

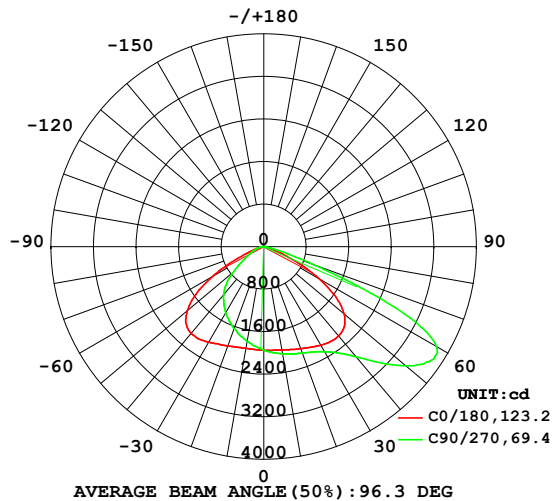
## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

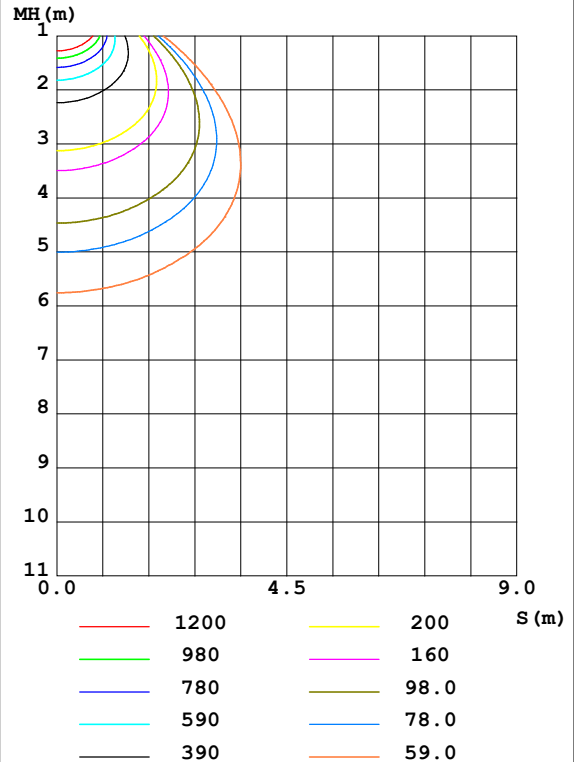
Test:U:229.9V I:0.2302A P:50.37W PF:0.9516 Freq:50.01Hz UTHDi:0% ITHDi:0% Lamp Flux:7445.65x1 lm		
NAME: FL23-050-5070-F06401	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 147.83 lm/W			
MODEL	SMD283	Imax(cd)	3832	S/MH(C0/180)	1.66
NOMINAL POWER(W)	50	LOR(%)	100.0	S/MH(C90/270)	1.11
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	7445.6	$\eta$ UP,DN(C0-180)	0.0,66.7
NOMINAL FLUX(lm)	7445.65	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,33.3
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.75
TEST VOLTAGE(V)	230	$\eta$ down(%)	100.0	CIBSE SHR MAX	1.75

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2020-08-14

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:26.000m [K=0.4589]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	1974	2049	2047	2021	1943	1845	1809	1862	0- 10	185.7	185.7	2.49,2.49
20	2041	2199	2134	2128	1990	1737	1642	1761	10- 20	552.0	737.8	9.91,9.91
30	2142	2431	2281	2341	2074	1603	1435	1627	20- 30	911.8	1650	22.2,22.2
40	2192	2771	2708	2680	2132	1410	1176	1436	30- 40	1273	2922	39.2,39.2
50	1973	3083	3484	2926	1881	1085	758.2	1114	40- 50	1605	4527	60.8,60.8
60	1188	2438	3744	2193	1094	591.9	350.8	626.3	50- 60	1652	6179	83,83
70	293.0	819.9	1008	719.9	271.8	238.6	177.8	265.3	60- 70	1025	7204	96.8,96.8
80	35.95	57.98	55.66	51.28	31.97	39.19	52.77	42.66	70- 80	228.7	7433	99.8,99.8
90	0	0	0	0	0	0	0	0	80- 90	12.69	7446	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 3690.5 lm

%lum = 49.6%

%lamp = 49.6%

Conical surface Flux(120deg): 6178.8 lm

%lum = 83.0%

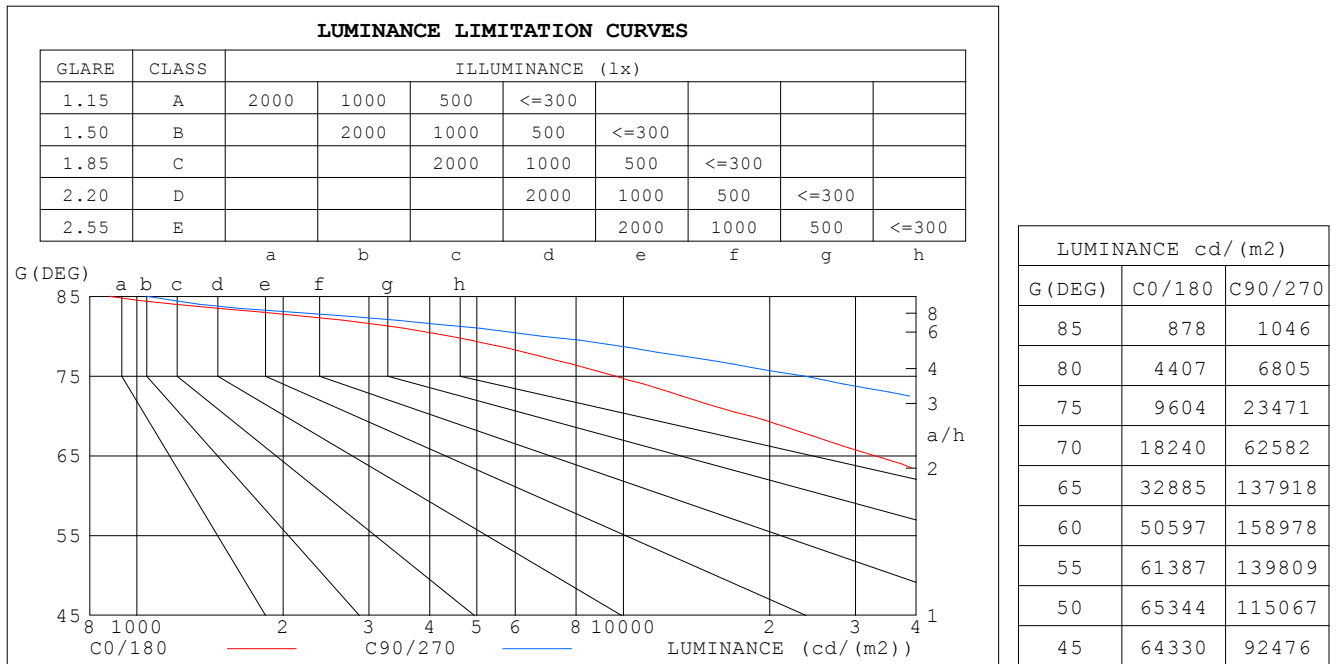
%lamp = 83.0%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2020-08-14

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Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:26.000m [K=0.4589]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINANCE LIMITATION CURVES



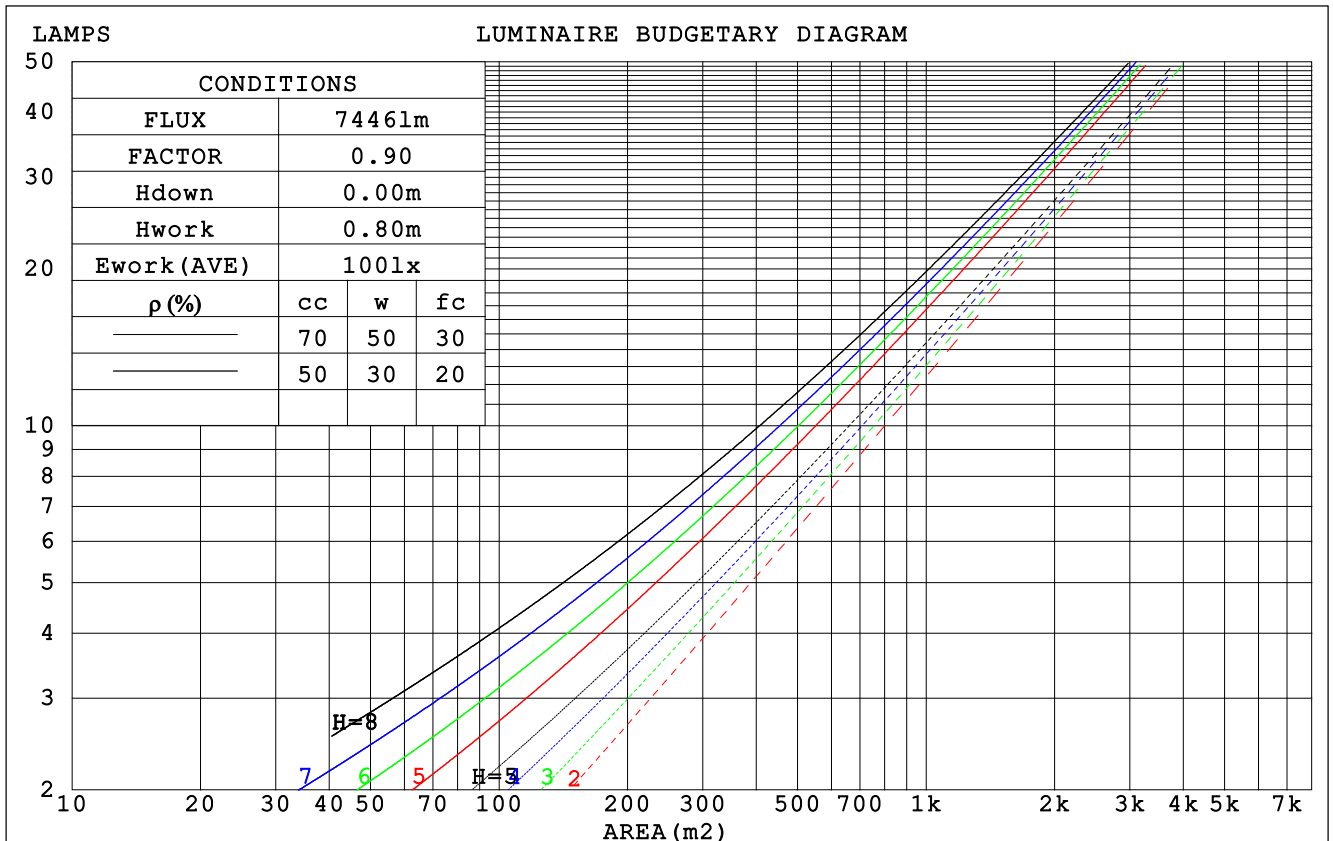
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2020-08-14

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4589]  
Remarks:

## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	1.00
1.0	1.05	1.01	.98	1.03	.99	.96	.99	.96	.93	.95	.92	.90	.91	.89	.87	.85
2.0	.91	.85	.79	.90	.83	.78	.86	.81	.76	.83	.78	.75	.80	.76	.73	.71
3.0	.80	.72	.65	.78	.71	.64	.75	.69	.63	.72	.67	.62	.70	.65	.61	.59
4.0	.70	.61	.54	.69	.60	.54	.66	.59	.53	.64	.57	.52	.62	.56	.52	.49
5.0	.62	.53	.46	.61	.52	.46	.59	.51	.45	.57	.50	.45	.55	.49	.44	.42
6.0	.55	.46	.39	.54	.45	.39	.52	.45	.39	.51	.44	.38	.49	.43	.38	.36
7.0	.49	.40	.34	.49	.40	.34	.47	.39	.34	.46	.39	.33	.44	.38	.33	.31
8.0	.45	.36	.30	.44	.36	.30	.43	.35	.30	.41	.34	.29	.40	.34	.29	.27
9.0	.41	.32	.27	.40	.32	.26	.39	.31	.26	.38	.31	.26	.37	.31	.26	.24
10.0	.37	.29	.24	.37	.29	.24	.36	.29	.24	.35	.28	.23	.34	.28	.23	.21



C Range: 0 - 360DEG  
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 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: LYJ  
 Test Date: 2020-08-14

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 26.000m [K=0.4589]  
 Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## WEC AND CCEC

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	.287	.163	.052	.280	.160	.051	.267	.153	.049	.254	.147	.047	.243	.141	.045		
2.0	.282	.155	.047	.276	.152	.047	.264	.147	.046	.254	.142	.045	.244	.138	.043		
3.0	.268	.142	.043	.262	.140	.042	.252	.136	.041	.242	.133	.041	.233	.129	.040		
4.0	.251	.130	.038	.246	.129	.038	.237	.125	.037	.228	.122	.037	.220	.120	.036		
5.0	.234	.119	.035	.230	.118	.034	.221	.115	.034	.214	.113	.034	.207	.110	.033		
6.0	.218	.109	.031	.214	.108	.031	.207	.106	.031	.200	.104	.031	.194	.102	.030		
7.0	.204	.101	.029	.200	.100	.028	.194	.098	.028	.187	.096	.028	.182	.094	.028		
8.0	.190	.093	.026	.187	.092	.026	.181	.091	.026	.176	.089	.026	.171	.088	.026		
9.0	.179	.086	.024	.176	.086	.024	.171	.084	.024	.166	.083	.024	.161	.082	.024		
10.0	.168	.081	.022	.165	.080	.022	.161	.079	.022	.156	.078	.022	.152	.076	.022		

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020		
1.0	.179	.156	.136	.153	.134	.117	.105	.092	.081	.060	.053	.047	.019	.017	.015		
2.0	.171	.132	.099	.146	.114	.086	.100	.079	.060	.058	.046	.035	.019	.015	.011		
3.0	.164	.114	.075	.141	.099	.065	.097	.068	.045	.056	.040	.027	.018	.013	.009		
4.0	.157	.101	.058	.135	.087	.050	.093	.061	.036	.054	.036	.021	.017	.012	.007		
5.0	.150	.091	.047	.129	.078	.041	.089	.055	.029	.052	.032	.017	.017	.011	.006		
6.0	.144	.082	.038	.124	.071	.034	.085	.050	.024	.049	.029	.014	.016	.010	.005		
7.0	.137	.076	.033	.118	.066	.028	.082	.046	.020	.047	.027	.012	.015	.009	.004		
8.0	.131	.070	.028	.113	.061	.024	.078	.043	.017	.045	.025	.010	.015	.008	.003		
9.0	.125	.065	.025	.108	.056	.022	.075	.040	.015	.043	.023	.009	.014	.008	.003		
10.0	.119	.061	.022	.103	.053	.019	.071	.037	.014	.042	.022	.008	.013	.007	.003		

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:LYJ  
 Test Date:2020-08-14

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:26.000m [K=0.4589]  
 Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## UGR(Unified Glare Rating) Table

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	28.0	29.7	28.4	30.0	30.3	33.2	34.9	33.6	35.2	35.6
3H	28.1	29.7	28.5	30.0	30.3	34.2	35.7	34.6	36.1	36.4
4H	28.1	29.6	28.5	29.9	30.3	34.3	35.7	34.6	36.0	36.4
6H	28.1	29.4	28.5	29.8	30.2	34.2	35.5	34.6	35.9	36.3
8H	28.1	29.3	28.5	29.7	30.1	34.2	35.4	34.6	35.8	36.2
12H	28.0	29.2	28.5	29.6	30.0	34.2	35.4	34.6	35.7	36.2
4H 2H	29.1	30.5	29.5	30.9	31.3	33.3	34.8	33.7	35.1	35.5
3H	29.3	30.4	29.7	30.8	31.2	34.5	35.7	34.9	36.0	36.4
4H	29.3	30.3	29.7	30.7	31.2	34.5	35.6	35.0	36.0	36.4
6H	29.2	30.1	29.7	30.6	31.0	34.5	35.4	35.0	35.9	36.3
8H	29.2	30.0	29.7	30.5	30.9	34.5	35.3	34.9	35.8	36.2
12H	29.2	29.9	29.7	30.4	30.9	34.5	35.2	34.9	35.7	36.2
8H 4H	29.5	30.3	29.9	30.7	31.2	34.5	35.3	34.9	35.8	36.2
6H	29.4	30.1	29.9	30.6	31.1	34.4	35.1	34.9	35.6	36.1
8H	29.4	30.0	29.9	30.5	31.0	34.4	35.0	34.9	35.5	36.0
12H	29.4	29.9	29.9	30.4	31.0	34.4	34.9	34.9	35.4	36.0
12H 4H	29.4	30.2	29.9	30.7	31.1	34.5	35.2	34.9	35.7	36.2
6H	29.4	30.0	29.9	30.5	31.0	34.4	35.0	34.9	35.5	36.0
8H	29.4	29.9	29.9	30.4	31.0	34.4	34.9	34.9	35.4	36.0
CIE190: 2010										

CIE190: 2010  
Area: 0.04708 m2

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Test Date:2020-08-14

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:26.000m [K=0.4589]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## UTILIZATION FACTORS TABLE

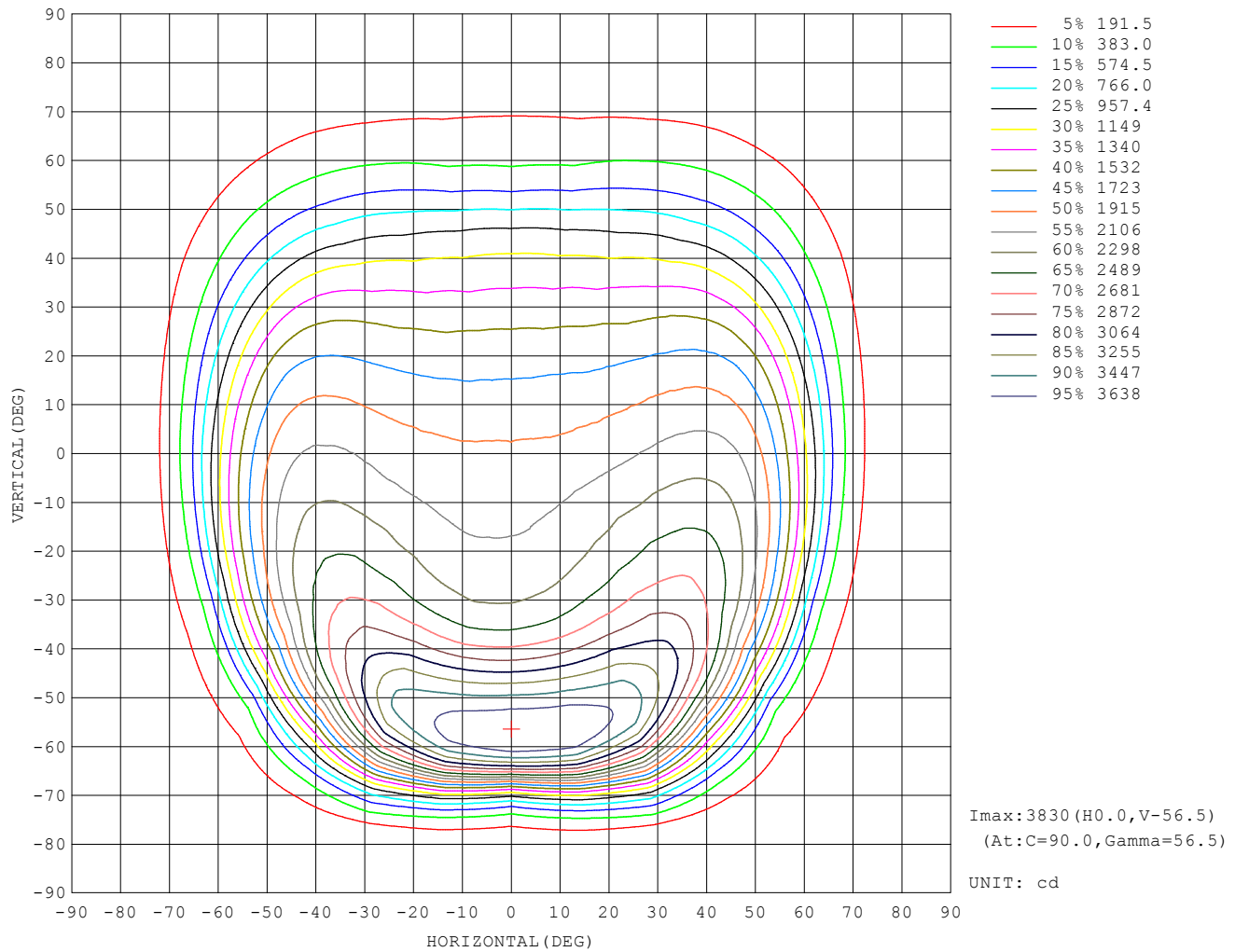
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	53	41	33	53	41	33	51	40	33	26
0.80	65	52	44	63	52	44	62	51	44	37
1.00	74	63	55	73	62	55	71	64	54	47
1.25	82	72	64	81	71	64	78	69	63	56
1.50	88	78	71	86	77	70	83	75	69	61
2.00	95	87	80	93	86	80	90	83	78	70
2.50	99	92	86	97	90	85	94	88	83	75
3.00	103	96	91	101	95	90	97	92	88	79
4.00	107	101	97	105	100	96	100	96	93	84
5.00	109	105	101	107	103	99	102	99	96	87
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 26.000m [K=0.4589]  
 Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ISOCANDELA DIAGRAM

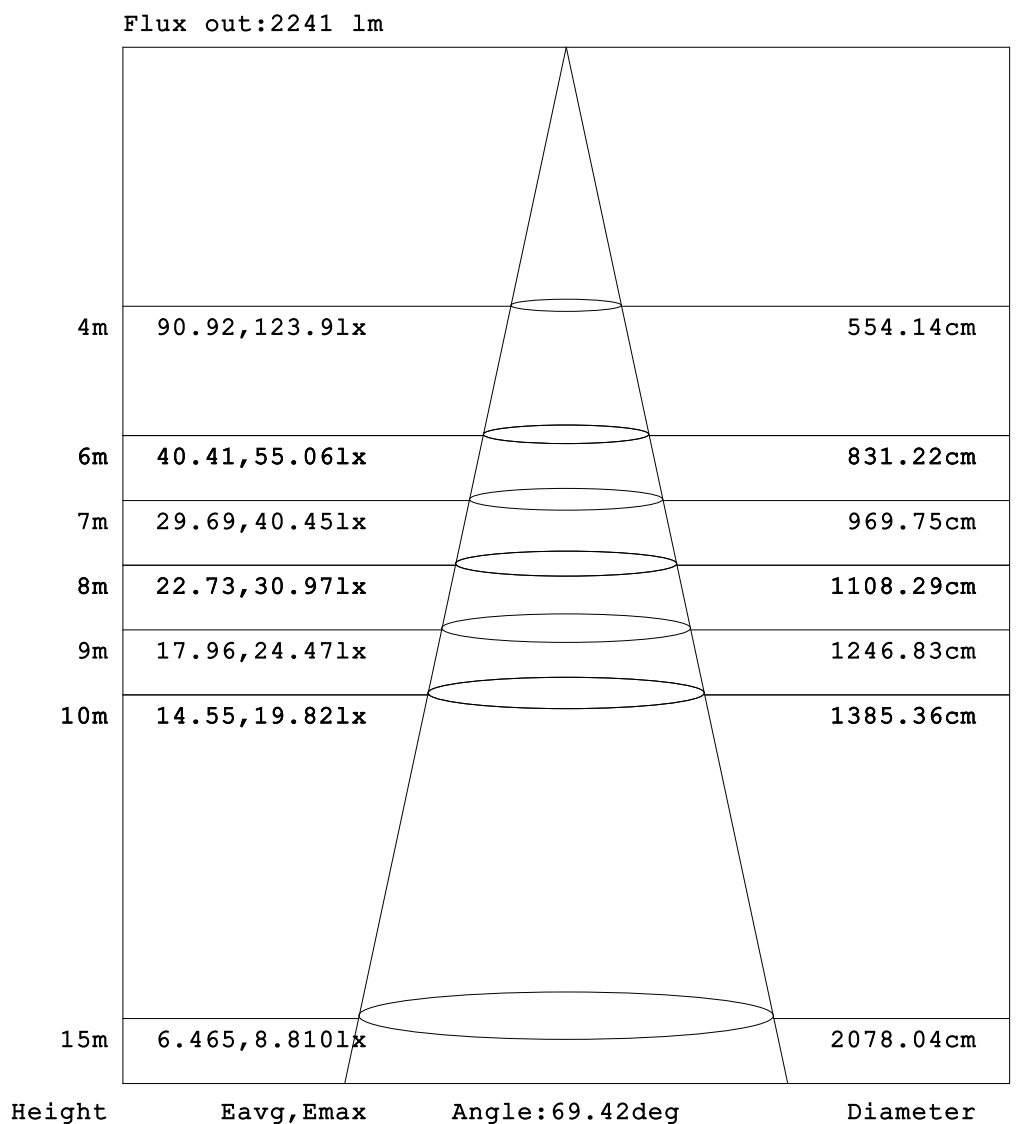


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Humidity: 65.0%  
Test Distance: 26.000m [K=0.4589]  
Remarks:



## AAI Figure

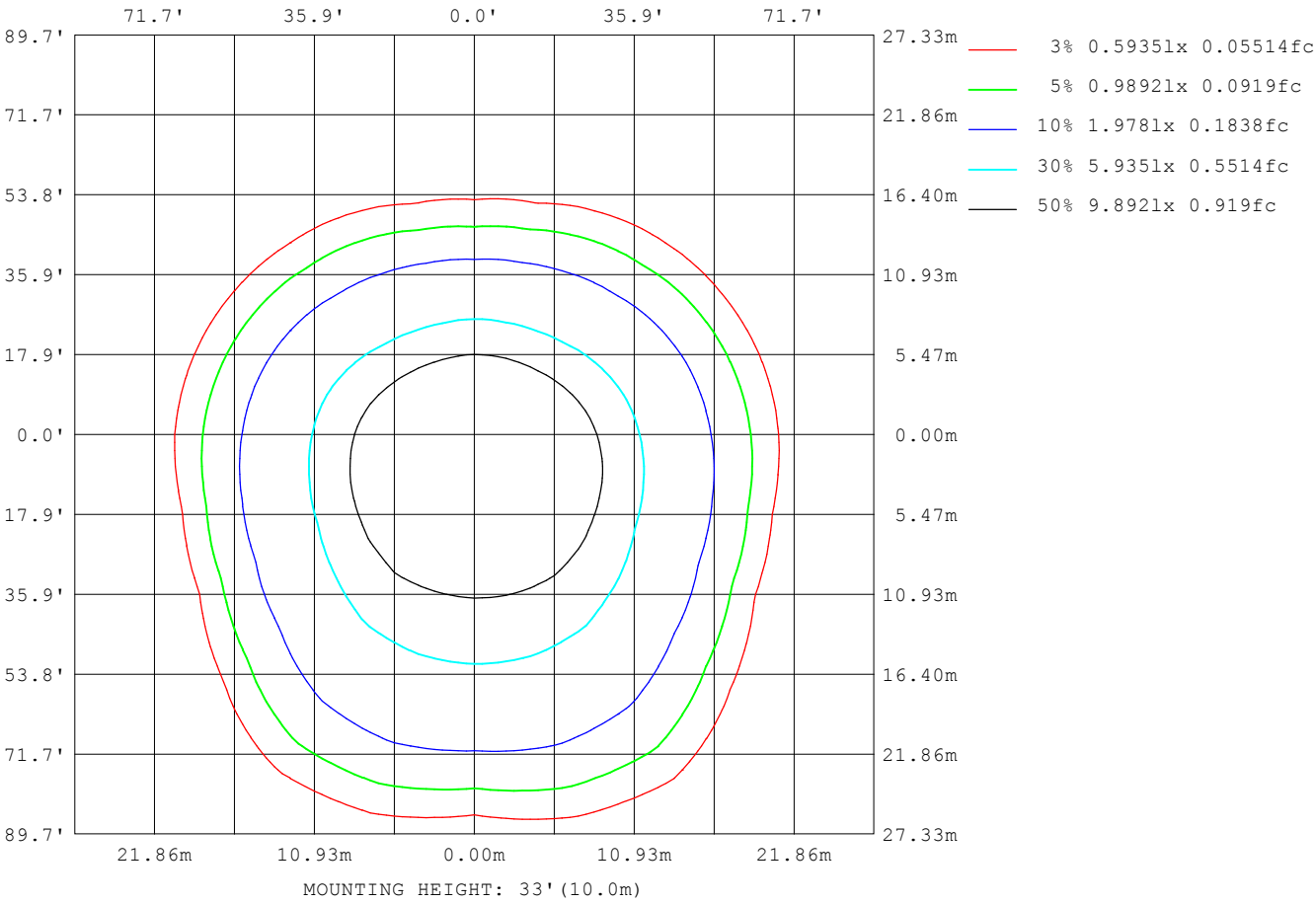


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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Temperature: 25.3DEG  
Operators: LYJ  
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$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4589]  
Remarks:

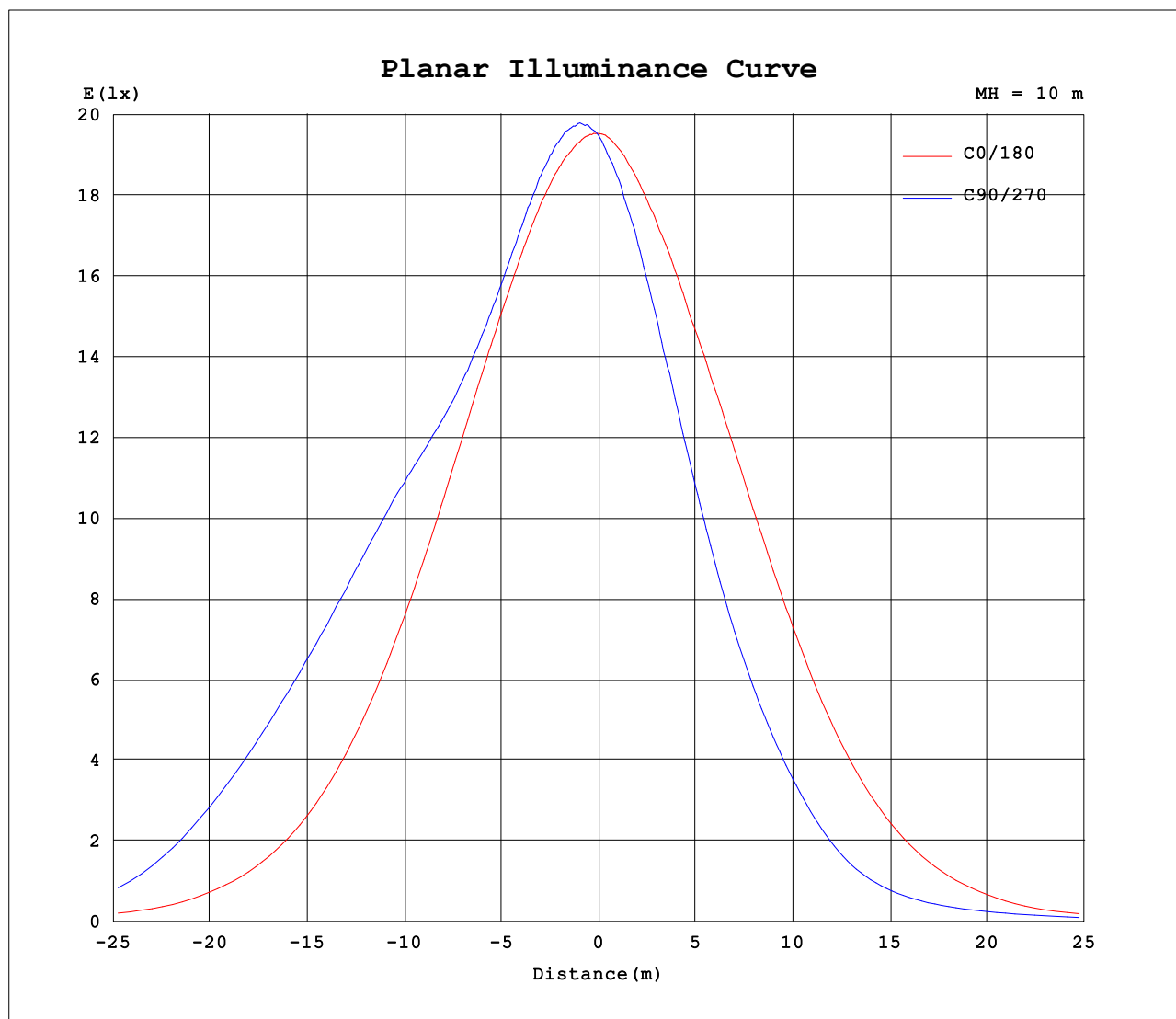
ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2020-08-14

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:26.000m [K=0.4589]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2020-08-14

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4589]  
Remarks: