

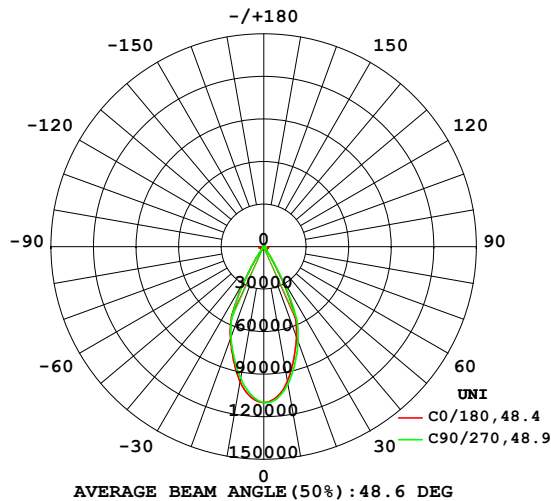
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

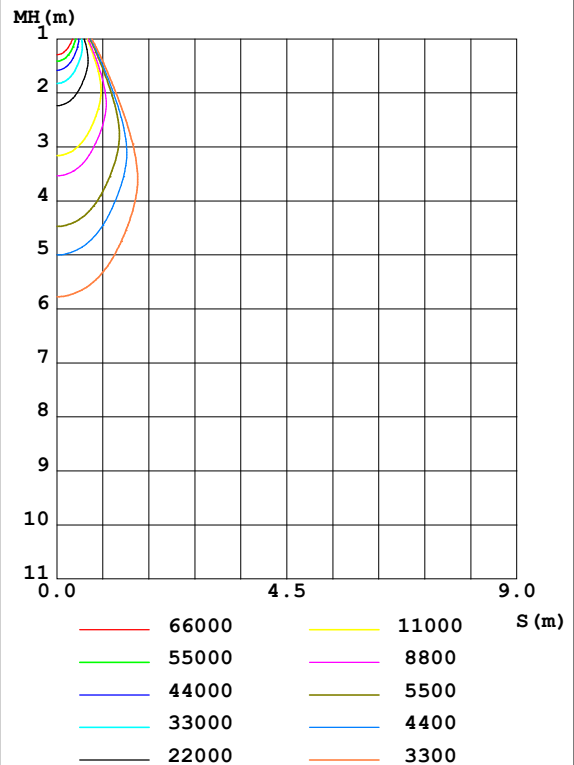
Test:U:230.00V I:1.7452A P:399.50W PF:0.9953 Freq:50.00Hz UTHDi:0% ITHDi:0% Lamp Flux:62409.9x1 lm		
NAME: LHB09-400-5070-L03901	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 156.22 lm/W			
MODEL	/	I _{max} (cd)	110076	S/MH (C0/180)	0.74
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH (C90/270)	0.74
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	62410	η UP,DN(C0-180)	0.0,50.5
NOMINAL FLUX(lm)	62409.9	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.5
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	230	η down (%)	100.0	CIBSE SHR MAX	0.75

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: 2021-03-01

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=0.4574]
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	963.9	985.3	984.0	988.9	967.2	951.4	942.4	955.0	0- 10	9844	9844	15.8,15.8
20	676.1	640.3	708.3	652.2	689.9	622.4	679.0	612.0	10- 20	22820	32664	52.3,52.3
30	206.2	227.6	241.2	247.7	245.1	242.9	245.8	222.5	20- 30	20614	53278	85.4,85.4
40	23.92	23.31	19.91	24.74	24.99	26.77	19.77	21.33	30- 40	5320	58598	93.9,93.9
50	16.14	10.13	10.83	10.11	16.56	10.08	10.56	9.365	40- 50	1012	59610	95.5,95.5
60	12.02	7.974	8.296	8.213	12.63	8.169	8.353	7.659	50- 60	774.5	60385	96.8,96.8
70	9.604	5.804	5.138	5.817	7.747	5.704	5.165	5.727	60- 70	632.7	61017	97.8,97.8
80	20.13	6.211	6.126	6.420	22.50	5.775	5.648	6.070	70- 80	809.9	61827	99.1,99.1
90	0.0316	0.0158	0.0176	0.1439	0.1573	0.7578	0.0965	0.0223	80- 90	582.7	62410	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:×100cd									UNIT:lm		

Conical surface Flux(90deg): 59171 lm

%lum = 94.8%

%lamp = 94.8%

Conical surface Flux(120deg): 60385 lm

%lum = 96.8%

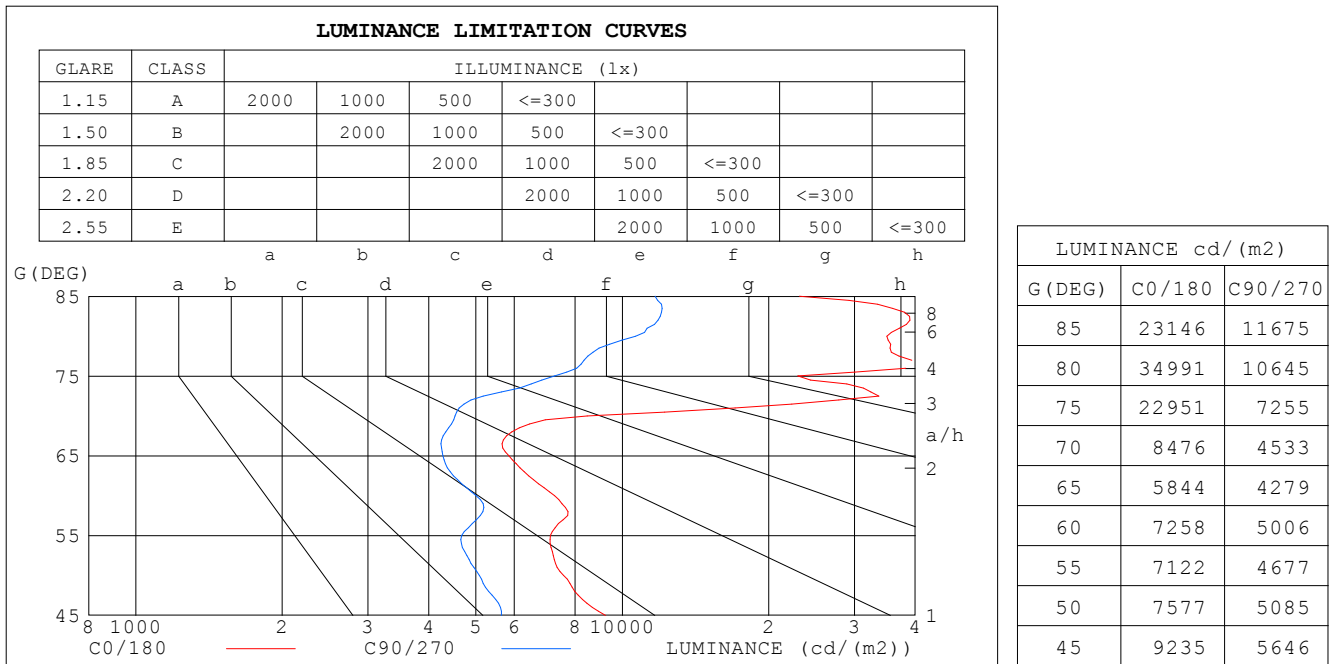
%lamp = 96.8%

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-03-01

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
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LUMINANCE LIMITATION CURVES



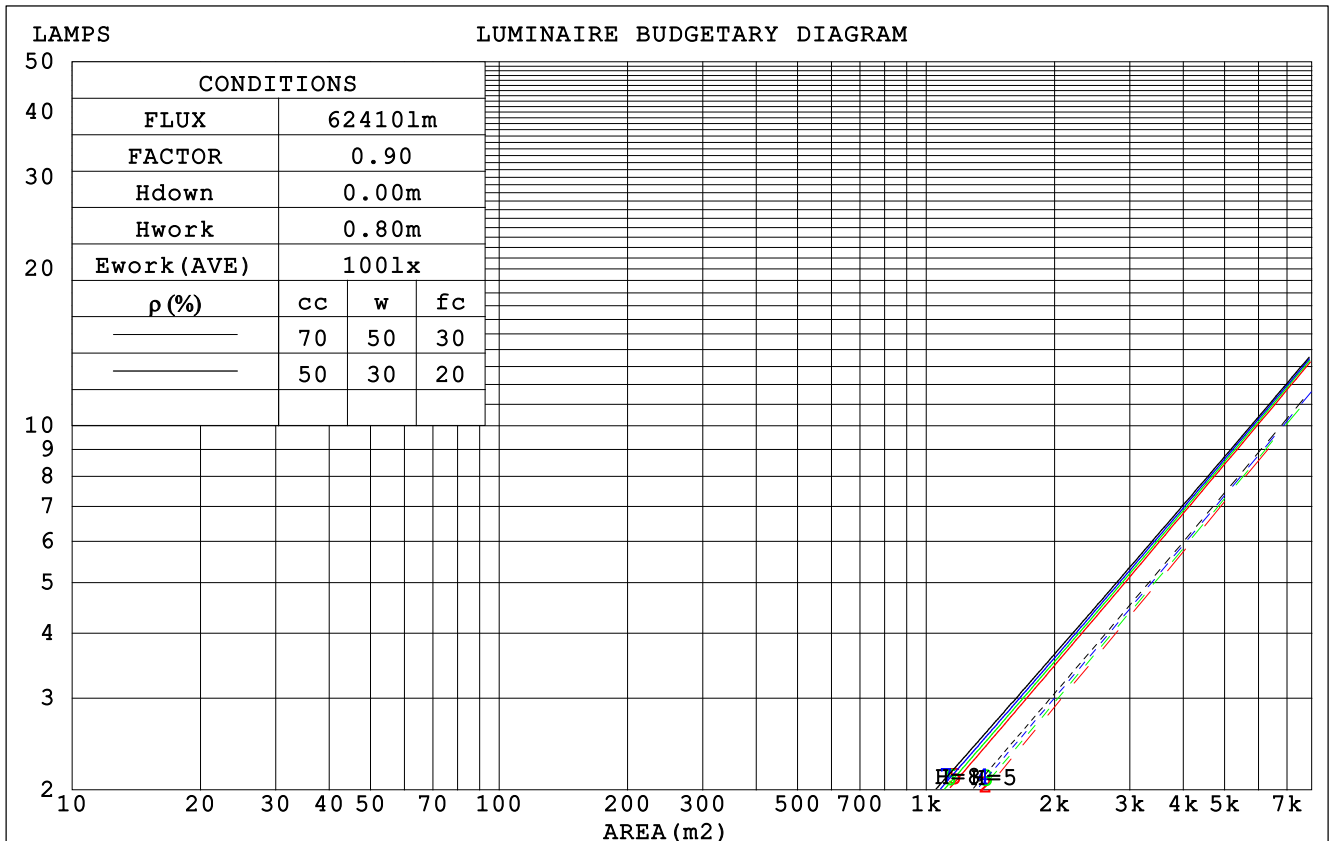
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 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2021-03-01

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=0.4574]
 Remarks:

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	1.11	1.08	1.06	1.08	1.06	1.04	1.04	1.03	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.04	.90	.96	1.02	.98	.95	.99	.96	.93	.96	.93	.91	.93	.91	.89	.88
3.0	.97	.93	.89	.96	.92	.88	.93	.90	.87	.91	.88	.86	.89	.86	.84	.83
4.0	.92	.87	.83	.91	.86	.82	.89	.85	.81	.87	.83	.81	.85	.82	.80	.78
5.0	.87	.82	.78	.86	.81	.77	.84	.80	.77	.83	.79	.76	.81	.78	.75	.74
6.0	.83	.77	.73	.82	.77	.73	.80	.76	.73	.79	.75	.72	.78	.74	.72	.70
7.0	.79	.73	.69	.78	.73	.69	.77	.72	.69	.76	.72	.69	.75	.71	.68	.67
8.0	.75	.70	.66	.74	.69	.66	.73	.69	.66	.72	.68	.65	.72	.68	.65	.64
9.0	.72	.66	.63	.71	.66	.63	.70	.66	.62	.69	.65	.62	.69	.65	.62	.61
10.0	.69	.63	.60	.68	.63	.60	.67	.63	.60	.67	.62	.59	.66	.62	.59	.58



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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=0.4574]
 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	.180	.102	.032	.173	.099	.031	.161	.092	.029	.149	.086	.028	.138	.080	.026															
2.0	.166	.091	.028	.160	.088	.027	.150	.083	.026	.140	.078	.025	.131	.074	.023															
3.0	.154	.082	.025	.150	.080	.024	.141	.076	.023	.132	.072	.022	.125	.069	.021															
4.0	.145	.075	.022	.141	.074	.022	.133	.070	.021	.126	.068	.020	.119	.065	.020															
5.0	.136	.069	.020	.133	.068	.020	.126	.066	.019	.120	.063	.019	.114	.061	.018															
6.0	.129	.065	.019	.126	.064	.018	.120	.062	.018	.115	.060	.018	.110	.058	.017															
7.0	.123	.061	.017	.120	.060	.017	.115	.058	.017	.110	.057	.016	.106	.055	.016															
8.0	.117	.057	.016	.115	.056	.016	.110	.055	.016	.106	.054	.015	.102	.052	.015															
9.0	.112	.054	.015	.110	.054	.015	.106	.052	.015	.102	.051	.015	.098	.050	.014															
10.0	.107	.051	.014	.105	.051	.014	.102	.050	.014	.098	.049	.014	.095	.048	.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	.171	.157	.145	.147	.135	.124	.100	.093	.086	.058	.054	.050	.018	.017	.016		
2.0	.155	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013		
3.0	.142	.114	.091	.122	.098	.079	.084	.068	.055	.048	.040	.032	.016	.013	.011		
4.0	.131	.099	.074	.112	.085	.064	.077	.059	.045	.045	.035	.027	.014	.011	.009		
5.0	.122	.087	.061	.104	.075	.053	.072	.052	.038	.042	.031	.022	.013	.010	.007		
6.0	.114	.077	.051	.098	.067	.045	.067	.047	.032	.039	.028	.019	.013	.009	.006		
7.0	.107	.070	.044	.092	.060	.038	.063	.042	.027	.037	.025	.016	.012	.008	.005		
8.0	.101	.063	.037	.087	.055	.033	.060	.038	.023	.035	.023	.014	.011	.007	.005		
9.0	.095	.058	.033	.082	.050	.028	.057	.035	.020	.033	.021	.012	.011	.007	.004		
10.0	.091	.053	.029	.078	.046	.025	.054	.033	.018	.032	.019	.011	.010	.006	.003		

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYJ
 Test Date:2021-03-01

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=0.4574]
 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	9.2	10.2	9.6	10.5	10.8	7.9	8.9	8.3	9.2	9.5
3H	11.8	12.7	12.2	13.0	13.4	10.3	11.1	10.6	11.5	11.8
4H	15.9	16.7	16.3	17.0	17.4	12.1	12.9	12.5	13.2	13.6
6H	20.8	21.5	21.2	21.9	22.3	14.6	15.3	15.0	15.7	16.1
8H	22.2	22.9	22.7	23.3	23.7	15.6	16.3	16.1	16.7	17.1
12H	23.0	23.7	23.4	24.0	24.5	16.3	17.0	16.8	17.4	17.8
4H 2H	9.9	10.7	10.3	11.0	11.4	9.0	9.8	9.4	10.1	10.5
3H	12.6	13.2	13.0	13.6	14.0	11.5	12.2	11.9	12.6	13.0
4H	16.3	16.9	16.8	17.4	17.8	13.6	14.2	14.1	14.7	15.1
6H	21.4	21.9	21.8	22.3	22.8	16.2	16.7	16.7	17.2	17.7
8H	23.0	23.5	23.5	23.9	24.4	17.3	17.8	17.8	18.2	18.7
12H	24.0	24.4	24.5	24.9	25.4	18.1	18.5	18.6	19.0	19.5
8H 4H	16.8	17.3	17.3	17.7	18.2	14.7	15.2	15.2	15.6	16.1
6H	21.6	22.0	22.1	22.5	23.0	17.4	17.8	17.9	18.3	18.8
8H	23.4	23.7	23.9	24.2	24.7	18.6	19.0	19.2	19.5	20.0
12H	24.7	25.0	25.3	25.5	26.1	19.7	20.0	20.2	20.5	21.1
12H 4H	16.9	17.3	17.4	17.8	18.3	15.0	15.4	15.5	15.9	16.4
6H	21.7	22.0	22.2	22.5	23.0	17.7	18.1	18.3	18.6	19.1
8H	23.5	23.8	24.0	24.3	24.8	19.2	19.5	19.7	20.0	20.5
CIE190: 2010										

CIE190: 2010
Area: 0.3315 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=0.4574]
Remarks:

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UTILIZATION FACTORS TABLE

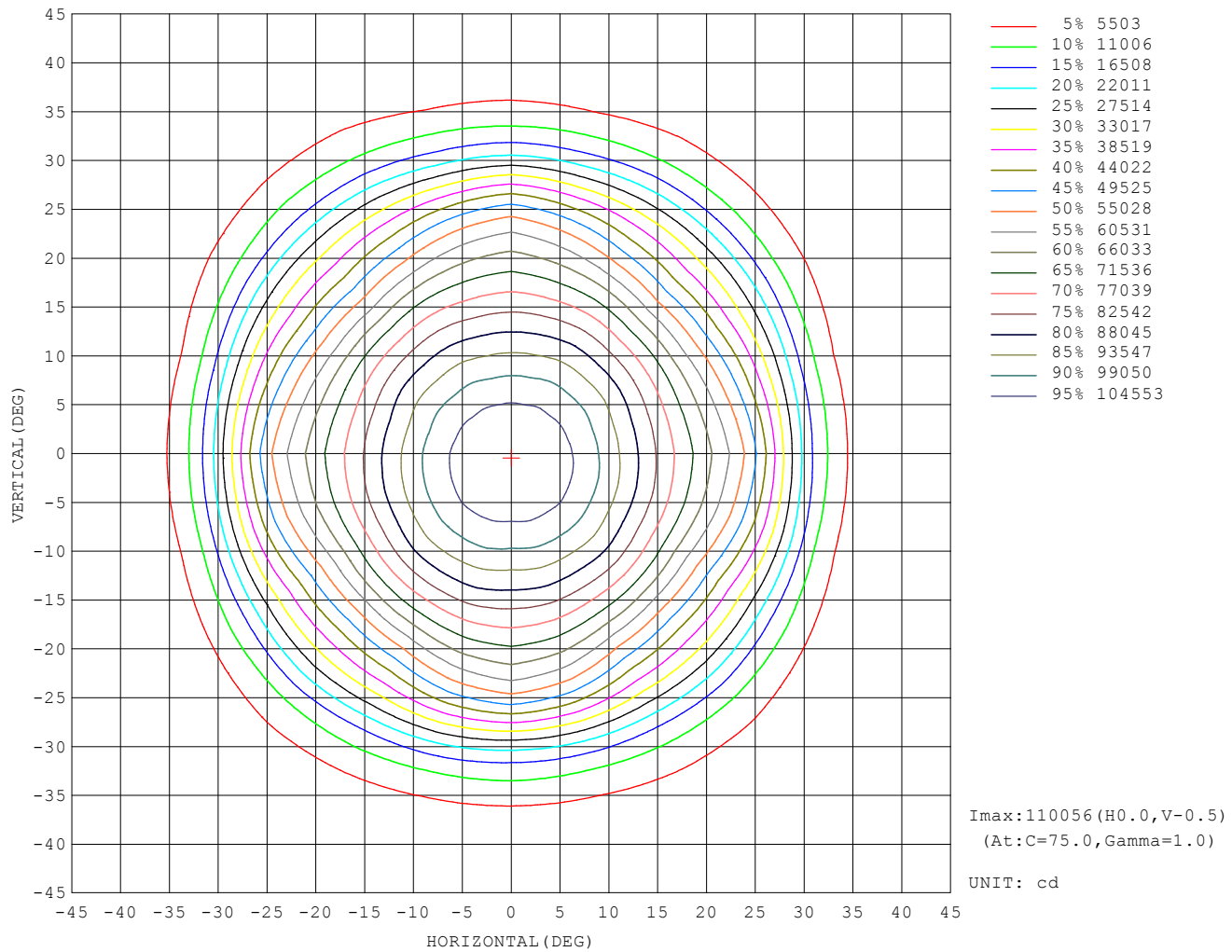
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	88	82	78	87	82	78	87	81	78	74
0.80	95	89	86	94	89	85	93	88	85	81
1.00	99	93	90	98	93	90	97	93	89	85
1.25	103	98	94	102	97	94	100	96	93	89
1.50	105	101	97	104	100	97	102	98	96	91
2.00	108	104	100	107	103	100	104	101	98	93
2.50	110	106	103	108	104	102	105	102	100	94
3.00	111	108	105	109	106	104	106	104	102	95
4.00	113	110	108	111	109	107	108	106	104	97
5.00	115	112	110	113	110	109	109	107	106	98
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=0.4574]
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EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

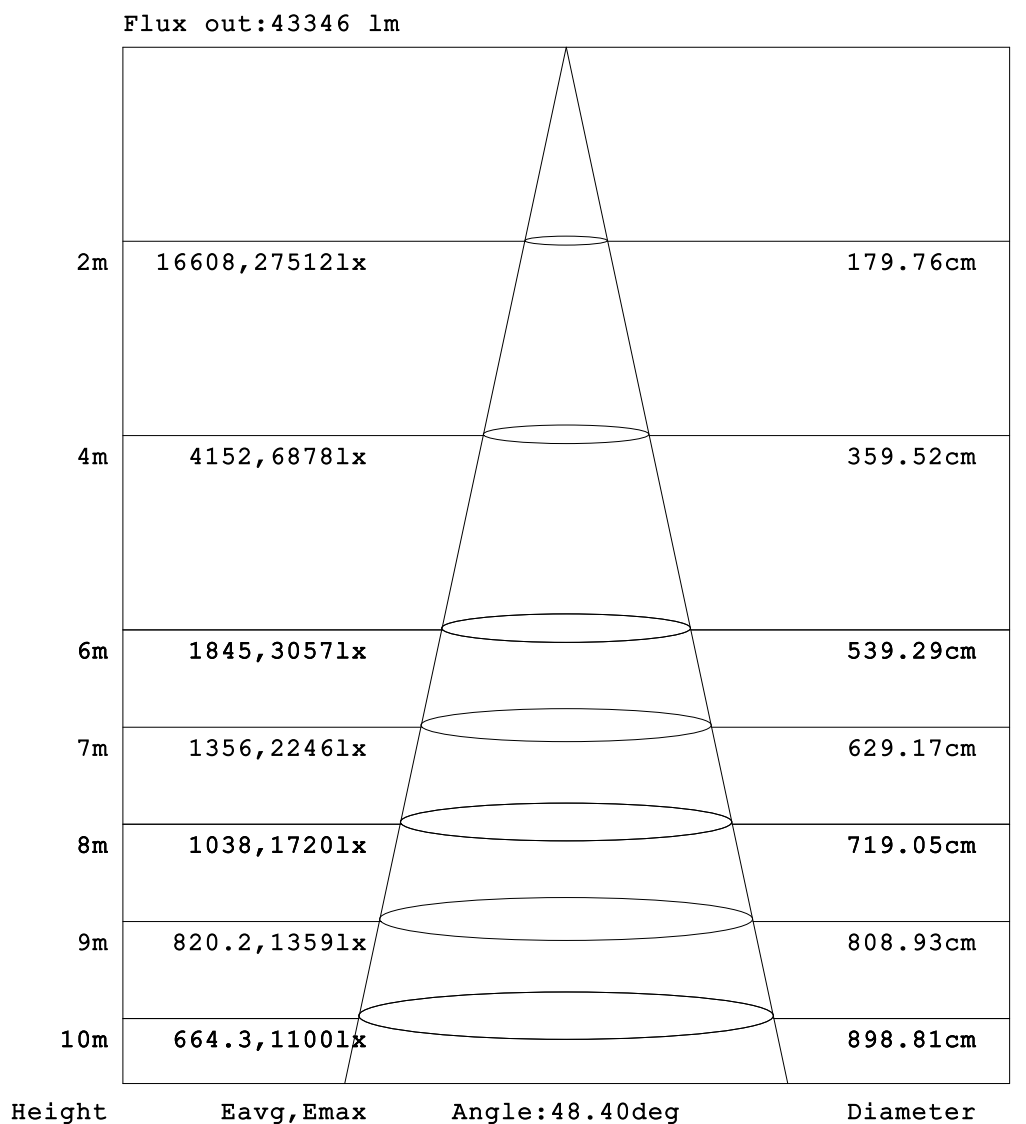
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
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Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-03-01

γ Range: 0 - 90DEG
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Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
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Test Distance:26.000m [K=0.4574]
Remarks:

AAI Figure



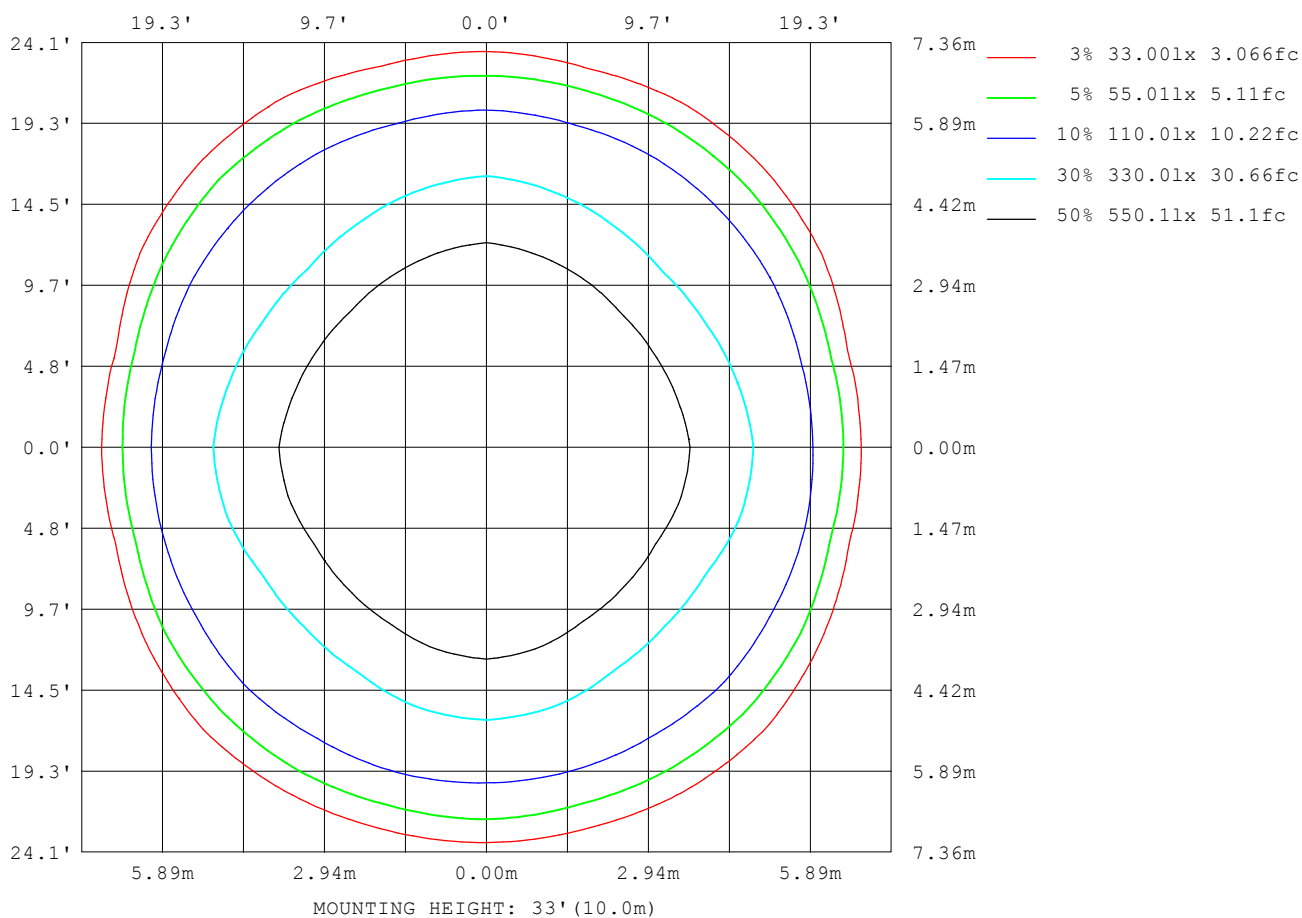
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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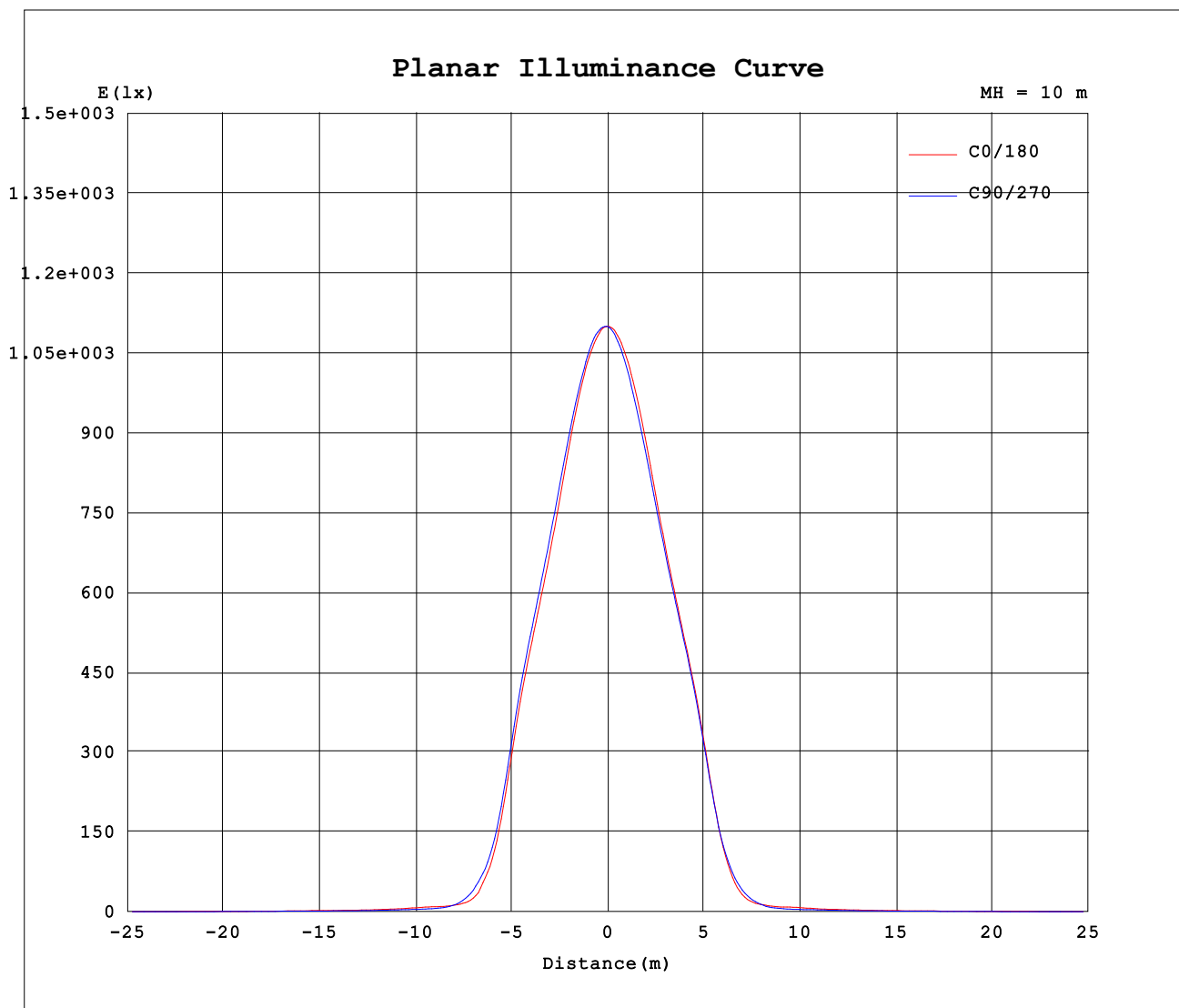
ISOLUX DIAGRAM



C Range: 0 - 360DEG
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Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-03-01

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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Humidity: 65.0%
Test Distance: 26.000m [K=0.4574]
Remarks:

Planar Illuminance Curve



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Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-03-01

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=0.4574]
Remarks: