

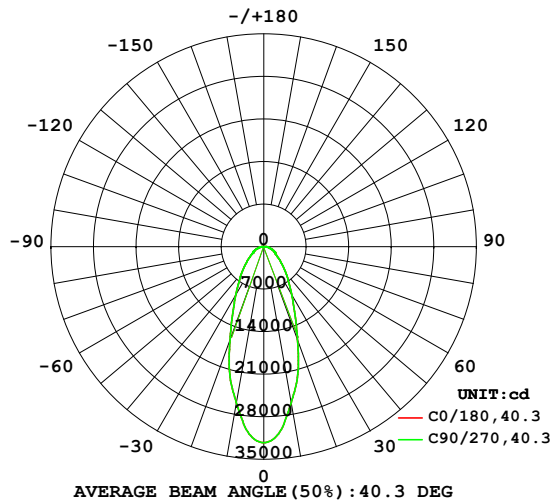
## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

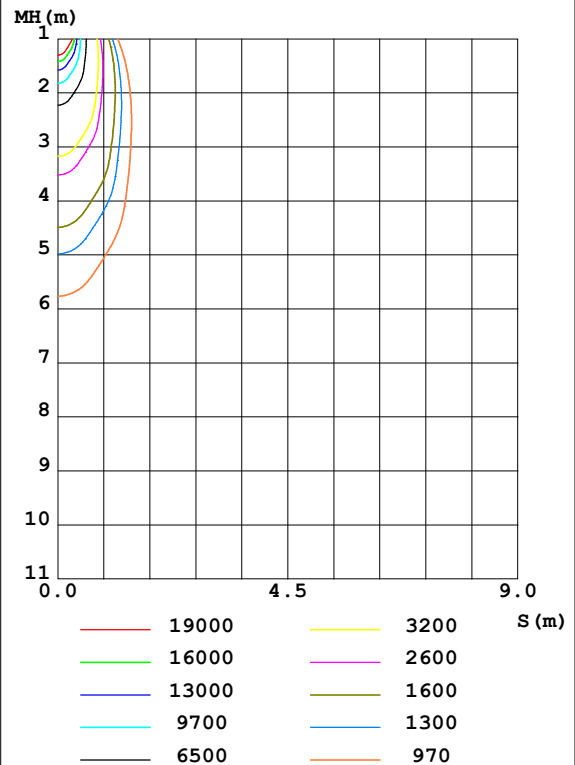
Test:U:229.8V I:0.8658A P:195.96W PF:0.9850 Freq:50.00Hz Lamp Flux:28088.8x1 lm		
NAME: HB44-200-5080-H00121	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 143.34 lm/W			
MODEL	/	I <sub>max</sub> (cd)	32251	S/MH(C0/180)	0.64
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	0.64
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	28089	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	28088.8	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	/	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: 2.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2020-07-25

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:9.470m [K=1.0000]  
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	2607	2607	2607	2607	2607	2607	2607	2607	0- 10	2763	2763	9.84,9.84
20	1628	1628	1628	1628	1628	1628	1628	1628	10- 20	5940	8703	31,31
30	933.2	933.2	933.2	933.2	933.2	933.2	933.2	933.2	20- 30	5626	14329	51,51
40	567.1	567.1	567.1	567.1	567.1	567.1	567.1	567.1	30- 40	4554	18884	67.2,67.2
50	344.6	344.6	344.6	344.6	344.6	344.6	344.6	344.6	40- 50	3447	22330	79.5,79.5
60	213.2	213.2	213.2	213.2	213.2	213.2	213.2	213.2	50- 60	2401	24731	88,88
70	143.5	143.5	143.5	143.5	143.5	143.5	143.5	143.5	60- 70	1818	26549	94.5,94.5
80	71.73	71.73	71.73	71.73	71.73	71.73	71.73	71.73	70- 80	1112	27661	98.5,98.5
90	4.081	4.081	4.081	4.081	4.081	4.081	4.081	4.081	80- 90	428.0	28089	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): 20745 lm

%lum = 73.9%

%lamp = 73.9%

Conical surface Flux(120deg): 24731 lm

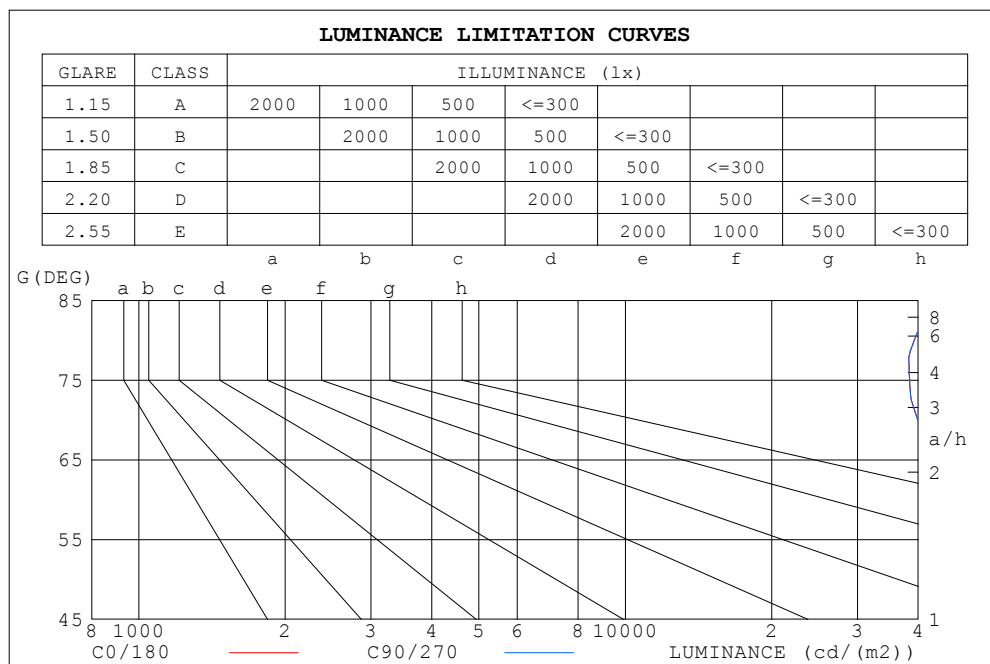
%lum = 88.0%

%lamp = 88.0%

C Range: 0 - 360DEG  
C Interval: 2.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2020-07-25

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:9.470m [K=1.0000]  
Remarks:

## LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	43597	43597
80	39267	39267
75	38400	38400
70	39890	39890
65	41973	41973
60	40528	40528
55	43940	43940
50	50956	50956
45	59770	59770

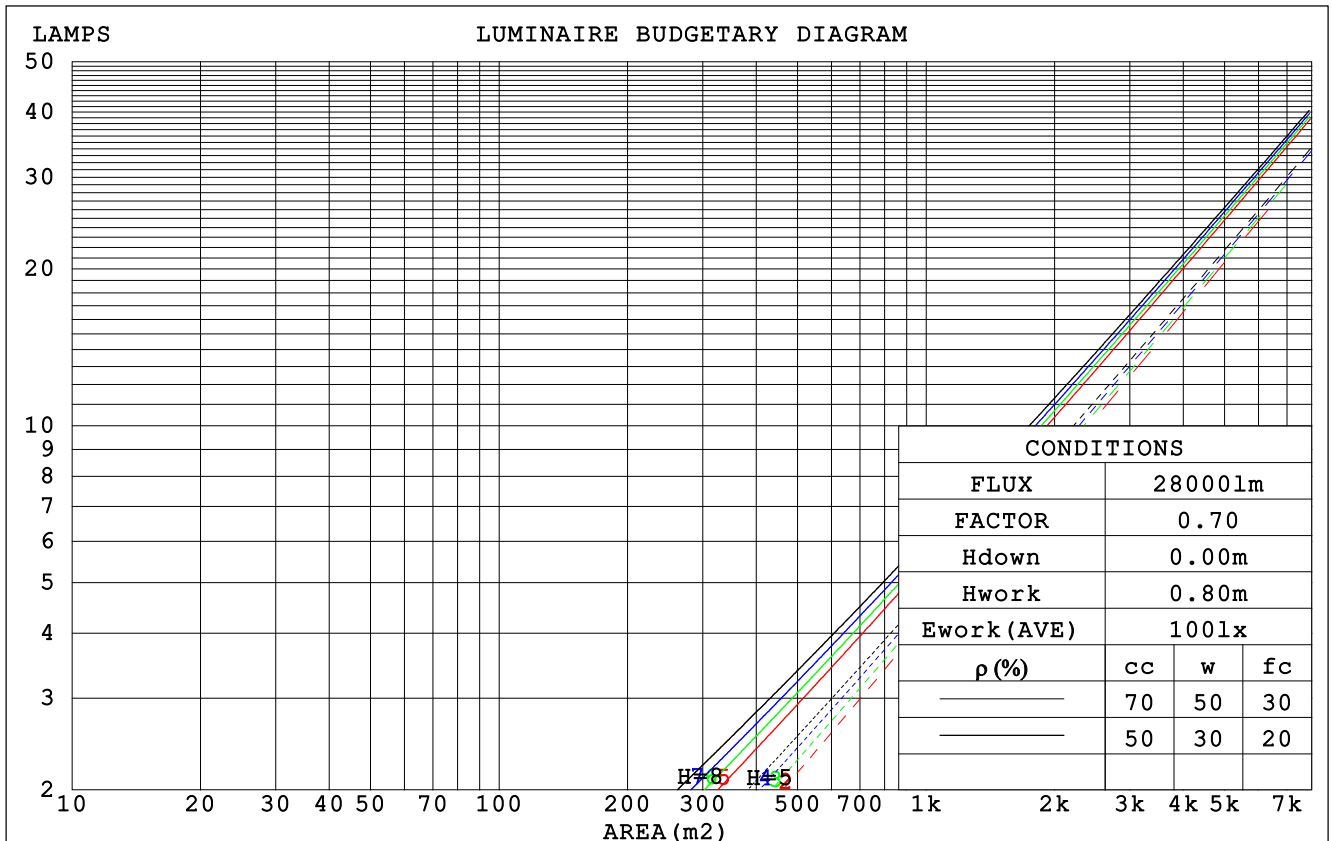
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C Interval: 2.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2020-07-25

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 65.0%  
Test Distance: 9.470m [K=1.0000]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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			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	.97	.91	.87	.95	.90	.86	.91	.87	.84	.88	.85	.82	.85	.83	.80	.78
3.0	.88	.81	.76	.86	.80	.75	.84	.78	.74	.81	.77	.73	.79	.75	.72	.70
4.0	.80	.73	.68	.79	.73	.67	.77	.71	.67	.75	.70	.66	.73	.68	.65	.63
5.0	.74	.67	.61	.73	.66	.61	.71	.65	.60	.69	.64	.60	.68	.63	.59	.58
6.0	.69	.61	.56	.68	.61	.56	.66	.60	.55	.65	.59	.55	.63	.58	.55	.53
7.0	.64	.57	.52	.63	.56	.51	.62	.56	.51	.60	.55	.51	.59	.54	.50	.49
8.0	.60	.53	.48	.59	.52	.48	.58	.52	.47	.57	.51	.47	.56	.51	.47	.45
9.0	.56	.49	.44	.55	.49	.44	.54	.48	.44	.53	.48	.44	.53	.48	.44	.42
10.0	.53	.46	.42	.52	.46	.42	.51	.45	.41	.51	.45	.41	.50	.45	.41	.40



C Range: 0 - 360DEG  
 C Interval: 2.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: LYJ  
 Test Date: 2020-07-25

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity: 65.0%  
 Test Distance: 9.470m [K=1.0000]  
 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	.248	.141	.045	.241	.137	.044	.228	.131	.042	.216	.125	.040	.205	.119	.038	
2.0	.232	.127	.039	.226	.124	.038	.215	.119	.037	.204	.115	.036	.195	.110	.035	
3.0	.215	.115	.034	.210	.113	.034	.200	.109	.033	.191	.105	.032	.183	.101	.031	
4.0	.200	.104	.031	.196	.102	.030	.187	.099	.030	.179	.096	.029	.172	.093	.028	
5.0	.187	.095	.028	.183	.094	.027	.175	.091	.027	.168	.089	.026	.162	.086	.026	
6.0	.174	.087	.025	.171	.086	.025	.164	.084	.025	.158	.082	.024	.153	.080	.024	
7.0	.164	.081	.023	.161	.080	.023	.155	.078	.023	.149	.077	.022	.144	.075	.022	
8.0	.154	.075	.021	.151	.075	.021	.146	.073	.021	.141	.072	.021	.137	.070	.020	
9.0	.146	.070	.020	.143	.070	.020	.139	.068	.019	.134	.067	.019	.130	.066	.019	
10.0	.138	.066	.018	.136	.066	.018	.132	.064	.018	.128	.063	.018	.124	.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	.176	.157	.139	.151	.134	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.164	.132	.105	.141	.114	.091	.096	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.154	.114	.082	.132	.098	.071	.091	.068	.050	.052	.040	.029	.017	.013	.010	
4.0	.145	.100	.066	.124	.086	.057	.085	.060	.040	.049	.035	.024	.016	.011	.008	
5.0	.136	.089	.054	.117	.077	.047	.081	.054	.033	.047	.032	.020	.015	.010	.006	
6.0	.129	.080	.045	.111	.069	.039	.076	.048	.028	.044	.029	.016	.014	.009	.005	
7.0	.122	.073	.038	.105	.063	.033	.073	.044	.023	.042	.026	.014	.014	.009	.005	
8.0	.116	.067	.033	.100	.058	.029	.069	.041	.020	.040	.024	.012	.013	.008	.004	
9.0	.110	.061	.029	.095	.053	.025	.066	.038	.018	.038	.022	.011	.012	.007	.003	
10.0	.105	.057	.025	.091	.050	.022	.063	.035	.016	.037	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 2.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:LYJ  
 Test Date:2020-07-25

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:9.470m [K=1.0000]  
 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	23.0	24.4	23.4	24.7	25.0	23.0	24.4	23.4	24.7	25.0
3H	25.1	26.3	25.4	26.6	27.0	25.1	26.3	25.4	26.6	27.0
4H	25.8	27.0	26.2	27.3	27.7	25.8	27.0	26.2	27.3	27.7
6H	26.5	27.5	26.9	27.9	28.3	26.5	27.5	26.9	27.9	28.3
8H	26.7	27.7	27.2	28.1	28.5	26.7	27.7	27.2	28.1	28.5
12H	27.0	27.9	27.4	28.3	28.7	27.0	27.9	27.4	28.3	28.7
4H 2H	23.7	24.9	24.1	25.2	25.6	23.7	24.9	24.1	25.2	25.6
3H	25.9	26.9	26.4	27.3	27.7	25.9	26.9	26.4	27.3	27.7
4H	26.8	27.7	27.3	28.1	28.5	26.8	27.7	27.3	28.1	28.5
6H	27.6	28.4	28.1	28.8	29.3	27.6	28.4	28.1	28.8	29.3
8H	28.0	28.6	28.4	29.1	29.6	28.0	28.6	28.4	29.1	29.6
12H	28.2	28.9	28.7	29.3	29.8	28.2	28.9	28.7	29.3	29.8
8H 4H	27.2	27.8	27.6	28.3	28.8	27.2	27.8	27.6	28.3	28.8
6H	28.1	28.7	28.6	29.2	29.7	28.1	28.7	28.6	29.2	29.7
8H	28.6	29.1	29.1	29.6	30.1	28.6	29.1	29.1	29.6	30.1
12H	29.0	29.4	29.5	29.9	30.5	29.0	29.4	29.5	29.9	30.5
12H 4H	27.2	27.8	27.7	28.3	28.8	27.2	27.8	27.7	28.3	28.8
6H	28.2	28.7	28.7	29.2	29.7	28.2	28.7	28.7	29.2	29.7
8H	28.7	29.2	29.2	29.7	30.2	28.7	29.2	29.2	29.7	30.2
CIE190: 2010										

CIE190: 2010  
Area: 0.1052 m2

C Range: 0 - 360DEG  
C Interval: 2.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:LYJ  
Test Date:2020-07-25

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:9.470m [K=1.0000]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## UTILIZATION FACTORS TABLE

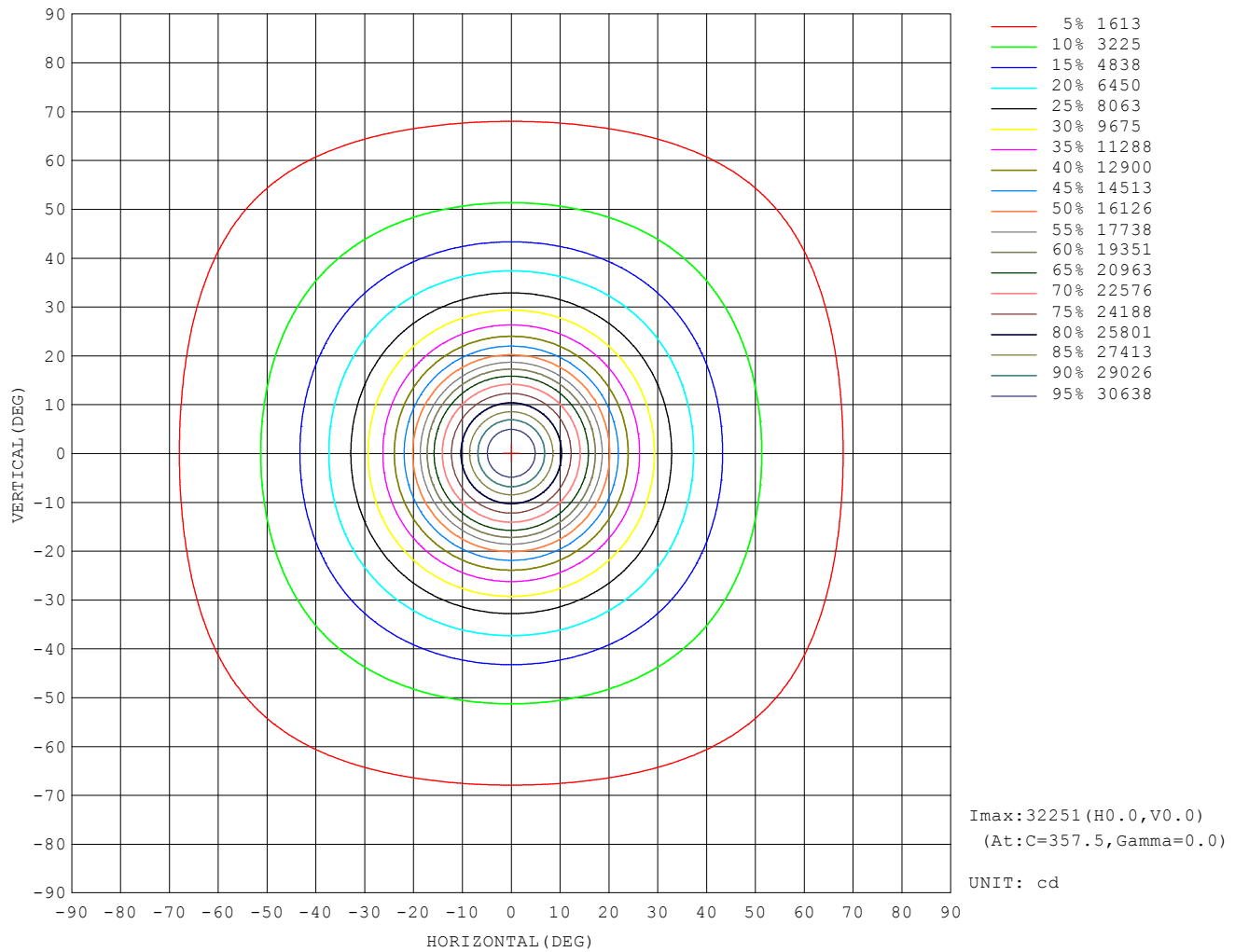
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	71	62	57	71	62	57	70	62	57	51
0.80	80	71	66	79	71	65	78	70	65	60
1.00	87	78	73	86	78	72	84	78	72	66
1.25	92	84	79	91	84	79	89	82	78	72
1.50	96	89	84	95	88	83	92	86	82	76
2.00	101	95	90	100	94	89	96	91	87	81
2.50	104	98	93	102	97	92	99	94	91	83
3.00	107	101	97	105	100	96	101	97	94	86
4.00	110	105	102	107	103	100	103	100	98	89
5.00	111	108	105	109	106	103	105	102	100	92
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
 C Interval: 2.5DEG  
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 Test Date: 2020-07-25

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity: 65.0%  
 Test Distance: 9.470m [K=1.0000]  
 Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ISOCANDELA DIAGRAM

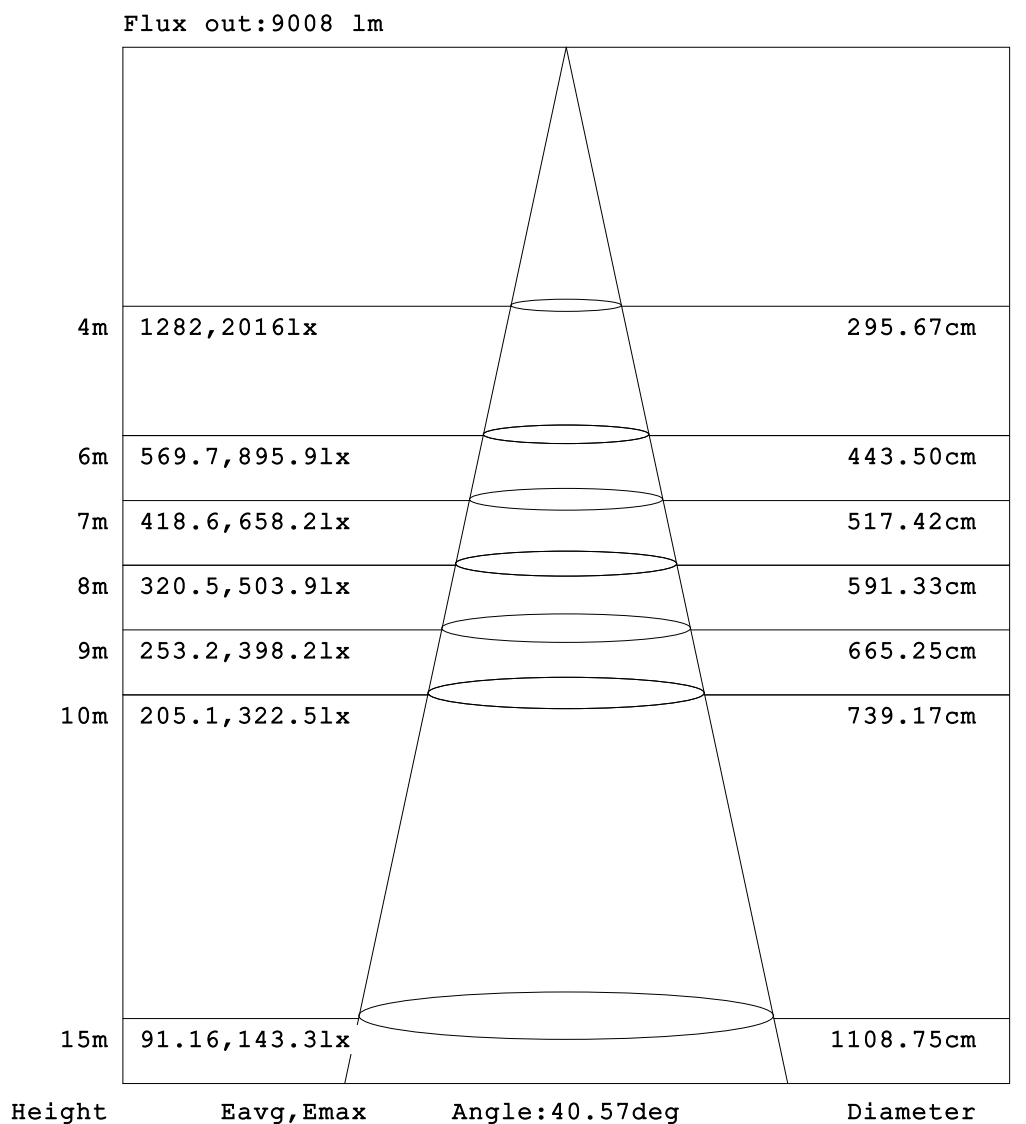


C Range: 0 - 360DEG  
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Temperature: 25.3DEG  
Operators: LYJ  
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Test Distance: 9.470m [K=1.0000]  
Remarks:



## AAI Figure



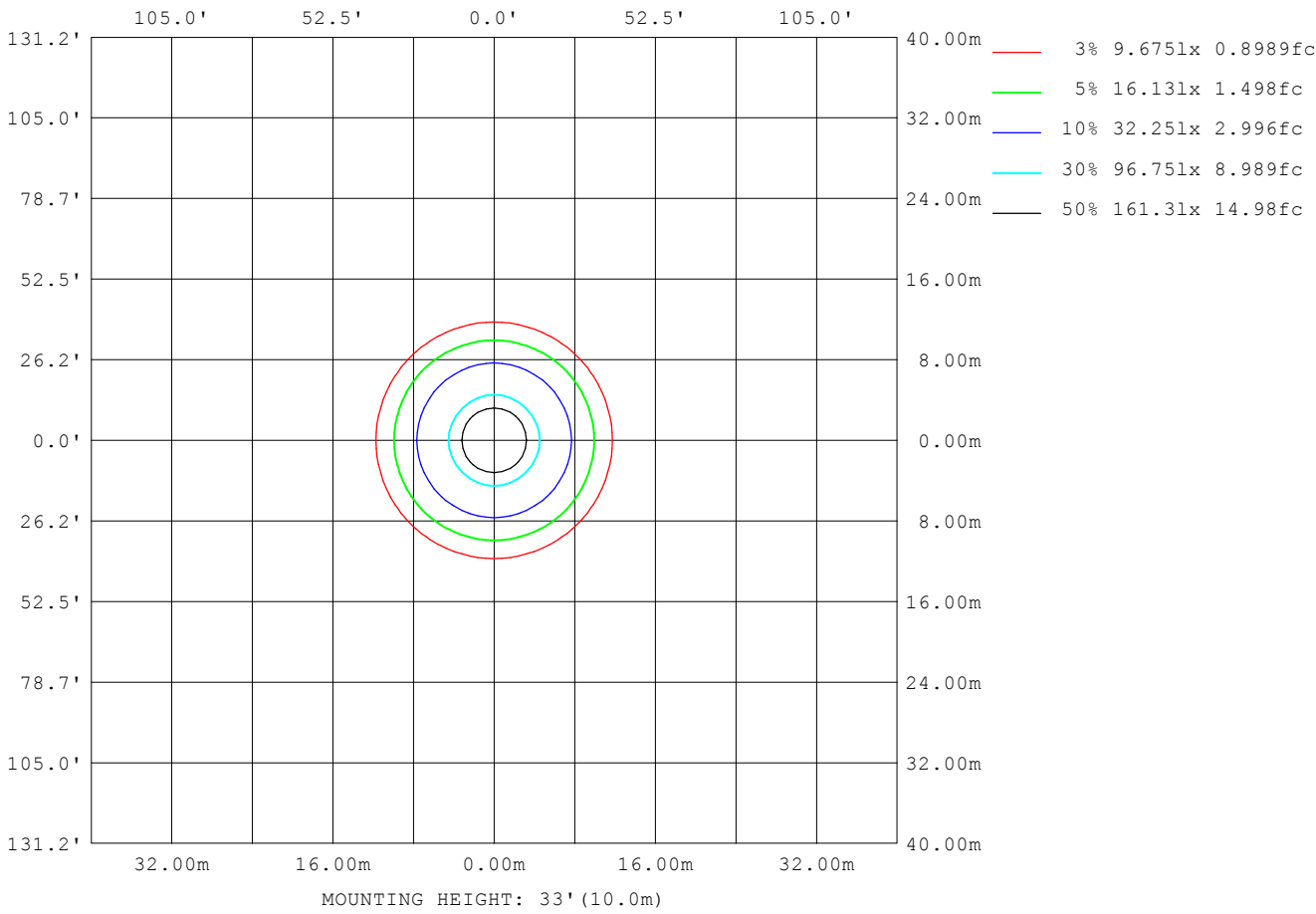
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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C Interval: 2.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2020-07-25

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 65.0%  
Test Distance: 9.470m [K=1.0000]  
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

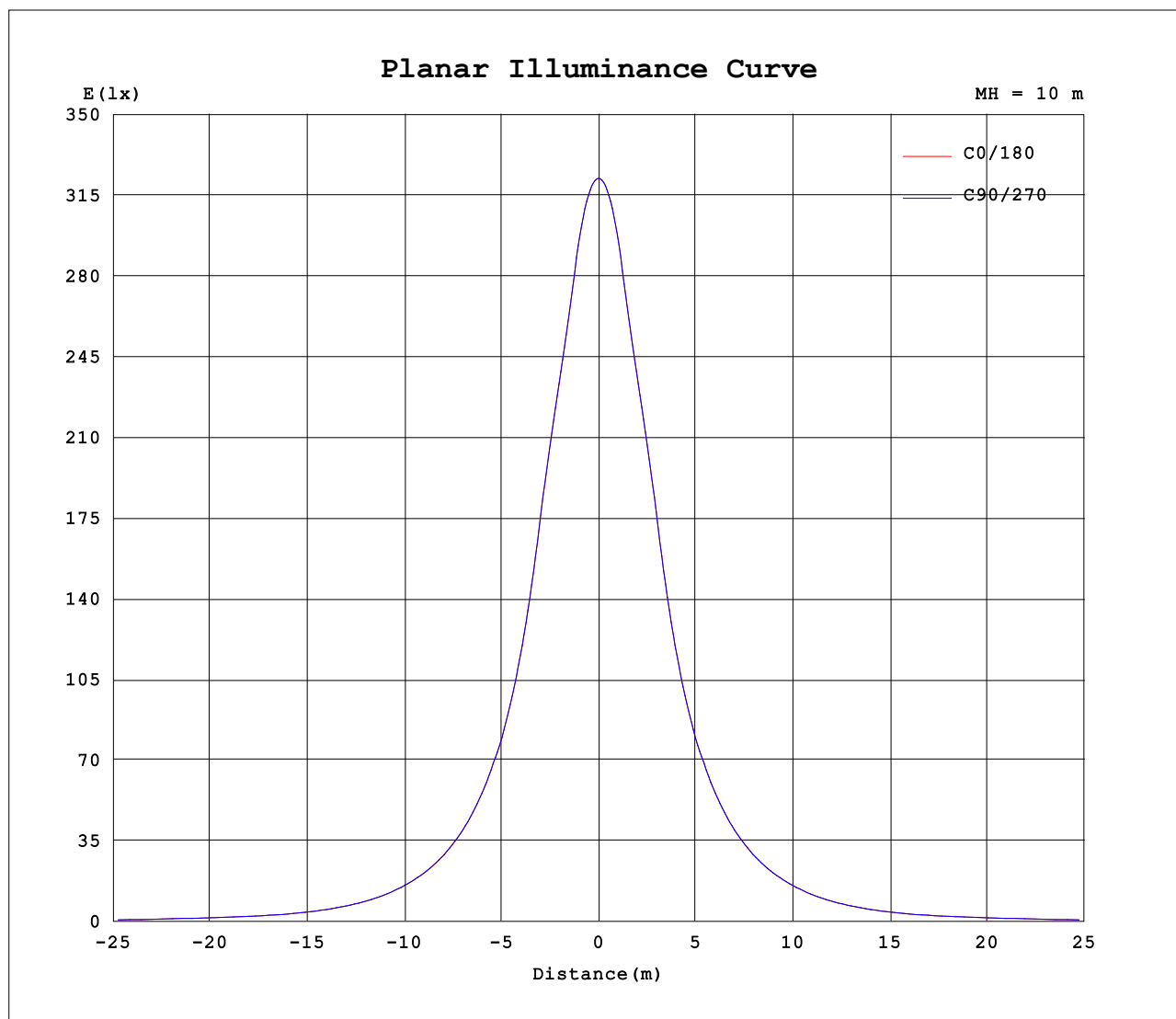
ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 2.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2020-07-25

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 65.0%  
Test Distance: 9.470m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 2.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2020-07-25

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 65.0%  
Test Distance: 9.470m [K=1.0000]  
Remarks: