

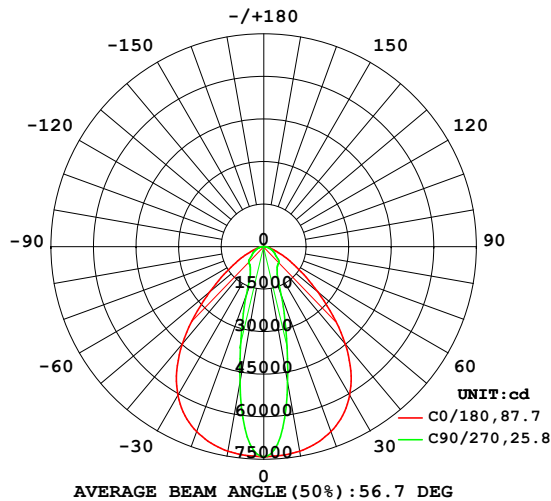
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

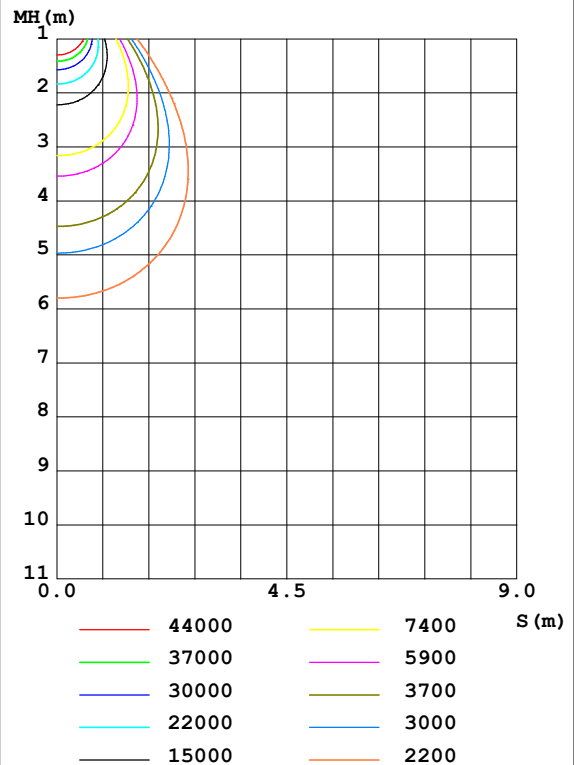
Test:U:229.7V I:2.1190A P:481.60W PF:0.9896 Freq:50.00Hz Lamp Flux:70162.8x1 lm		
NAME: LHB09-480-5070-L00401	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 145.69 lm/W			
MODEL	/	I _{max} (cd)	73999	S/MH(C0/180)	1.21
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	0.44
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	70163	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	70162.8	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	0.55

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 23.2DEG
Operators:LYJ
Test Date:2020-01-05

Checker: LYJ

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.420
Humidity: 61.2%
Test Distance:26.000m [K=1.0000]
Remarks:

Assessor:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	7320	6025	4868	6025	7320	6025	4868	6025	0- 10	6416	6416	9.15,9.15
20	6936	3051	1810	3051	6936	3051	1810	3051	10- 20	13351	19768	28.2,28.2
30	6057	1300	950.1	1300	6057	1300	950.1	1300	20- 30	13394	33161	47.3,47.3
40	4472	805.0	801.9	805.0	4472	805.0	801.9	805.0	30- 40	11836	44998	64.1,64.1
50	2491	646.0	622.4	646.0	2491	646.0	622.4	646.0	40- 50	9960	54958	78.3,78.3
60	1156	482.8	438.4	482.8	1156	482.8	438.4	482.8	50- 60	7327	62285	88.8,88.8
70	441.0	316.2	273.9	316.2	441.0	316.2	273.9	316.2	60- 70	4736	67021	95.5,95.5
80	131.8	143.9	130.2	143.9	131.8	143.9	130.2	143.9	70- 80	2460	69481	99,99
90	0.4961	0.3071	0.2661	0.3071	0.4961	0.3071	0.2661	0.3071	80- 90	682.2	70163	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:X10cd									UNIT:lm		

Conical surface Flux(90deg): 50247 lm

%lum = 71.6%

%lamp = 71.6%

Conical surface Flux(120deg): 62285 lm

%lum = 88.8%

%lamp = 88.8%

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C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 23.2DEG
Operators:LYJ
Test Date:2020-01-05

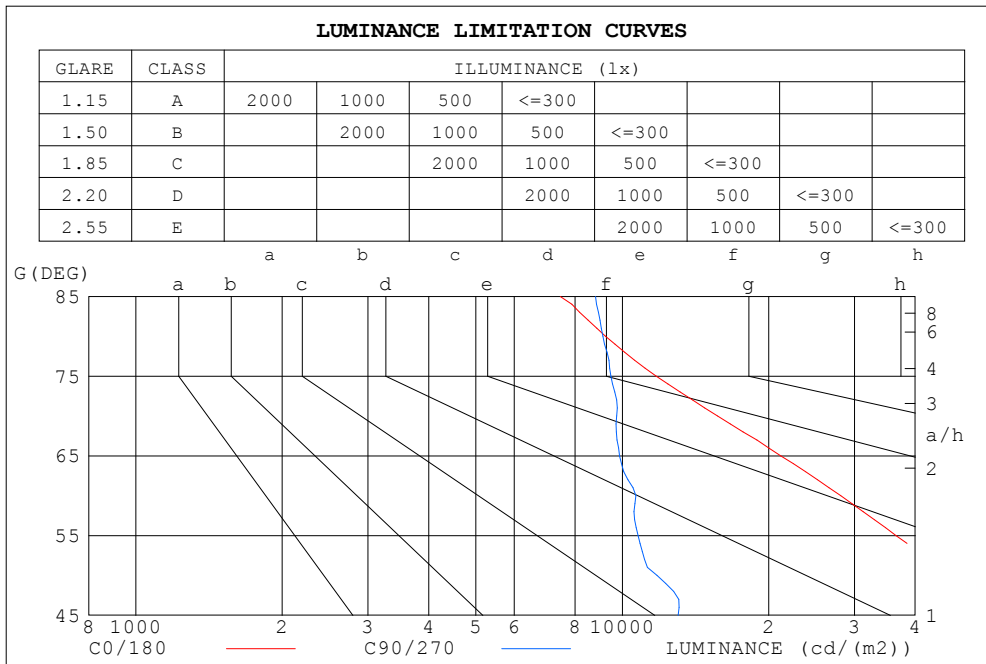
Checker: LYJ

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.420
Humidity: 61.2%
Test Distance:26.000m [K=1.0000]
Remarks:

Assessor:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	7461	8812
80	9237	9119
75	11756	9473
70	15686	9744
65	21196	9877
60	28132	10665
55	36565	10772
50	47135	11779
45	59493	13028

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 23.2DEG
 Operators:LYJ
 Test Date:2020-01-05

Checker: LYJ

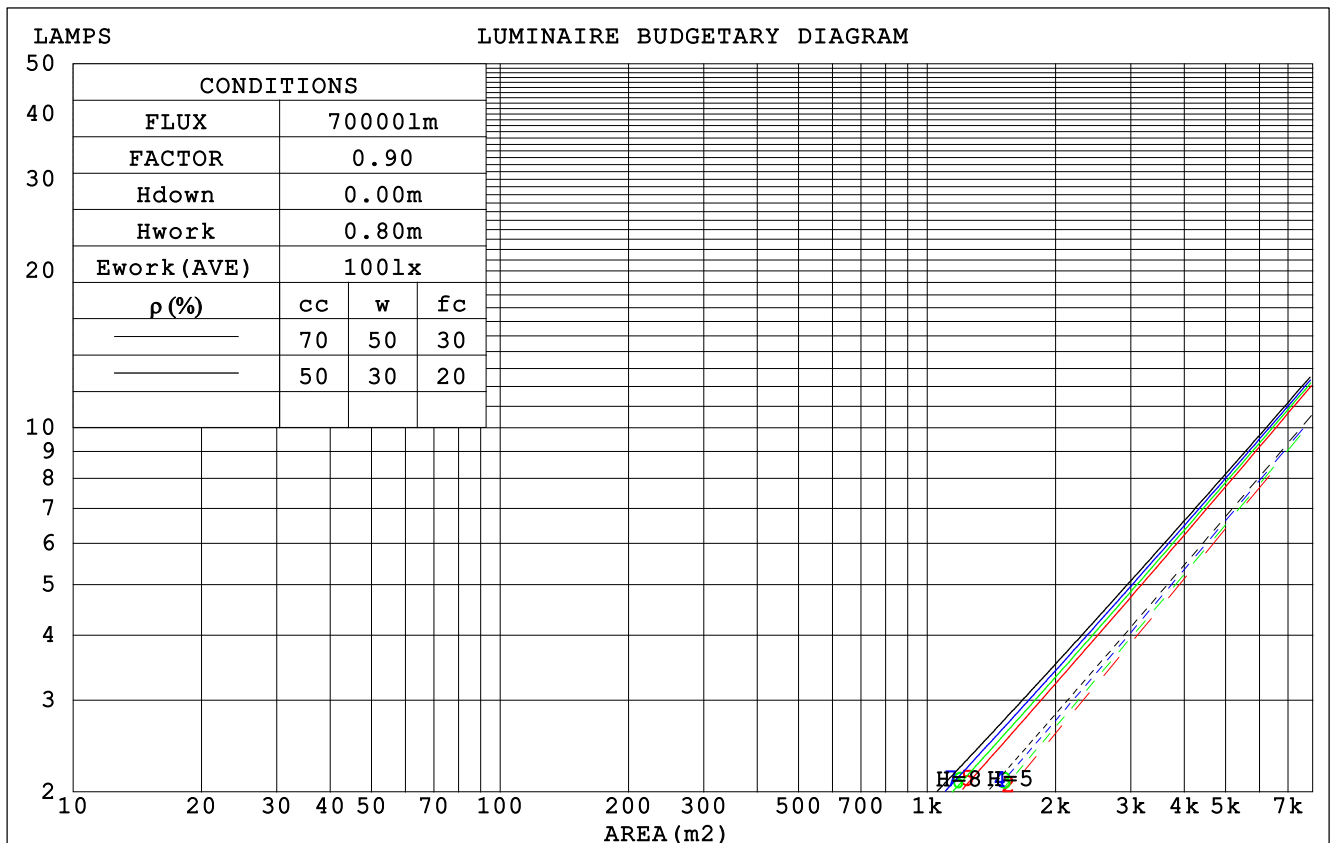
γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.420
 Humidity: 61.2%
 Test Distance:26.000m [K=1.0000]
 Remarks:

Assessor:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

pcc	80%			70%			50%			30%			10%			0
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p _{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	1.07	1.04	1.01	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.93	.92	.90	.88
2.0	.96	.91	.86	.95	.90	.85	.91	.87	.83	.88	.85	.82	.85	.82	.80	.78
3.0	.87	.81	.75	.86	.80	.75	.83	.78	.73	.80	.76	.72	.78	.74	.71	.69
4.0	.80	.72	.67	.78	.72	.66	.76	.70	.66	.74	.69	.65	.72	.67	.64	.62
5.0	.73	.65	.60	.72	.65	.60	.70	.64	.59	.68	.63	.58	.66	.62	.58	.56
6.0	.67	.60	.54	.66	.59	.54	.65	.58	.54	.63	.58	.53	.62	.57	.53	.51
7.0	.62	.55	.50	.62	.55	.50	.60	.54	.49	.59	.53	.49	.58	.53	.49	.47
8.0	.58	.51	.46	.57	.51	.46	.56	.50	.45	.55	.49	.45	.54	.49	.45	.43
9.0	.54	.47	.42	.54	.47	.42	.53	.47	.42	.52	.46	.42	.51	.46	.42	.40
10.0	.51	.44	.40	.51	.44	.40	.50	.44	.39	.49	.43	.39	.48	.43	.39	.38



C Range: 0 - 360DEG
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γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.420
Humidity: 61.2%
Test Distance:26.000m [K=1.0000]
Remarks:

Checker: LYJ

Assessor:

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	.246	.140	.044	.239	.136	.043	.226	.130	.041	.214	.124	.040	.203	.118	.038															
2.0	.234	.128	.039	.228	.125	.039	.217	.120	.037	.206	.116	.036	.197	.111	.035															
3.0	.219	.116	.035	.214	.114	.034	.204	.111	.034	.195	.107	.033	.187	.103	.032															
4.0	.204	.106	.031	.200	.105	.031	.191	.101	.030	.183	.098	.030	.176	.096	.029															
5.0	.191	.097	.028	.187	.096	.028	.179	.093	.027	.172	.091	.027	.166	.089	.027															
6.0	.179	.090	.026	.175	.089	.025	.169	.086	.025	.162	.084	.025	.157	.082	.024															
7.0	.168	.083	.024	.165	.082	.023	.159	.080	.023	.153	.079	.023	.148	.077	.023															
8.0	.158	.077	.022	.155	.076	.022	.150	.075	.021	.145	.073	.021	.140	.072	.021															
9.0	.149	.072	.020	.147	.072	.020	.142	.070	.020	.138	.069	.020	.133	.068	.020															
10.0	.141	.068	.019	.139	.067	.019	.135	.066	.019	.131	.065	.018	.127	.064	.018															

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	.176	.157	.139	.151	.134	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016		
2.0	.165	.132	.105	.141	.114	.091	.097	.079	.063	.056	.046	.037	.018	.015	.012		
3.0	.155	.114	.082	.133	.098	.071	.091	.068	.050	.053	.040	.029	.017	.013	.010		
4.0	.146	.100	.065	.125	.086	.056	.086	.060	.040	.050	.035	.024	.016	.011	.008		
5.0	.138	.089	.053	.118	.077	.046	.081	.054	.033	.047	.032	.019	.015	.010	.006		
6.0	.130	.080	.044	.112	.069	.038	.077	.049	.027	.045	.029	.016	.014	.009	.005		
7.0	.124	.073	.037	.106	.063	.033	.074	.044	.023	.043	.026	.014	.014	.009	.005		
8.0	.118	.067	.032	.101	.058	.028	.070	.041	.020	.041	.024	.012	.013	.008	.004		
9.0	.112	.062	.028	.096	.054	.025	.067	.038	.017	.039	.022	.010	.013	.007	.003		
10.0	.107	.058	.025	.092	.050	.022	.064	.035	.015	.037	.021	.009	.012	.007	.003		

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 23.2DEG
 Operators:LYJ
 Test Date:2020-01-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.420
 Humidity: 61.2%
 Test Distance:26.000m [K=1.0000]
 Remarks:

Checker: LYJ

Assessor:

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	23.6	25.0	24.0	25.3	25.6	17.8	19.2	18.2	19.5	19.8
3H	24.9	26.2	25.3	26.5	26.9	19.6	20.8	19.9	21.1	21.5
4H	25.2	26.4	25.6	26.8	27.1	20.3	21.4	20.7	21.8	22.2
6H	25.4	26.5	25.8	26.8	27.2	20.9	21.9	21.3	22.3	22.7
8H	25.4	26.5	25.9	26.8	27.2	21.1	22.1	21.5	22.5	22.9
12H	25.4	26.4	25.9	26.8	27.2	21.2	22.2	21.6	22.6	23.0
4H 2H	23.6	24.7	24.0	25.1	25.5	18.6	19.7	19.0	20.1	20.5
3H	25.0	26.0	25.4	26.4	26.8	20.6	21.5	21.0	21.9	22.3
4H	25.4	26.3	25.8	26.7	27.1	21.4	22.3	21.8	22.7	23.1
6H	25.7	26.4	26.2	26.9	27.4	22.1	22.8	22.5	23.3	23.7
8H	25.8	26.5	26.2	26.9	27.4	22.3	23.0	22.8	23.5	23.9
12H	25.8	26.4	26.3	26.9	27.4	22.5	23.1	23.0	23.6	24.1
8H 4H	25.4	26.1	25.9	26.6	27.1	21.8	22.5	22.2	22.9	23.4
6H	25.8	26.4	26.3	26.9	27.3	22.6	23.2	23.1	23.7	24.1
8H	25.9	26.4	26.4	26.9	27.4	22.9	23.4	23.4	24.0	24.4
12H	26.0	26.5	26.5	26.9	27.5	23.2	23.7	23.7	24.2	24.7
12H 4H	25.4	26.1	25.9	26.5	27.0	21.8	22.4	22.3	22.9	23.4
6H	25.8	26.3	26.3	26.8	27.3	22.7	23.2	23.2	23.7	24.2
8H	25.9	26.4	26.5	26.9	27.5	23.1	23.5	23.6	24.0	24.6
CIE190: 2010										

CIE190: 2010
Area: 0.822 m2

C Range: 0 - 360DEG
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Test Date:2020-01-05

Checker: LYJ

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.420
Humidity: 61.2%
Test Distance:26.000m [K=1.0000]
Remarks:

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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) $k(RI) \times RCR = 5$									
$k = 0.60$	69	60	54	69	59	54	68	59	54	48
0.80	79	69	63	78	69	63	76	68	63	57
1.00	86	77	71	85	76	71	83	77	70	64
1.25	92	83	78	90	83	77	88	81	77	71
1.50	96	88	83	94	87	82	92	86	81	75
2.00	101	94	89	99	93	88	96	91	87	80
2.50	104	98	93	102	96	92	98	94	90	83
3.00	106	101	97	104	100	96	101	97	93	86
4.00	109	105	101	107	103	100	103	100	97	89
5.00	111	108	105	109	106	103	105	102	100	91
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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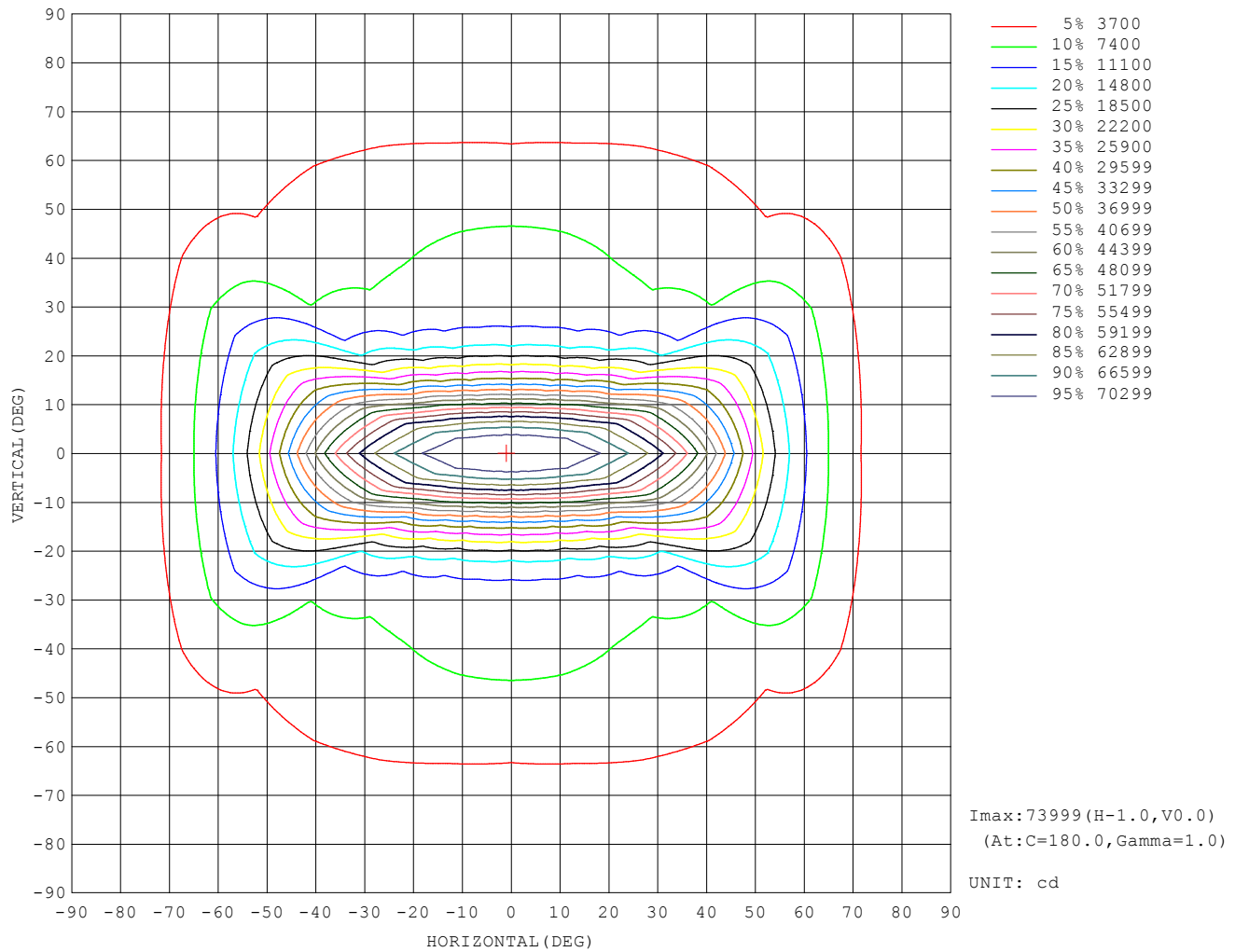
Checker: LYJ

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.420
 Humidity: 61.2%
 Test Distance:26.000m [K=1.0000]
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EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOCANDELA DIAGRAM



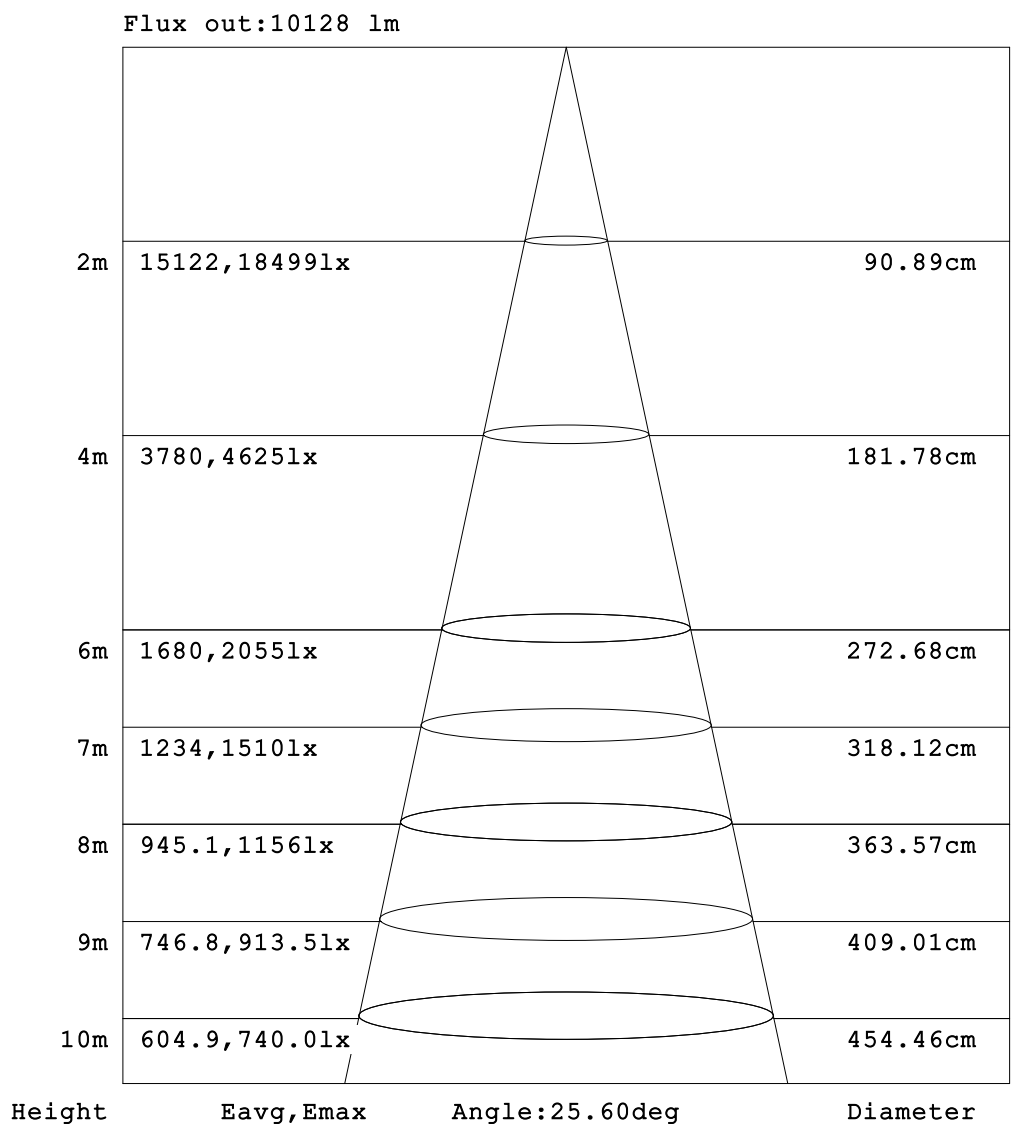
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 23.2DEG
Operators: LYJ
Test Date: 2020-01-05

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.420
Humidity: 61.2%
Test Distance: 26.000m [K=1.0000]
Remarks:

Checker: LYJ

Assessor:

AAI Figure



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

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 23.2DEG
Operators:LYJ
Test Date:2020-01-05

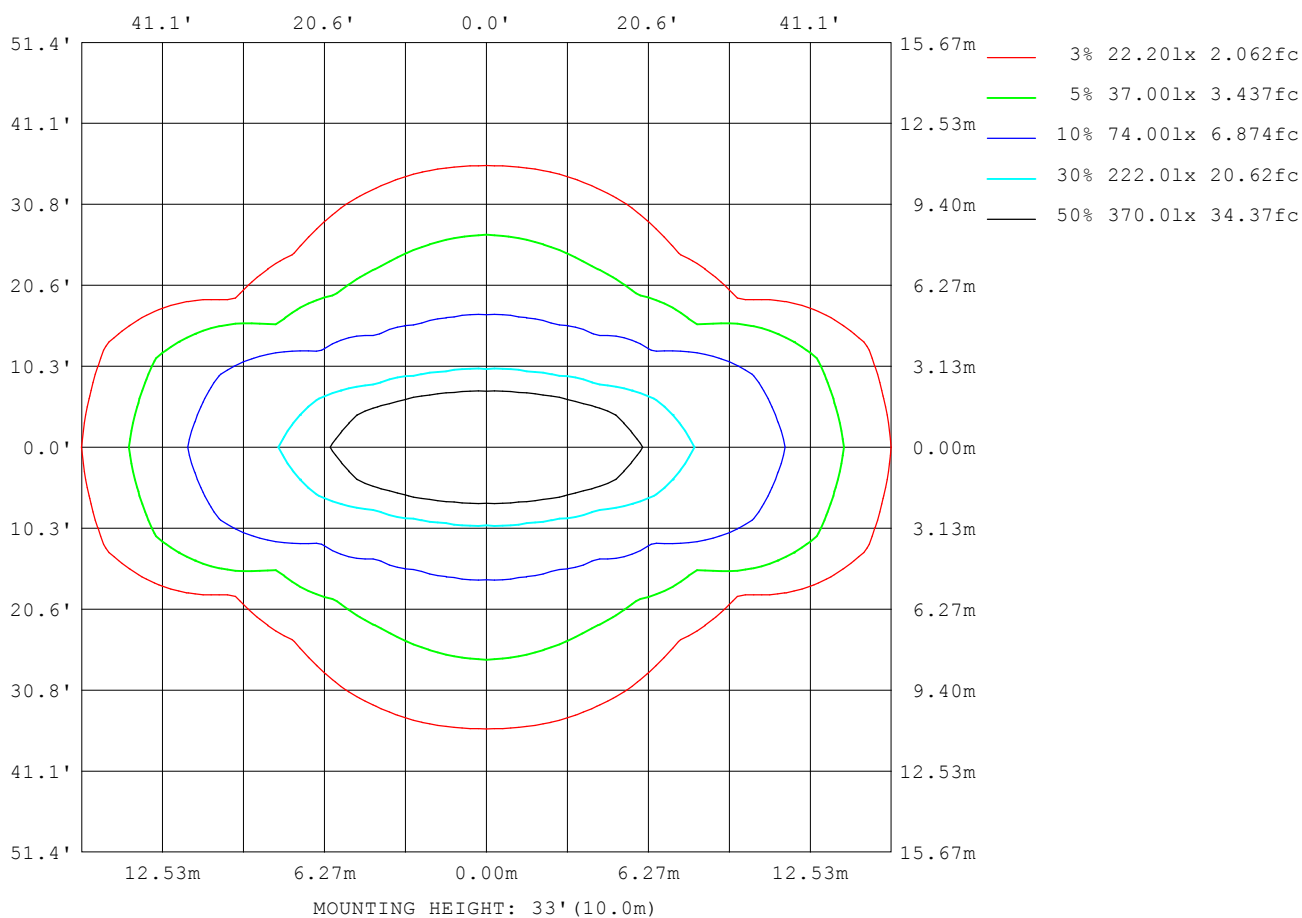
γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.420
Humidity: 61.2%
Test Distance:26.000m [K=1.0000]
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Assessor:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM



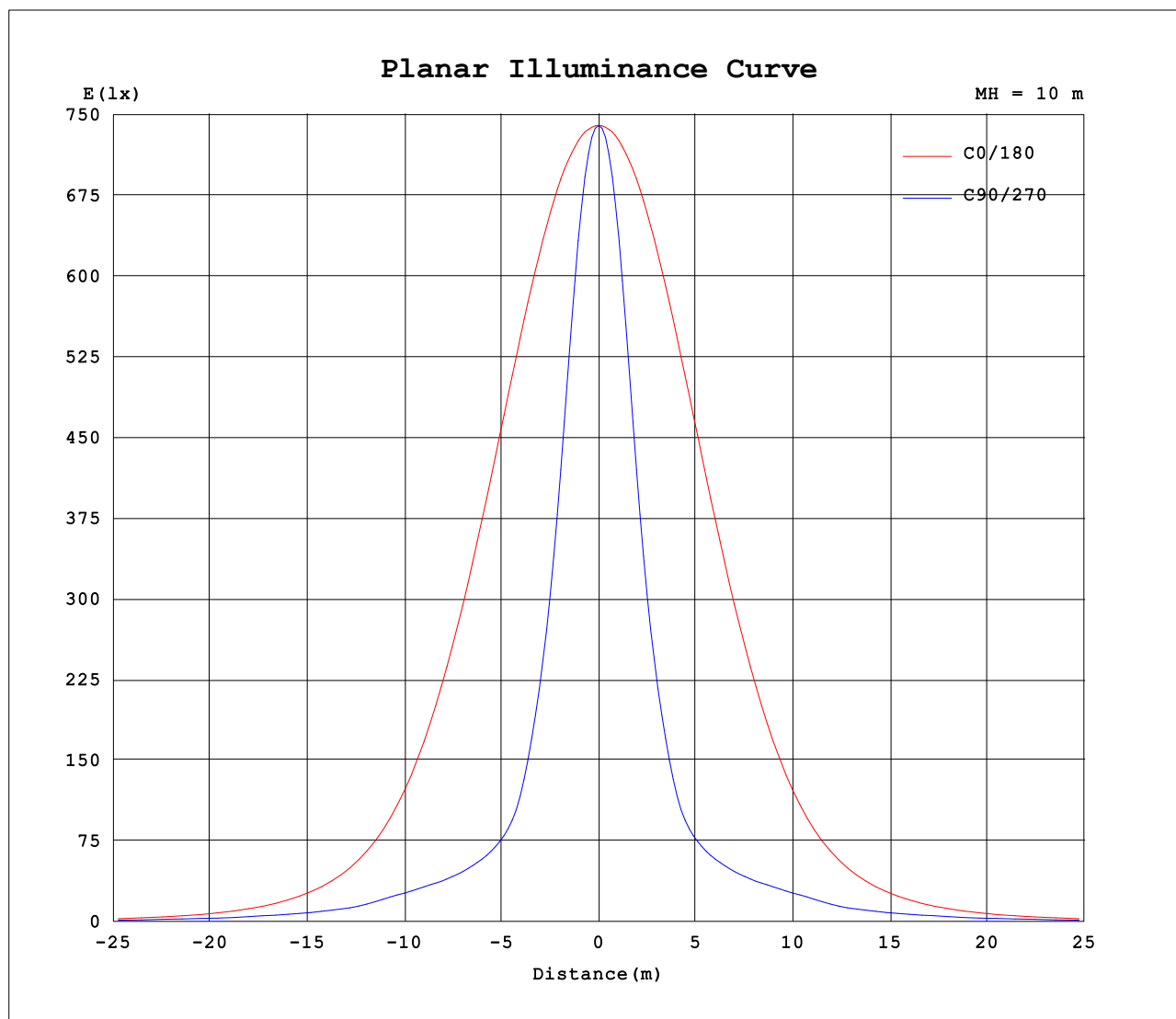
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 23.2DEG
Operators:LYJ
Test Date:2020-01-05

Checker: LYJ

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.420
Humidity: 61.2%
Test Distance:26.000m [K=1.0000]
Remarks:

Assessor:

Planar Illuminance Curve



C Range: 0 - 360DEG
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Operators:LYJ
Test Date:2020-01-05

Checker: LYJ

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.420
Humidity: 61.2%
Test Distance:26.000m [K=1.0000]
Remarks:

Assessor: