

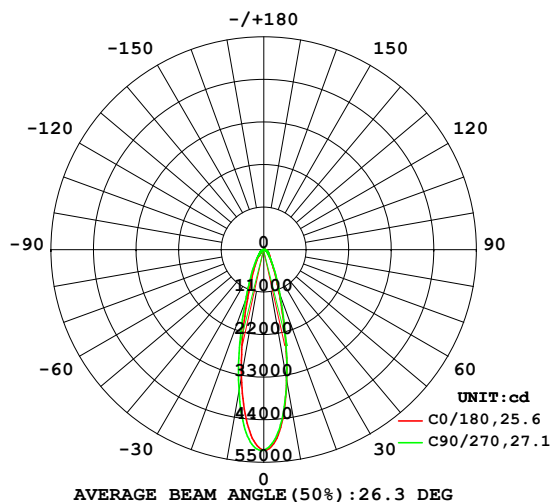
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

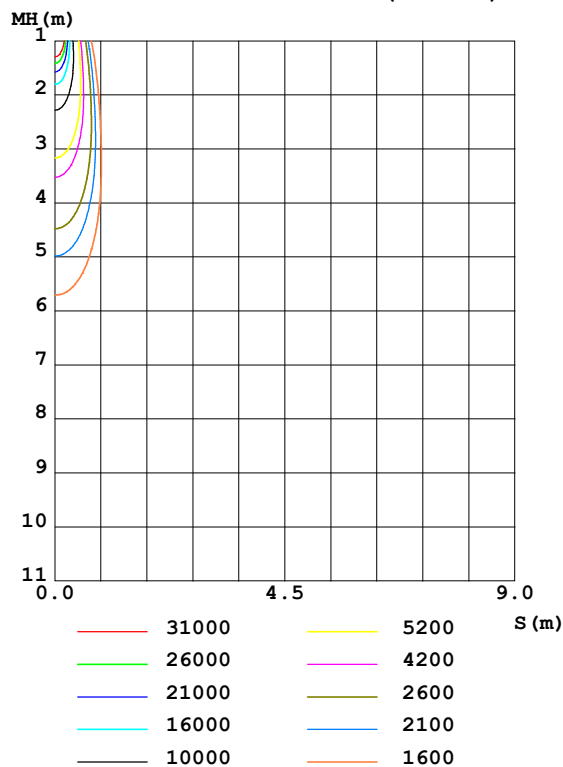
Test:U:229.6V I:0.6672A P:151.5W PF:0.9889 Freq:50.00Hz UTHDi:0% ITHDi:0% Lamp Flux:18914.4x1 lm		
NAME: FL23-150-5070-F19204	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 124.84 lm/W			
MODEL	RF303	I _{max} (cd)	51915	S/MH(C0/180)	0.43
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH(C90/270)	0.47
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	18914	η UP,DN(C0-180)	0.0,48.6
NOMINAL FLUX(lm)	18914.4	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.4
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.00

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:2020-07-03

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

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	3427	3468	3423	3374	3338	3518	3711	3599	0- 10	4092	4092	21.6,21.6
20	1137	1201	1221	1148	1119	1240	1370	1249	10- 20	5918	10009	52.9,52.9
30	445.4	468.5	482.1	447.3	441.0	481.4	536.7	480.0	20- 30	3452	13462	71.2,71.2
40	219.7	227.0	230.7	221.8	220.1	235.9	252.2	232.5	30- 40	2049	15510	82,82
50	133.6	135.4	134.2	133.4	134.5	141.2	146.3	139.2	40- 50	1361	16871	89.2,89.2
60	88.97	85.79	84.33	84.85	89.83	91.69	95.88	90.53	50- 60	995.5	17867	94.5,94.5
70	51.16	45.02	43.09	44.46	52.17	51.62	55.87	50.95	60- 70	679.4	18546	98.1,98.1
80	15.22	10.49	8.200	10.32	15.60	16.45	18.51	16.08	70- 80	322.4	18869	99.8,99.8
90	0.0432	0.0445	0.0482	0.0425	0.0467	0.0398	0.0353	0.0378	80- 90	45.79	18914	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:×10cd									UNIT:lm		

Conical surface Flux(90deg): 16248 lm

%lum = 85.9%

%lamp = 85.9%

Conical surface Flux(120deg): 17867 lm

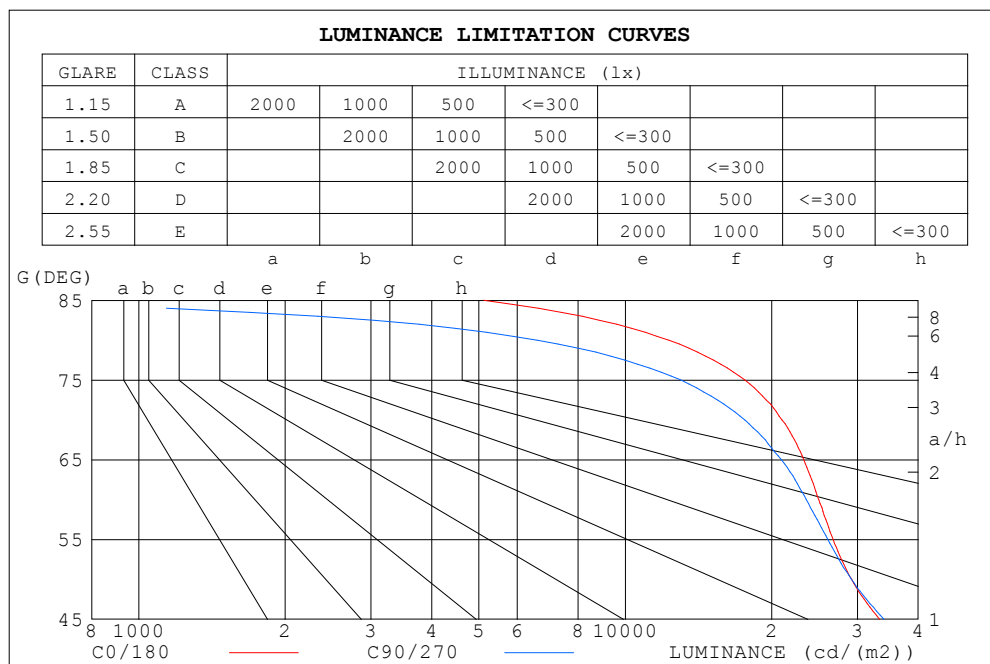
%lum = 94.5%

%lamp = 94.5%

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

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	5114	359
80	12305	6598
75	17621	13011
70	21002	17601
65	23270	20921
60	24986	23564
55	26736	26086
50	29188	29166
45	33302	34043

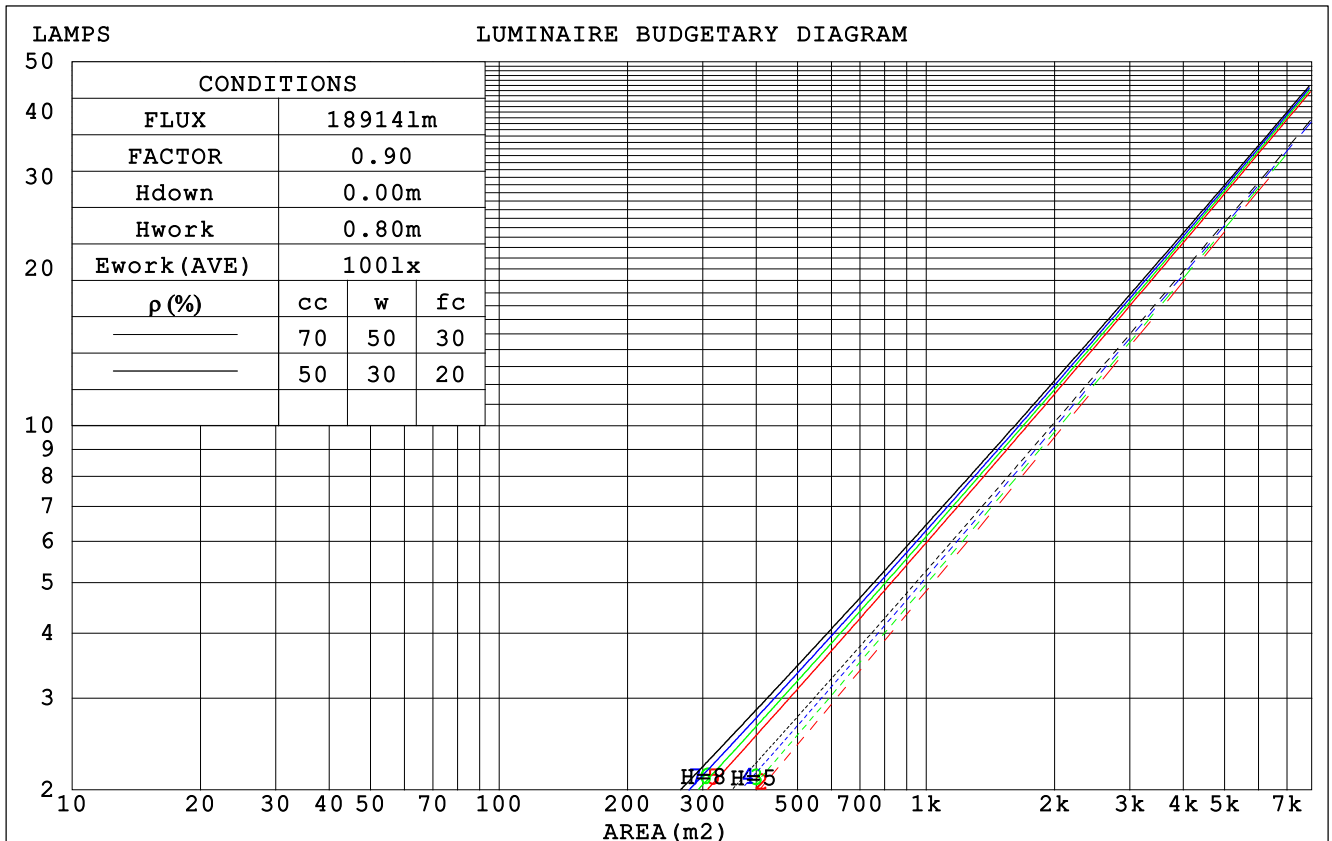
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C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2020-07-03

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 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
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Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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	1.00
1.0	1.10	1.08	1.05	1.08	1.06	1.03	1.04	1.02	1.00	1.00	.99	.97	.97	.96	.94	.93
2.0	1.02	.98	.94	1.00	.97	.93	.97	.94	.91	.94	.92	.89	.91	.89	.87	.86
3.0	.95	.90	.86	.94	.89	.85	.91	.87	.84	.89	.85	.83	.86	.84	.81	.80
4.0	.89	.84	.79	.88	.83	.79	.86	.82	.78	.84	.80	.77	.82	.79	.76	.75
5.0	.84	.78	.74	.83	.78	.74	.81	.77	.73	.80	.76	.72	.78	.75	.72	.70
6.0	.80	.74	.70	.79	.73	.69	.77	.72	.69	.76	.72	.68	.75	.71	.68	.66
7.0	.76	.70	.66	.75	.69	.66	.74	.69	.65	.73	.68	.65	.71	.67	.65	.63
8.0	.72	.66	.62	.72	.66	.62	.70	.66	.62	.69	.65	.62	.68	.64	.62	.60
9.0	.69	.63	.60	.68	.63	.59	.67	.63	.59	.67	.62	.59	.66	.62	.59	.58
10.0	.66	.61	.57	.66	.60	.57	.65	.60	.57	.64	.60	.57	.63	.59	.56	.55



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
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 Operators: LYJ
 Test Date: 2020-07-03

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

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	.189	.108	.034	.183	.104	.033	.170	.097	.031	.158	.091	.029	.148	.086	.028		
2.0	.179	.098	.030	.174	.096	.029	.163	.091	.028	.153	.086	.027	.144	.082	.026		
3.0	.168	.090	.027	.163	.087	.026	.154	.084	.025	.146	.080	.025	.138	.076	.024		
4.0	.158	.082	.024	.153	.080	.024	.146	.077	.023	.138	.074	.022	.131	.071	.022		
5.0	.148	.075	.022	.144	.074	.022	.137	.072	.021	.131	.069	.021	.125	.067	.020		
6.0	.139	.070	.020	.136	.069	.020	.130	.067	.019	.124	.065	.019	.119	.063	.019		
7.0	.131	.065	.018	.129	.064	.018	.123	.062	.018	.118	.061	.018	.114	.059	.017		
8.0	.124	.061	.017	.122	.060	.017	.117	.059	.017	.113	.057	.016	.109	.056	.016		
9.0	.118	.057	.016	.116	.056	.016	.112	.055	.016	.108	.054	.015	.104	.053	.015		
10.0	.112	.054	.015	.110	.053	.015	.106	.052	.015	.103	.051	.015	.100	.050	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.172	.157	.144	.147	.135	.124	.101	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.157	.132	.112	.135	.114	.096	.092	.079	.067	.053	.046	.039	.017	.015	.013	
3.0	.145	.114	.089	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.134	.099	.072	.115	.085	.063	.079	.060	.044	.046	.035	.026	.015	.011	.009	
5.0	.125	.087	.059	.107	.076	.052	.074	.053	.037	.043	.031	.022	.014	.010	.007	
6.0	.117	.078	.050	.101	.067	.043	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.110	.070	.042	.095	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.104	.064	.037	.089	.055	.032	.062	.039	.023	.036	.023	.013	.012	.008	.004	
9.0	.098	.058	.032	.084	.051	.028	.058	.036	.020	.034	.021	.012	.011	.007	.004	
10.0	.093	.054	.028	.080	.047	.024	.056	.033	.017	.032	.019	.010	.011	.006	.003	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYJ
 Test Date:2020-07-03

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	20.0	21.2	20.4	21.5	21.8	19.8	20.9	20.1	21.2	21.5
3H	21.5	22.6	21.9	22.9	23.3	21.0	22.0	21.4	22.4	22.7
4H	22.0	23.0	22.4	23.3	23.7	21.3	22.3	21.7	22.6	23.0
6H	22.3	23.1	22.7	23.5	23.9	21.4	22.3	21.8	22.6	23.0
8H	22.3	23.1	22.7	23.5	23.9	21.4	22.2	21.8	22.6	23.0
12H	22.2	23.0	22.7	23.4	23.8	21.3	22.1	21.8	22.5	22.9
4H 2H	20.4	21.4	20.8	21.7	22.1	20.2	21.2	20.6	21.5	21.9
3H	22.1	22.9	22.5	23.3	23.7	21.6	22.4	22.0	22.8	23.2
4H	22.7	23.4	23.1	23.8	24.2	22.0	22.7	22.4	23.1	23.5
6H	23.0	23.6	23.4	24.0	24.5	22.1	22.7	22.5	23.1	23.6
8H	23.0	23.5	23.5	24.0	24.5	22.0	22.6	22.5	23.0	23.5
12H	23.0	23.5	23.5	23.9	24.4	22.0	22.5	22.5	23.0	23.4
8H 4H	22.7	23.3	23.2	23.7	24.2	22.1	22.6	22.5	23.1	23.5
6H	23.1	23.5	23.6	24.0	24.5	22.2	22.6	22.7	23.1	23.6
8H	23.1	23.5	23.6	24.0	24.5	22.2	22.6	22.7	23.1	23.6
12H	23.1	23.4	23.6	23.9	24.5	22.1	22.5	22.6	23.0	23.5
12H 4H	22.7	23.2	23.2	23.6	24.1	22.0	22.5	22.5	23.0	23.5
6H	23.0	23.4	23.5	23.9	24.4	22.2	22.6	22.7	23.0	23.6
8H	23.1	23.4	23.6	23.9	24.5	22.2	22.5	22.7	23.0	23.6
CIE190: 2010										

CIE190: 2010
Area: 0.07155 m2

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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

UTILIZATION FACTORS TABLE

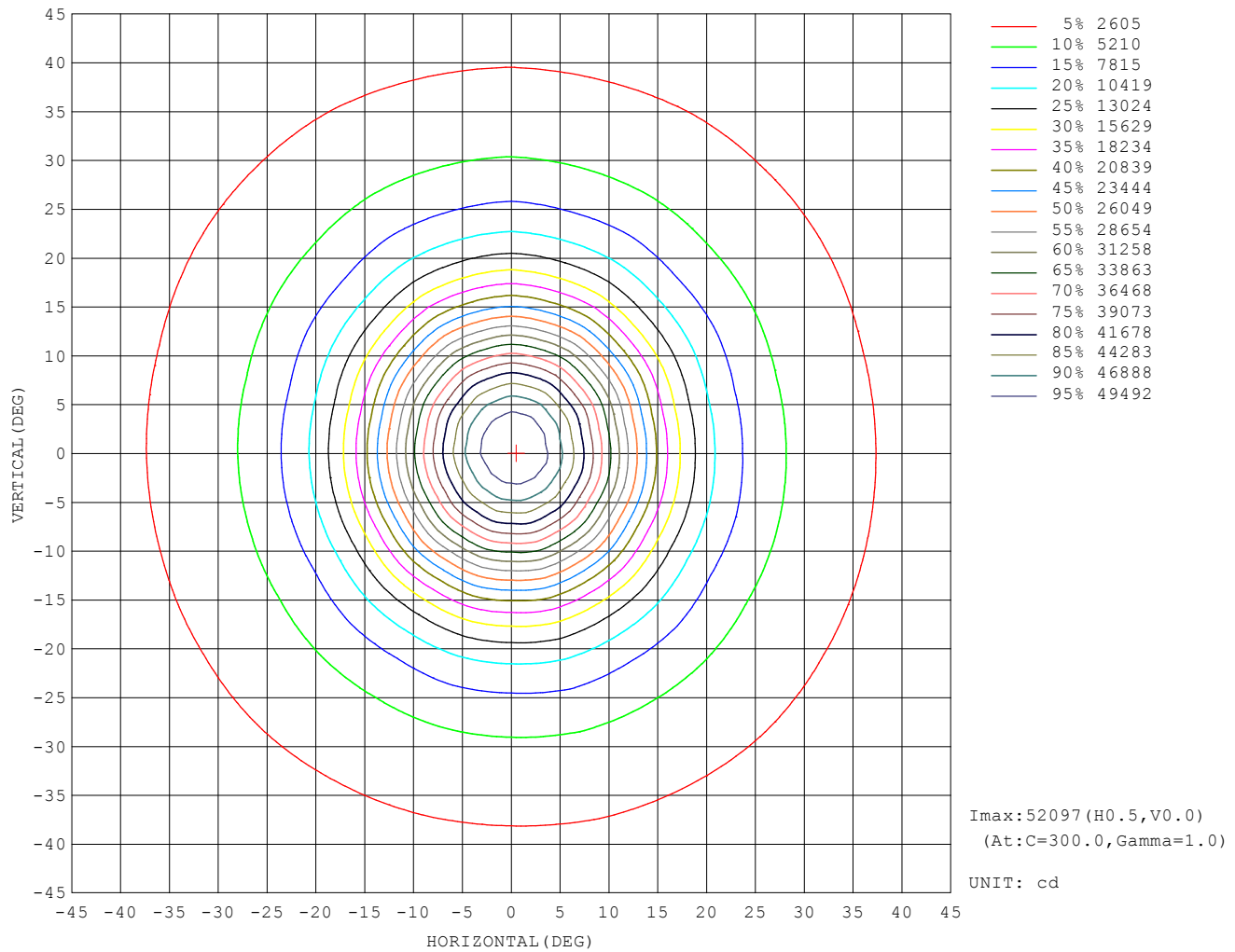
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	80	73	68	80	73	68	79	72	68	64
0.80	88	81	77	88	81	77	86	80	76	72
1.00	94	87	83	93	87	82	91	87	82	77
1.25	99	92	88	97	92	87	95	90	87	82
1.50	102	96	92	101	95	91	98	94	90	85
2.00	105	100	96	104	99	96	101	97	94	88
2.50	108	103	99	106	102	98	103	99	97	90
3.00	110	106	102	108	104	101	104	101	99	92
4.00	112	109	106	110	107	105	106	104	102	94
5.00	114	111	109	111	109	107	107	106	104	96
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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 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

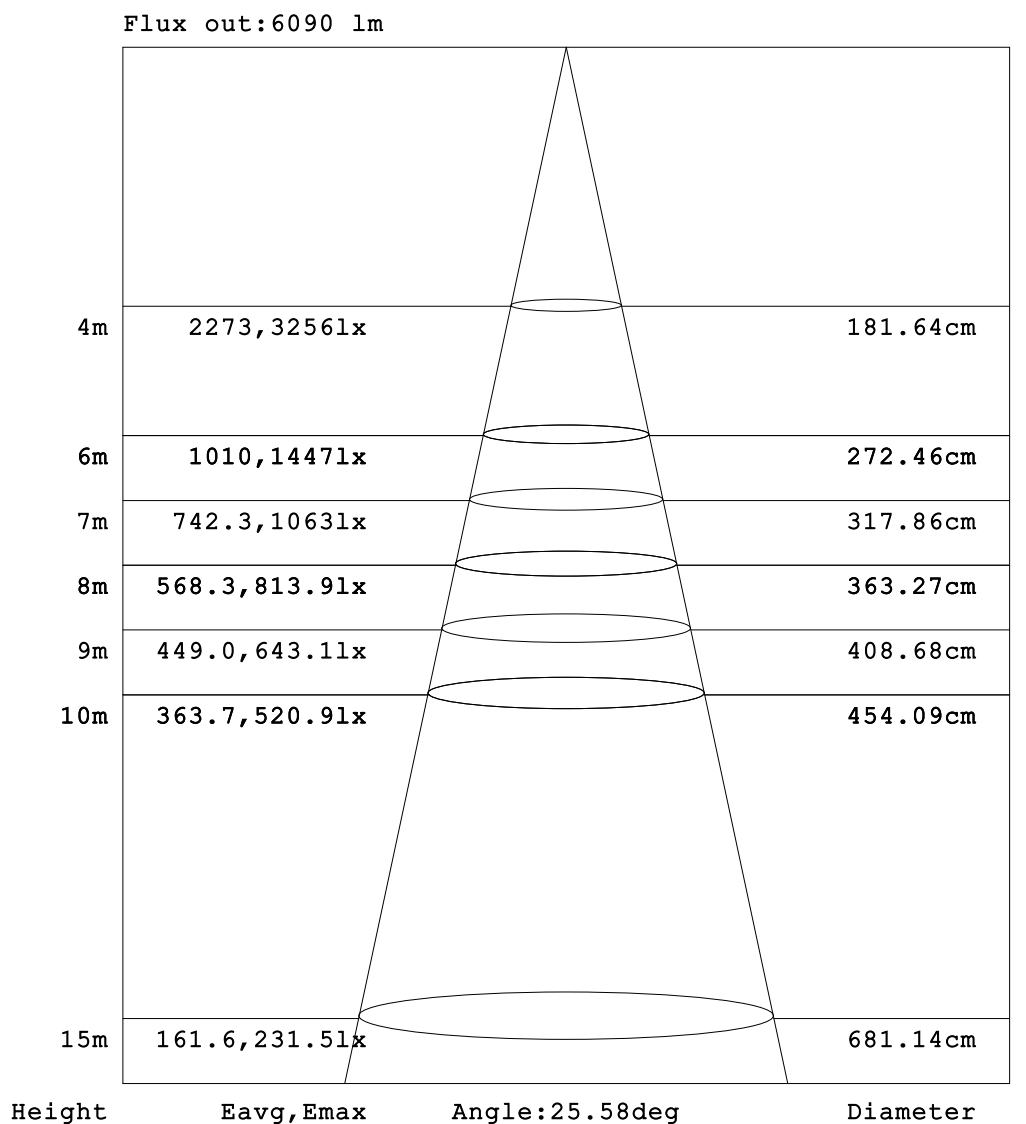
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2020-07-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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Humidity: 65.0%
Test Distance: 26.000m [K=0.4589]
Remarks:

AAI Figure



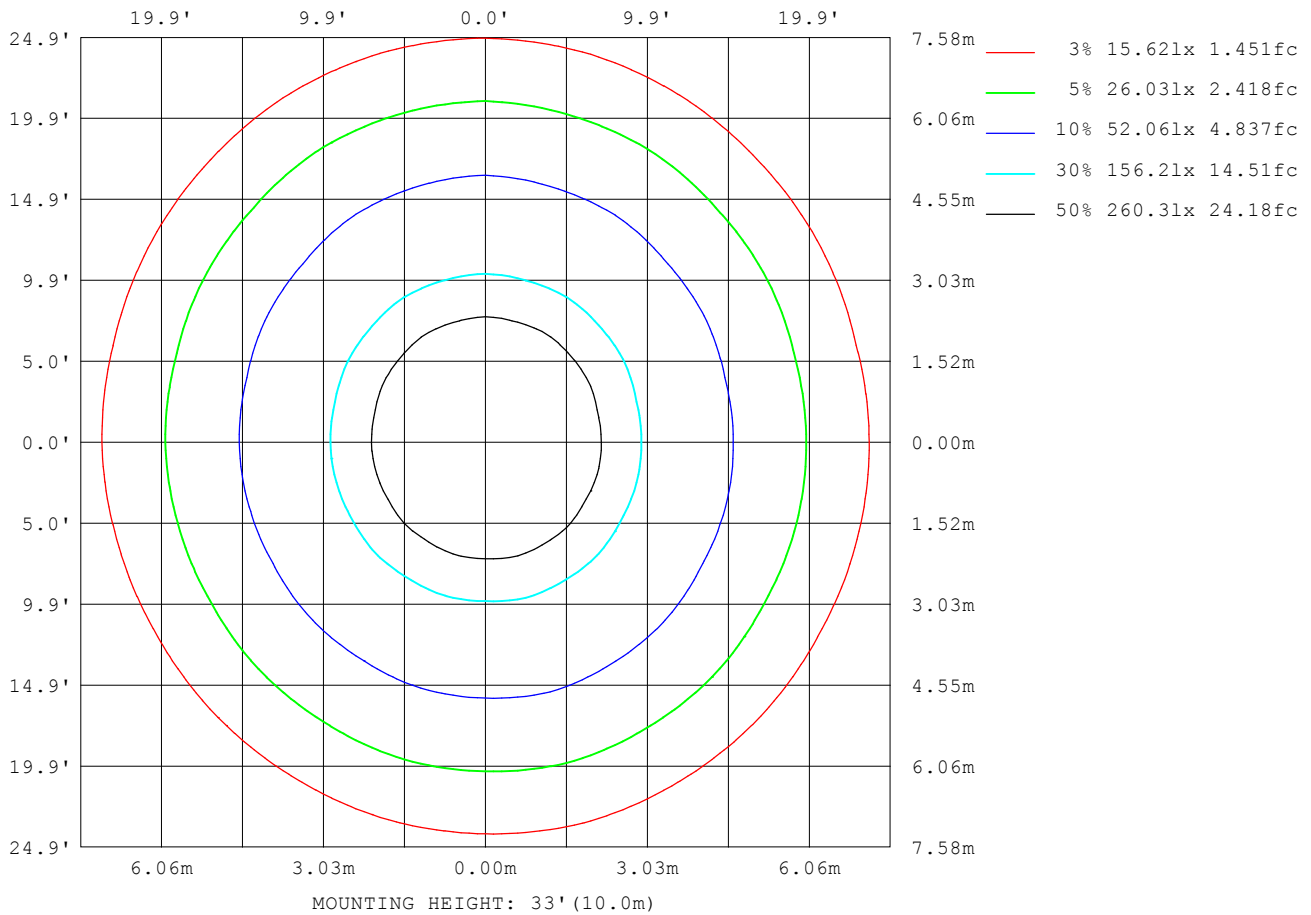
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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C Interval: 15.0DEG
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γ Range: 0 - 90DEG
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EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

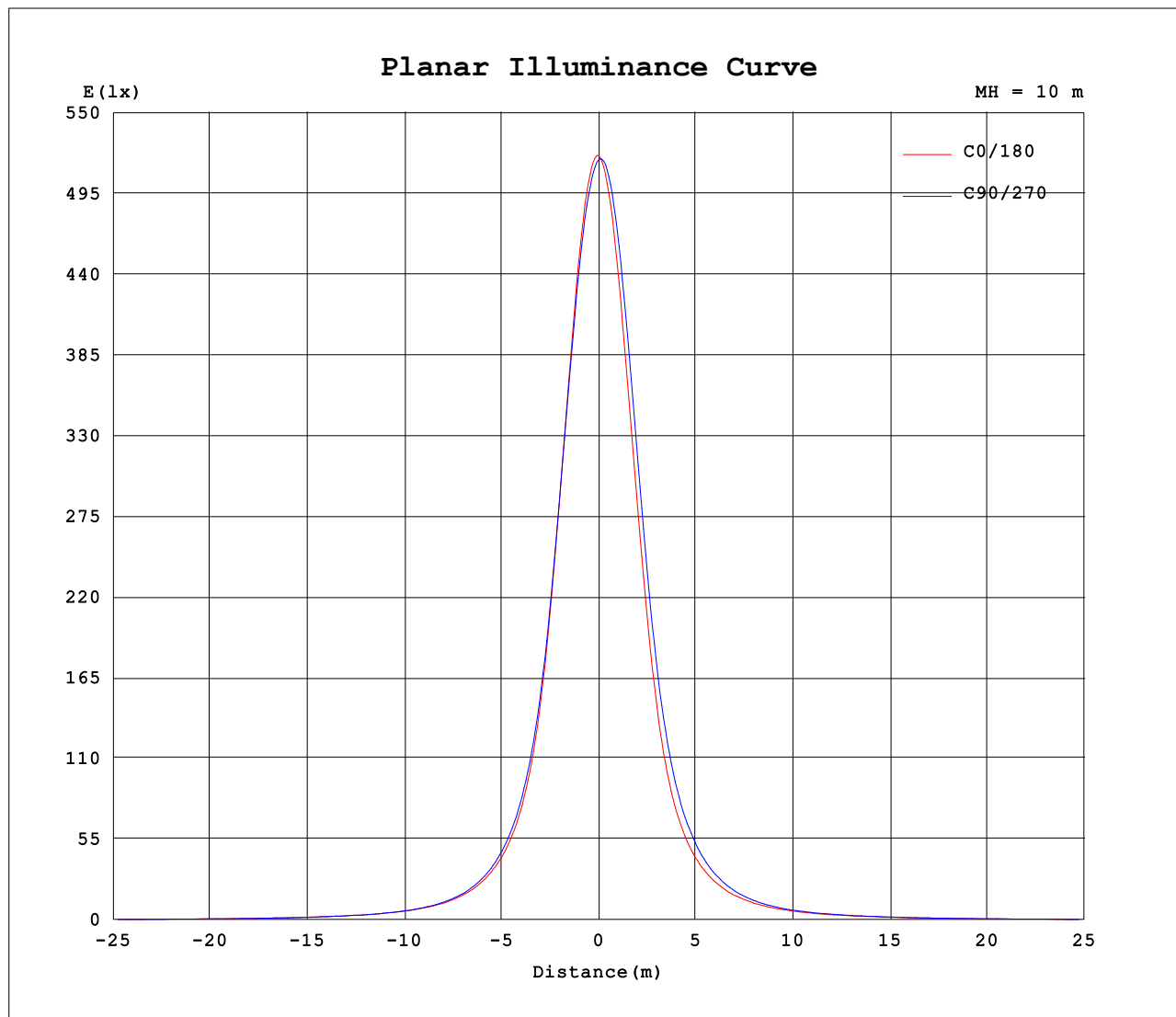
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2020-07-03

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
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Temperature: 25.3DEG
Operators: LYJ
Test Date: 2020-07-03

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: