	234	15.8	0.00															
65	14.9	161	12.7	0.00															
70	11.9	106	9.74	0.00															
75	8.86	65.1	6.82	0.00															
80	5.80	35.2	3.94	0.00															
85	2.78	13.9	1.38	0.02															
90	0.15	3.62	0.06	0.04															
95	0.03	2.54	0.02	0.08															
100	0.03	2.32	0.04	0.14															
105	0.05	2.22	0.05	0.22															
110	0.07	1.50	0.08	0.32															
115	0.10	1.62	0.11	0.46															
120	0.15	2.81	0.14	0.61															
125	0.23	2.85	0.19	0.81															
130	0.35	2.02	0.25	1.08															
135	0.54	2.74	0.35	1.44															
140	0.81	0.20	0.50	2.00															
145	1.16	0.00	0.70	2.81															
150	1.56	0.00	1.00	3.68															
155	2.01	0.05	1.40	4.30															
160	2.48	0.40	1.88	4.40															
165	2.92	1.22	2.39	4.08															
170	3.27	2.38	2.85	3.85															
175	3.45	3.55	3.23	4.13															
180	3.46	4.25	3.46	4.24															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Xie Bi
Test Date:2023-05-26

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:6.810m [K=1.0000]
Remarks: