

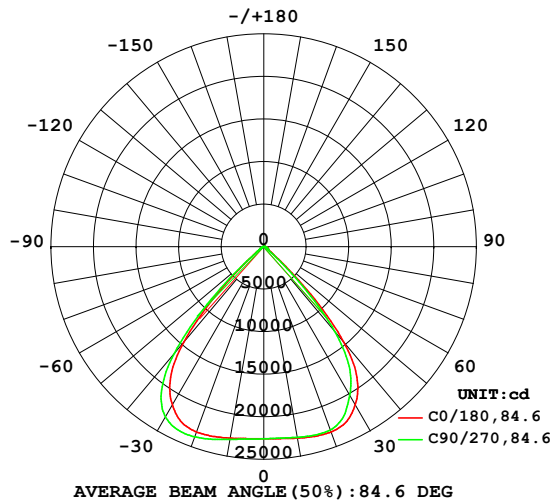
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

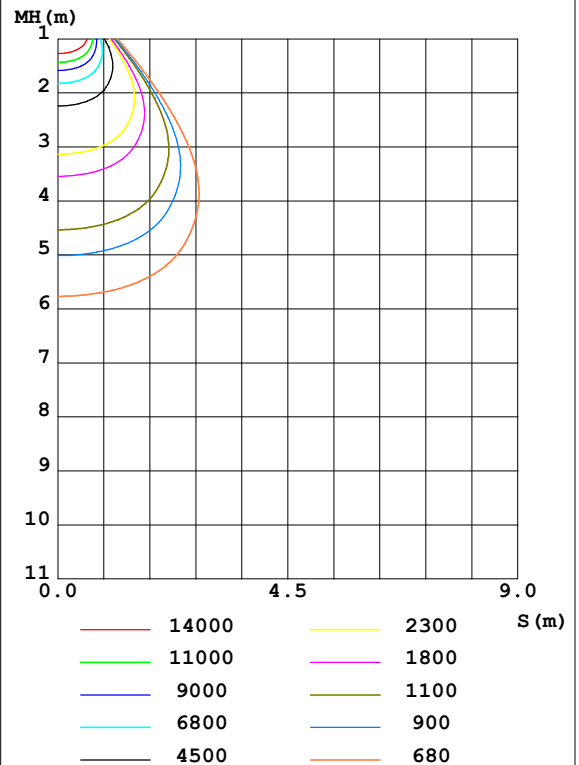
Test:U:119.2V I:2.0237A P:241.03W PF:0.9992 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:38127.2x1 lm		
NAME: HA04-240-5770-F01606	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 158.18 lm/W			
MODEL	/	I _{max} (cd)	23852	S/MH(C0/180)	1.23
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	38127	η UP,DN(C0-180)	0.0,48.1
NOMINAL FLUX(lm)	38127.2	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.9
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	120	η down(%)	100.0	CIBSE SHR MAX	1.25

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:2021-11-29

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.4536]
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	2285	2276	2275	2276	2285	2296	2300	2296	0- 10	2169	2169	5.69,5.69
20	2317	2299	2292	2299	2317	2356	2378	2356	10- 20	6557	8726	22.9,22.9
30	2150	2143	2022	2143	2150	2269	2311	2269	20- 30	10540	19266	50.5,50.5
40	1459	1311	1297	1311	1459	1527	1635	1527	30- 40	11795	31061	81.5,81.5
50	193.4	202.4	154.6	202.4	193.4	250.4	219.9	250.4	40- 50	5745	36806	96.5,96.5
60	48.71	40.91	42.23	40.91	48.71	46.12	51.04	46.12	50- 60	759.1	37565	98.5,98.5
70	29.41	22.27	23.40	22.27	29.41	26.66	29.78	26.66	60- 70	342.6	37908	99.4,99.4
80	10.28	7.055	5.801	7.055	10.28	9.806	10.31	9.806	70- 80	179.2	38087	99.9,99.9
90	0.0422	0.0337	0.0337	0.0337	0.0422	0.0833	0.0959	0.0833	80- 90	40.07	38127	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): 35088 lm

%lum = 92.0%

%lamp = 92.0%

Conical surface Flux(120deg): 37565 lm

%lum = 98.5%

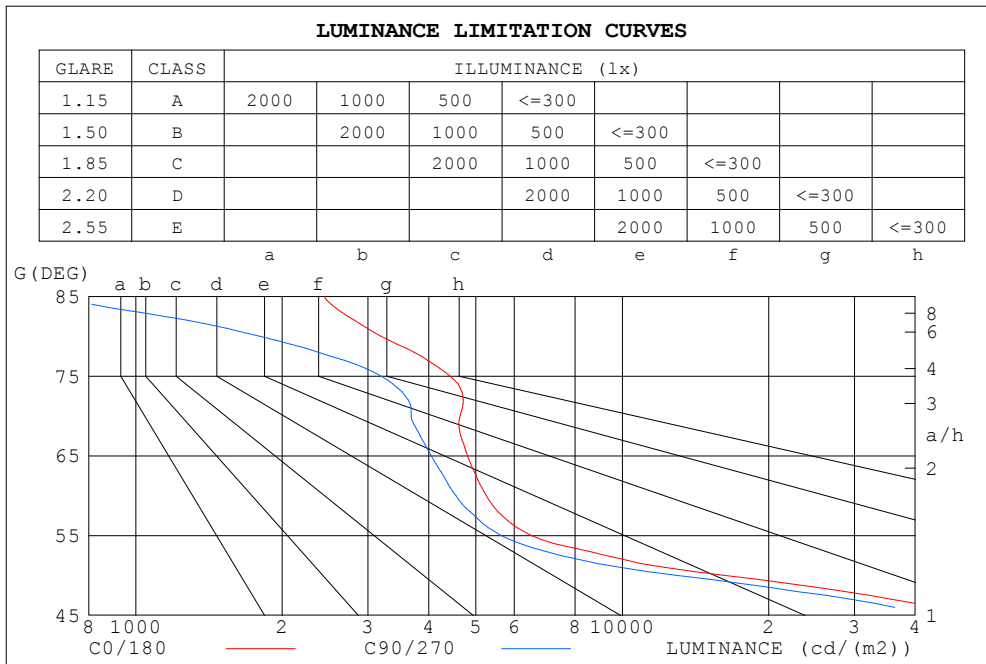
%lamp = 98.5%

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Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
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LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	2443	703
80	3195	1799
75	4429	3199
70	4639	3684
65	4810	4052
60	5256	4548
55	6515	5648
50	16231	12954
45	54424	45076

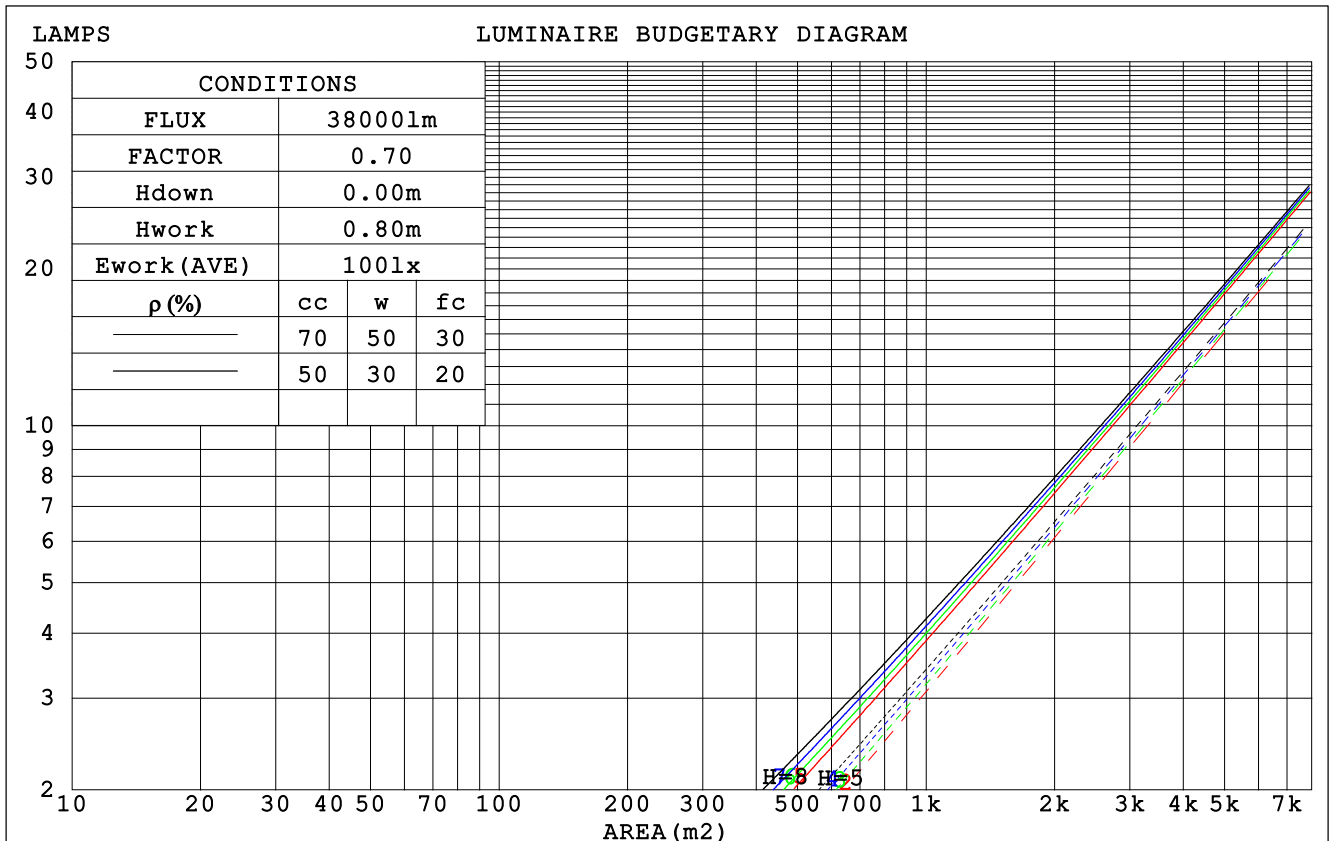
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 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2021-11-29

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 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4536]
 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	1.09	1.07	1.04	1.07	1.05	1.02	1.03	1.01	.99	.99	.98	.96	.96	.95	.94	.92
2.0	1.00	.96	.92	.99	.94	.91	.95	.92	.89	.92	.89	.87	.89	.87	.85	.83
3.0	.92	.86	.82	.91	.85	.81	.88	.83	.80	.85	.82	.79	.83	.80	.77	.76
4.0	.85	.78	.73	.83	.78	.73	.81	.76	.72	.79	.75	.71	.77	.73	.70	.69
5.0	.78	.71	.66	.77	.71	.66	.75	.70	.65	.73	.68	.65	.72	.67	.64	.62
6.0	.72	.65	.60	.71	.65	.60	.69	.64	.59	.68	.63	.59	.67	.62	.59	.57
7.0	.67	.60	.55	.66	.59	.55	.64	.59	.54	.63	.58	.54	.62	.57	.54	.52
8.0	.62	.55	.50	.61	.54	.50	.60	.54	.50	.59	.53	.49	.58	.53	.49	.48
9.0	.57	.51	.46	.57	.50	.46	.56	.50	.46	.55	.49	.45	.54	.49	.45	.44
10.0	.53	.47	.42	.53	.47	.42	.52	.46	.42	.51	.46	.42	.50	.45	.42	.40



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γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4536]
 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	.202	.115	.036	.196	.112	.035	.183	.105	.034	.171	.099	.032	.160	.093	.030	
2.0	.196	.108	.033	.191	.105	.032	.180	.100	.031	.170	.095	.030	.161	.091	.029	
3.0	.188	.100	.030	.183	.098	.030	.174	.094	.029	.165	.091	.028	.157	.087	.027	
4.0	.180	.094	.027	.176	.092	.027	.167	.089	.027	.160	.086	.026	.153	.083	.025	
5.0	.172	.088	.025	.168	.086	.025	.161	.084	.025	.154	.081	.024	.148	.079	.024	
6.0	.164	.082	.024	.161	.081	.023	.154	.079	.023	.148	.077	.023	.143	.075	.022	
7.0	.156	.077	.022	.153	.076	.022	.148	.075	.022	.142	.073	.021	.137	.071	.021	
8.0	.149	.073	.021	.147	.072	.020	.142	.071	.020	.137	.069	.020	.132	.068	.020	
9.0	.143	.069	.019	.140	.068	.019	.136	.067	.019	.131	.066	.019	.127	.065	.019	
10.0	.137	.066	.018	.134	.065	.018	.130	.064	.018	.126	.063	.018	.123	.062	.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	.173	.157	.143	.148	.135	.123	.101	.093	.085	.058	.054	.049	.019	.017	.016	
2.0	.160	.132	.110	.137	.114	.095	.094	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.149	.114	.086	.128	.098	.074	.088	.068	.052	.051	.040	.031	.016	.013	.010	
4.0	.140	.099	.069	.120	.086	.060	.082	.060	.042	.048	.035	.025	.015	.011	.008	
5.0	.132	.088	.056	.113	.076	.049	.078	.053	.034	.045	.031	.020	.015	.010	.007	
6.0	.125	.079	.046	.108	.069	.040	.074	.048	.029	.043	.028	.017	.014	.009	.006	
7.0	.119	.072	.039	.103	.063	.034	.071	.044	.024	.041	.026	.014	.013	.008	.005	
8.0	.114	.066	.033	.098	.057	.029	.068	.040	.021	.040	.024	.012	.013	.008	.004	
9.0	.109	.061	.029	.094	.053	.025	.065	.037	.018	.038	.022	.011	.012	.007	.004	
10.0	.104	.057	.025	.090	.049	.022	.062	.035	.016	.036	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYJ
 Test Date:2021-11-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:26.000m [K=0.4536]
 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	9.6	10.7	9.9	11.0	11.3	9.0	10.1	9.3	10.4	10.7
3H	11.2	12.2	11.6	12.5	12.9	10.4	11.4	10.8	11.7	12.1
4H	11.8	12.7	12.2	13.1	13.5	10.9	11.8	11.3	12.1	12.5
6H	12.2	13.0	12.6	13.4	13.8	11.0	11.9	11.5	12.2	12.6
8H	12.3	13.1	12.7	13.5	13.9	11.0	11.8	11.5	12.2	12.6
12H	12.3	13.1	12.7	13.4	13.9	11.0	11.7	11.4	12.1	12.6
4H 2H	9.9	10.8	10.3	11.2	11.5	9.4	10.3	9.8	10.7	11.1
3H	11.7	12.4	12.1	12.8	13.2	11.0	11.7	11.4	12.1	12.5
4H	12.4	13.1	12.8	13.5	13.9	11.5	12.2	12.0	12.6	13.0
6H	12.9	13.4	13.3	13.9	14.3	11.8	12.3	12.2	12.8	13.2
8H	13.0	13.5	13.4	13.9	14.4	11.7	12.3	12.2	12.7	13.2
12H	13.0	13.5	13.5	14.0	14.5	11.7	12.2	12.2	12.7	13.1
8H 4H	12.5	13.0	12.9	13.4	13.9	11.7	12.2	12.1	12.6	13.1
6H	13.0	13.4	13.5	13.9	14.4	11.9	12.4	12.4	12.9	13.3
8H	13.1	13.5	13.7	14.0	14.5	11.9	12.3	12.5	12.9	13.3
12H	13.3	13.6	13.8	14.1	14.7	11.9	12.3	12.4	12.8	13.3
12H 4H	12.4	12.9	12.9	13.4	13.9	11.6	12.1	12.1	12.6	13.1
6H	13.0	13.3	13.5	13.8	14.4	11.9	12.3	12.5	12.8	13.3
8H	13.1	13.5	13.7	14.0	14.5	12.0	12.3	12.5	12.8	13.4
CIE190: 2010										

CIE190: 2010
Area: 0.18564 m2

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γ Range: 0 - 90DEG
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Humidity:65.0%
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Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

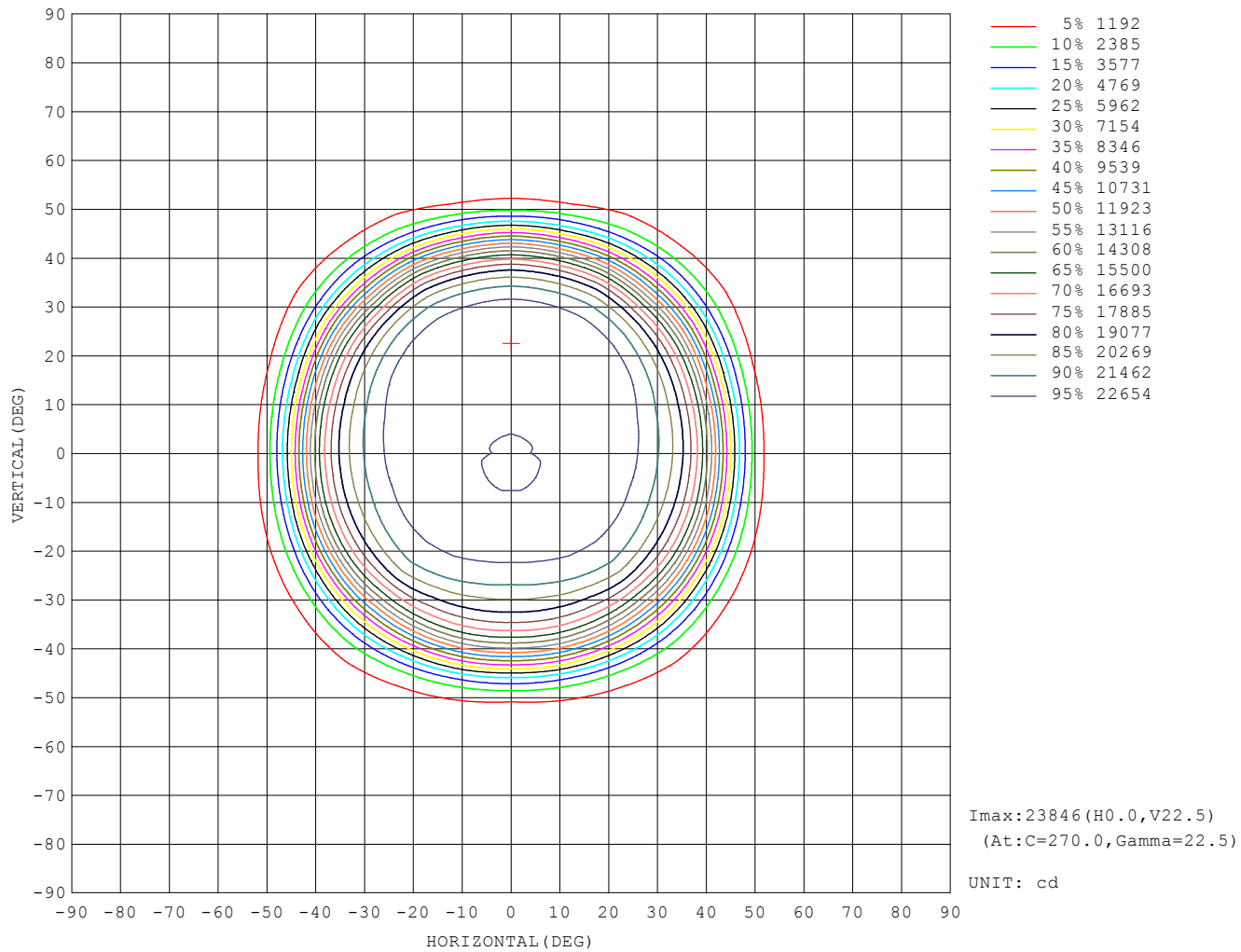
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	80	72	68	79	72	68	78	72	67	63
0.80	89	81	77	88	81	77	86	80	76	72
1.00	95	88	83	94	87	83	92	88	83	78
1.25	99	93	89	98	93	89	96	91	88	83
1.50	103	97	93	101	96	93	99	95	92	87
2.00	106	102	98	105	100	97	102	98	96	90
2.50	108	104	100	107	103	100	103	100	98	91
3.00	110	106	103	108	105	102	105	102	100	93
4.00	112	109	107	110	108	105	107	104	102	95
5.00	114	111	109	112	109	107	108	106	104	96
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4536]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

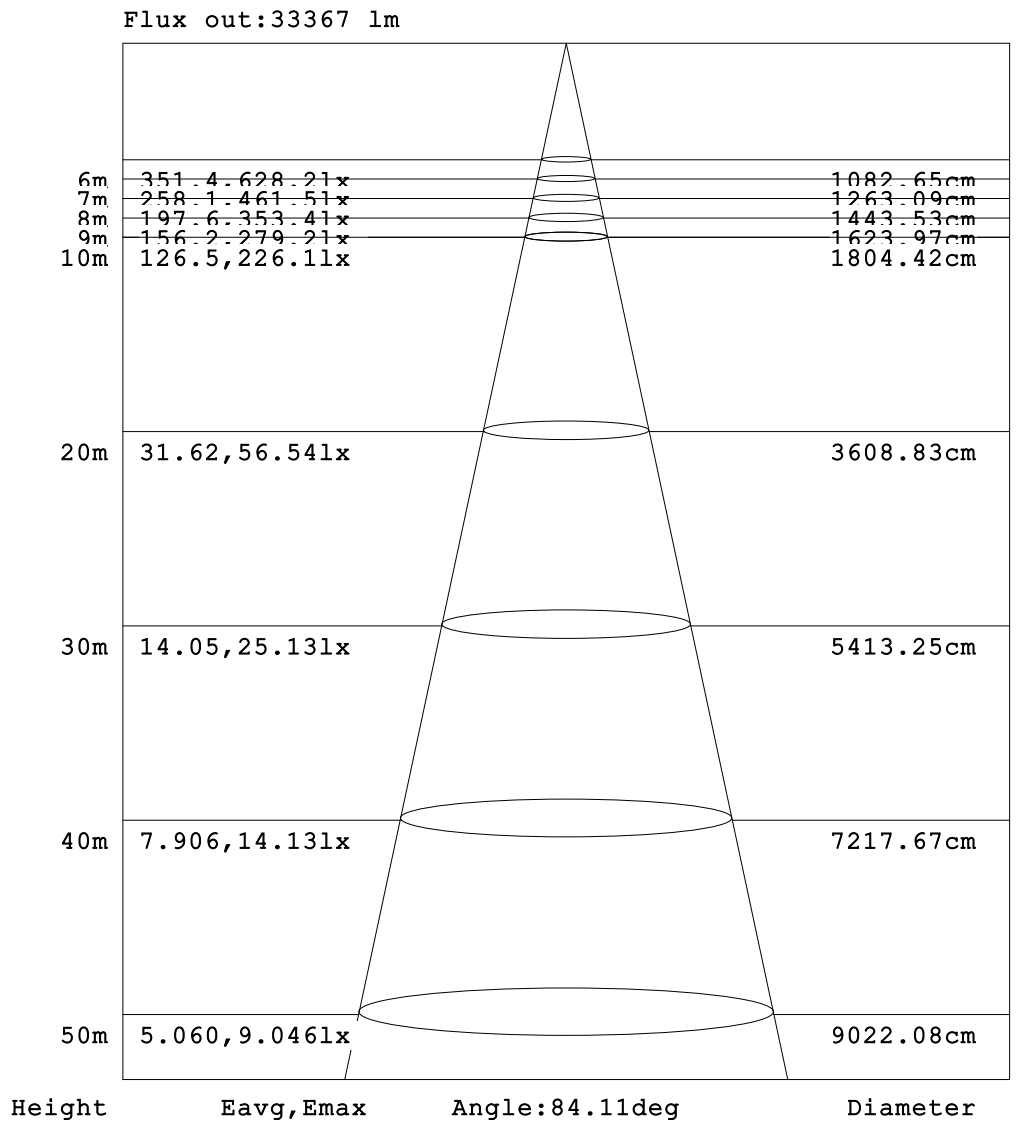
ISOCANDELA DIAGRAM



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Remarks:

AAI Figure



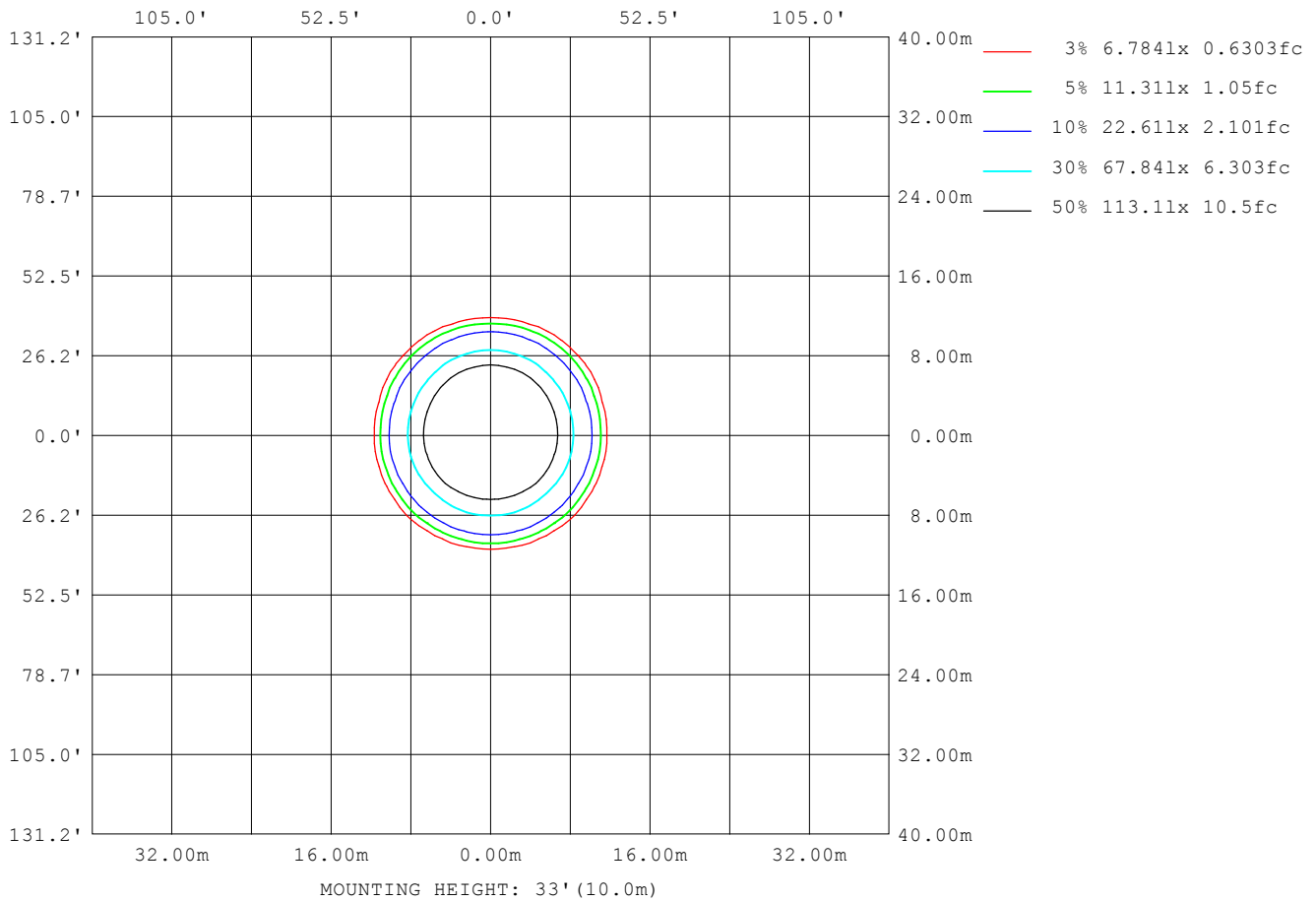
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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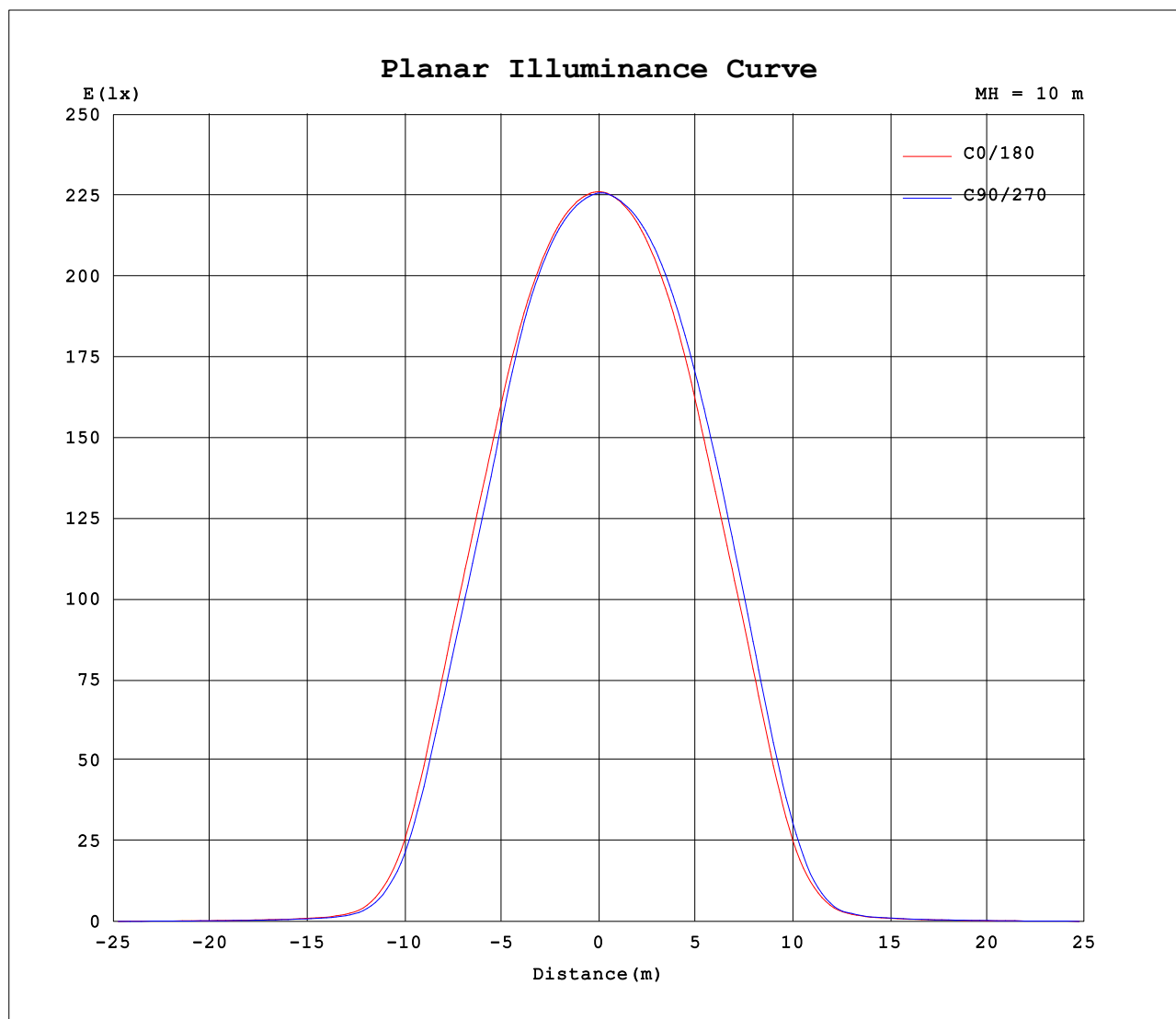
ISOLUX DIAGRAM



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Operators: LYJ
Test Date: 2021-11-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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Humidity: 65.0%
Test Distance: 26.000m [K=0.4536]
Remarks:

Planar Illuminance Curve



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 γ Interval: 0.5DEG
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Test Distance: 26.000m [K=0.4536]
Remarks: