

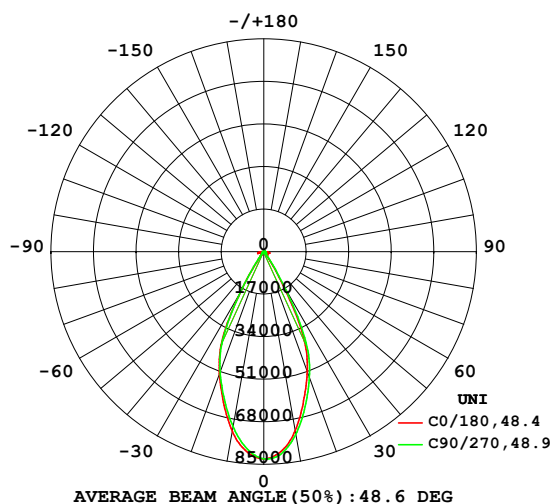
## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

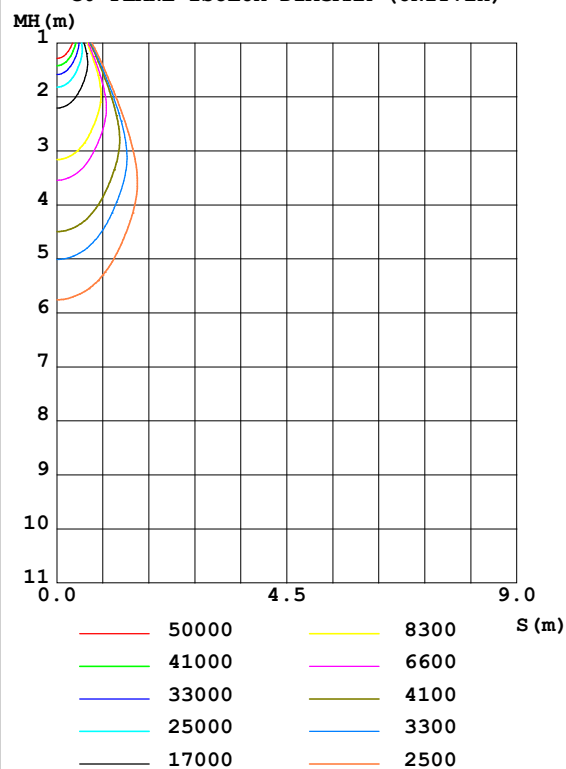
Test:U:230.00V I:1.3103A P:300.20W PF:0.9961 Freq:50.00Hz UTHDi:0% ITHDi:0% Lamp Flux:46996.3x1 lm		
NAME: LHB09-300-5070-L03901	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 156.55 lm/W			
MODEL	/	I <sub>max</sub> (cd)	82890	S/MH (C0/180)	0.74
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH (C90/270)	0.74
RATED VOLTAGE(V)	/	TOTAL FLUX (lm)	46996	η UP,DN (C0-180)	0.0,50.5
NOMINAL FLUX(lm)	46996.3	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:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	7259	7420	7410	7447	7283	7165	7096	7192	0- 10	7413	7413	15.8,15.8
20	5091	4822	5334	4911	5195	4687	5113	4609	10- 20	17184	24597	52.3,52.3
30	1553	1714	1816	1865	1846	1829	1851	1676	20- 30	15523	40120	85.4,85.4
40	180.1	175.5	149.9	186.3	188.2	201.6	148.8	160.6	30- 40	4006	44126	93.9,93.9
50	121.5	76.32	81.57	76.16	124.7	75.88	79.54	70.52	40- 50	761.9	44888	95.5,95.5
60	90.53	60.05	62.47	61.85	95.14	61.51	62.90	57.67	50- 60	583.2	45471	96.8,96.8
70	72.32	43.70	38.69	43.80	58.34	42.95	38.89	43.13	60- 70	476.5	45948	97.8,97.8
80	151.6	46.77	46.13	48.34	169.5	43.48	42.53	45.71	70- 80	609.8	46558	99.1,99.1
90	0.2376	0.1188	0.1327	1.084	1.184	5.706	0.7264	0.1678	80- 90	438.8	46996	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): 44557 lm

%lum = 94.8%

%lamp = 94.8%

Conical surface Flux(120deg): 45471 lm

%lum = 96.8%

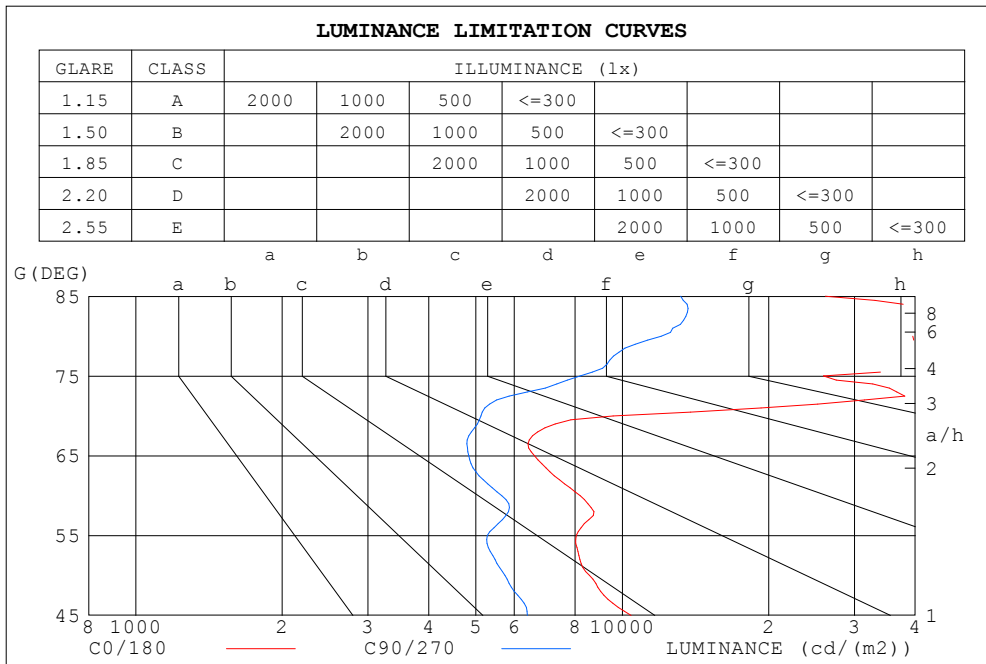
%lamp = 96.8%

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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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

## LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	26144	13187
80	39524	12024
75	25924	8194
70	9574	5120
65	6600	4833
60	8198	5655
55	8044	5283
50	8559	5743
45	10431	6378

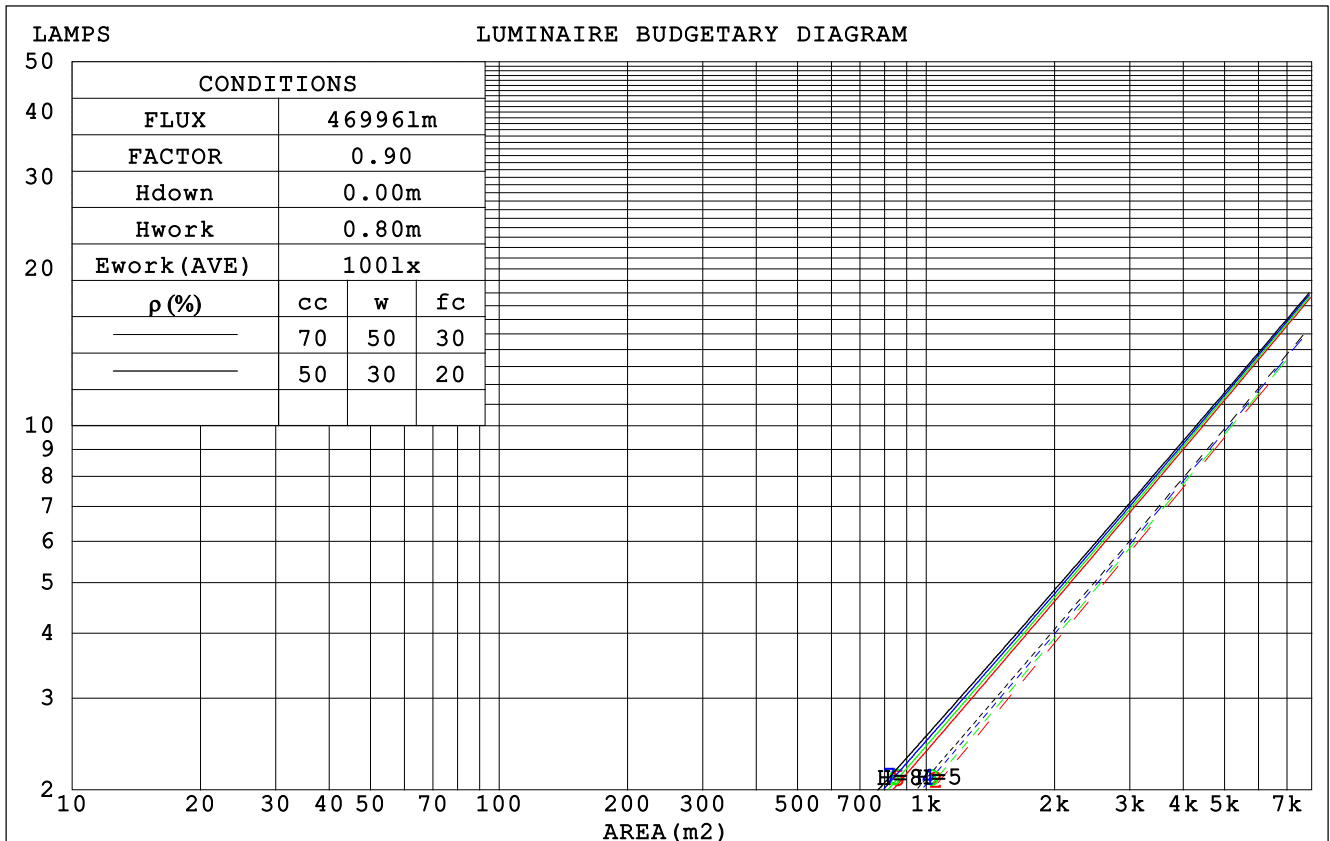
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: LYJ  
 Test Date: 2021-03-01

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

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	1.11	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



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
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 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

## 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	9.7	10.6	10.0	10.9	11.3	8.4	9.3	8.7	9.6	10.0
3H	12.2	13.1	12.6	13.4	13.8	10.7	11.6	11.1	11.9	12.3
4H	16.3	17.1	16.7	17.5	17.9	12.5	13.3	12.9	13.7	14.1
6H	21.2	21.9	21.6	22.3	22.7	15.0	15.8	15.5	16.1	16.5
8H	22.7	23.3	23.1	23.7	24.2	16.1	16.7	16.5	17.1	17.6
12H	23.4	24.1	23.9	24.5	24.9	16.8	17.4	17.2	17.8	18.2
4H 2H	10.3	11.1	10.7	11.4	11.8	9.4	10.2	9.8	10.6	10.9
3H	13.0	13.7	13.4	14.1	14.5	11.9	12.6	12.3	13.0	13.4
4H	16.8	17.4	17.2	17.8	18.2	14.1	14.7	14.5	15.1	15.5
6H	21.8	22.3	22.3	22.7	23.2	16.7	17.2	17.1	17.6	18.1
8H	23.4	23.9	23.9	24.4	24.8	17.7	18.2	18.2	18.6	19.1
12H	24.5	24.9	24.9	25.4	25.8	18.5	18.9	19.0	19.4	19.9
8H 4H	17.2	17.7	17.7	18.2	18.6	15.1	15.6	15.6	16.1	16.5
6H	22.0	22.4	22.5	22.9	23.4	17.8	18.2	18.3	18.7	19.2
8H	23.8	24.1	24.3	24.7	25.1	19.1	19.4	19.6	19.9	20.4
12H	25.2	25.5	25.7	26.0	26.5	20.1	20.4	20.6	20.9	21.5
12H 4H	17.3	17.7	17.8	18.2	18.7	15.5	15.9	15.9	16.4	16.8
6H	22.1	22.4	22.6	22.9	23.5	18.2	18.5	18.7	19.0	19.5
8H	23.9	24.2	24.4	24.7	25.3	19.6	19.9	20.1	20.4	21.0
CIE190: 2010										

CIE190: 2010  
Area: 0.221 m2

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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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

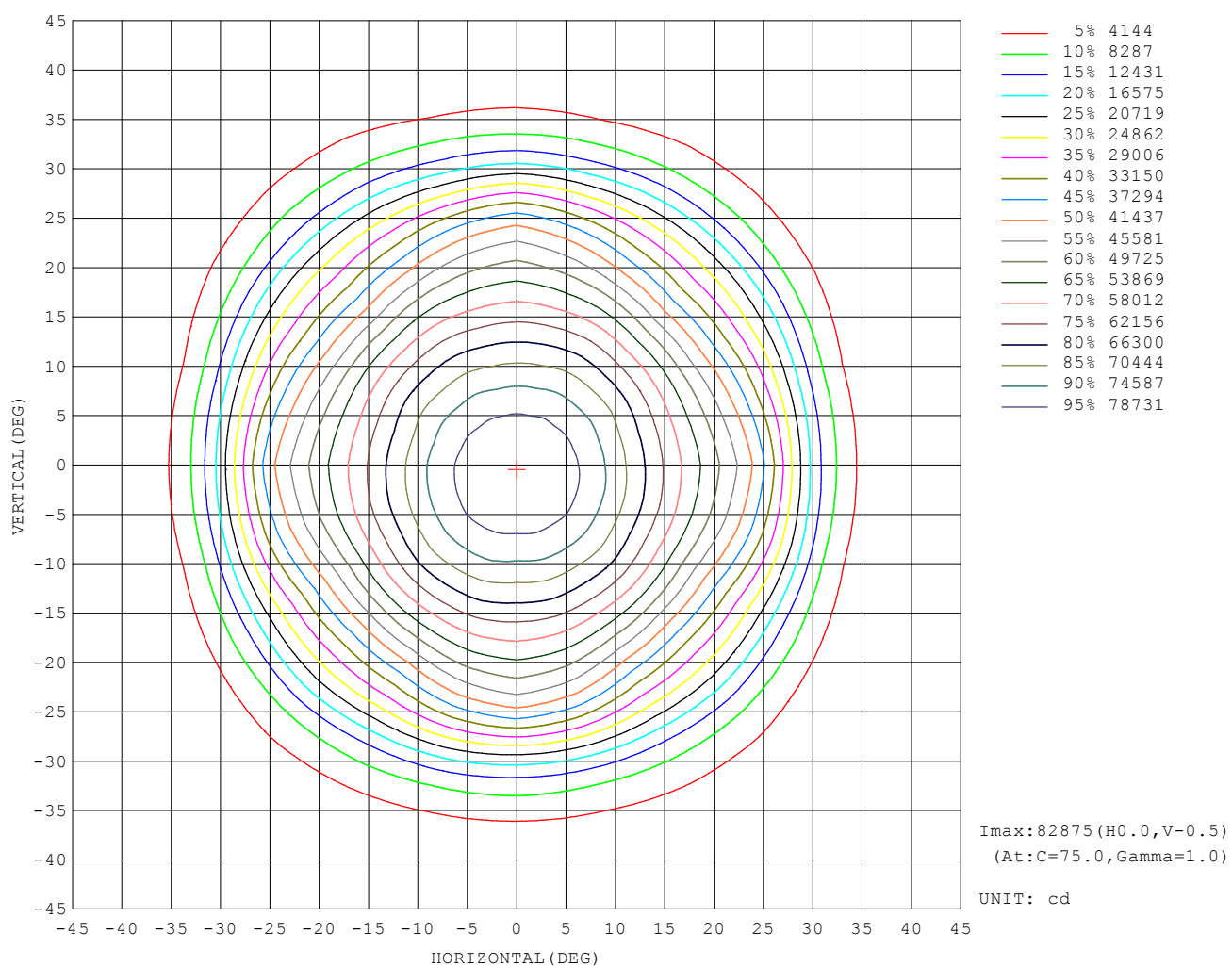
## UTILIZATION FACTORS TABLE

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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 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 26.000m [K=0.4574]  
 Remarks:

ISOCANDELA DIAGRAM

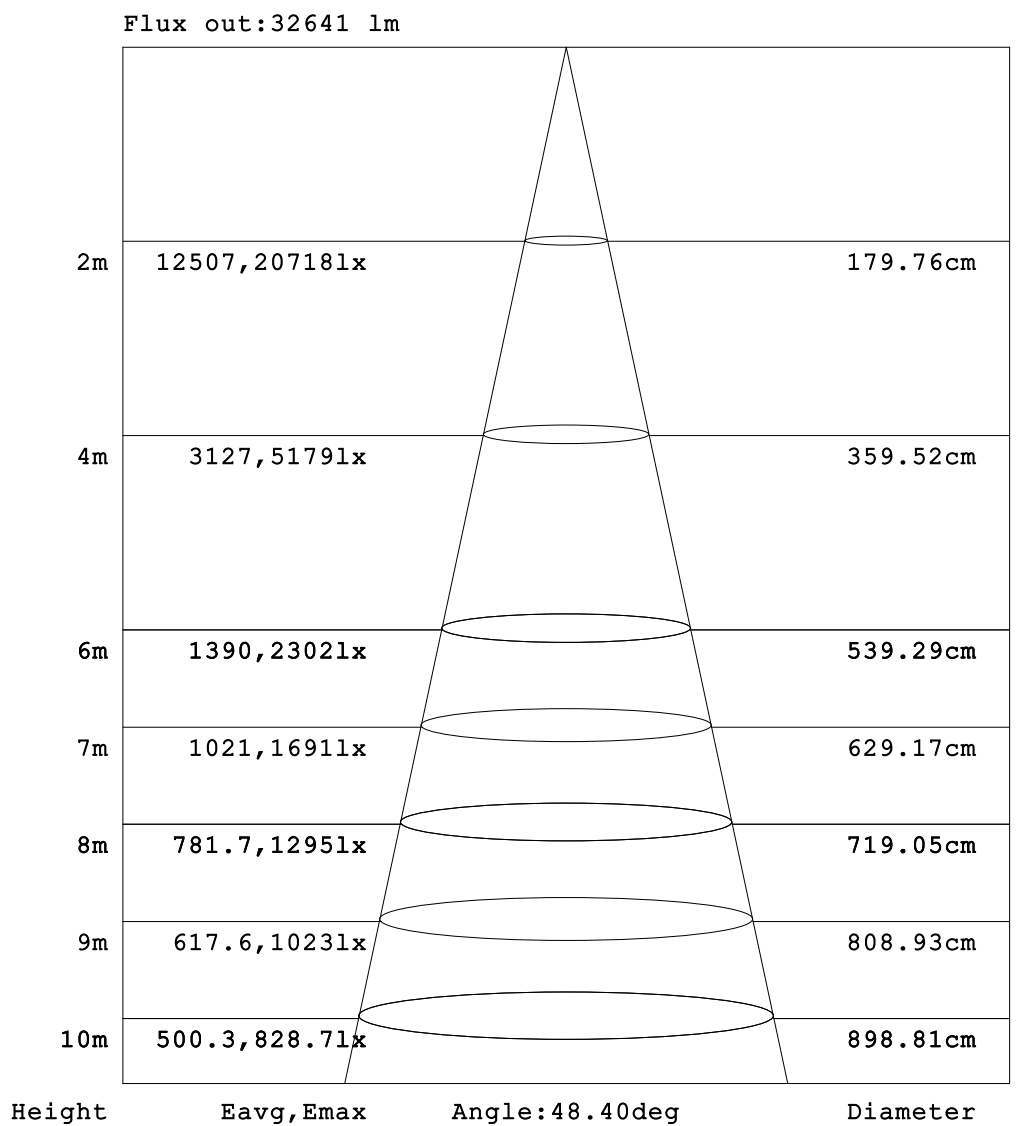


C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-03-01

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4574]  
Remarks:



## AAI Figure



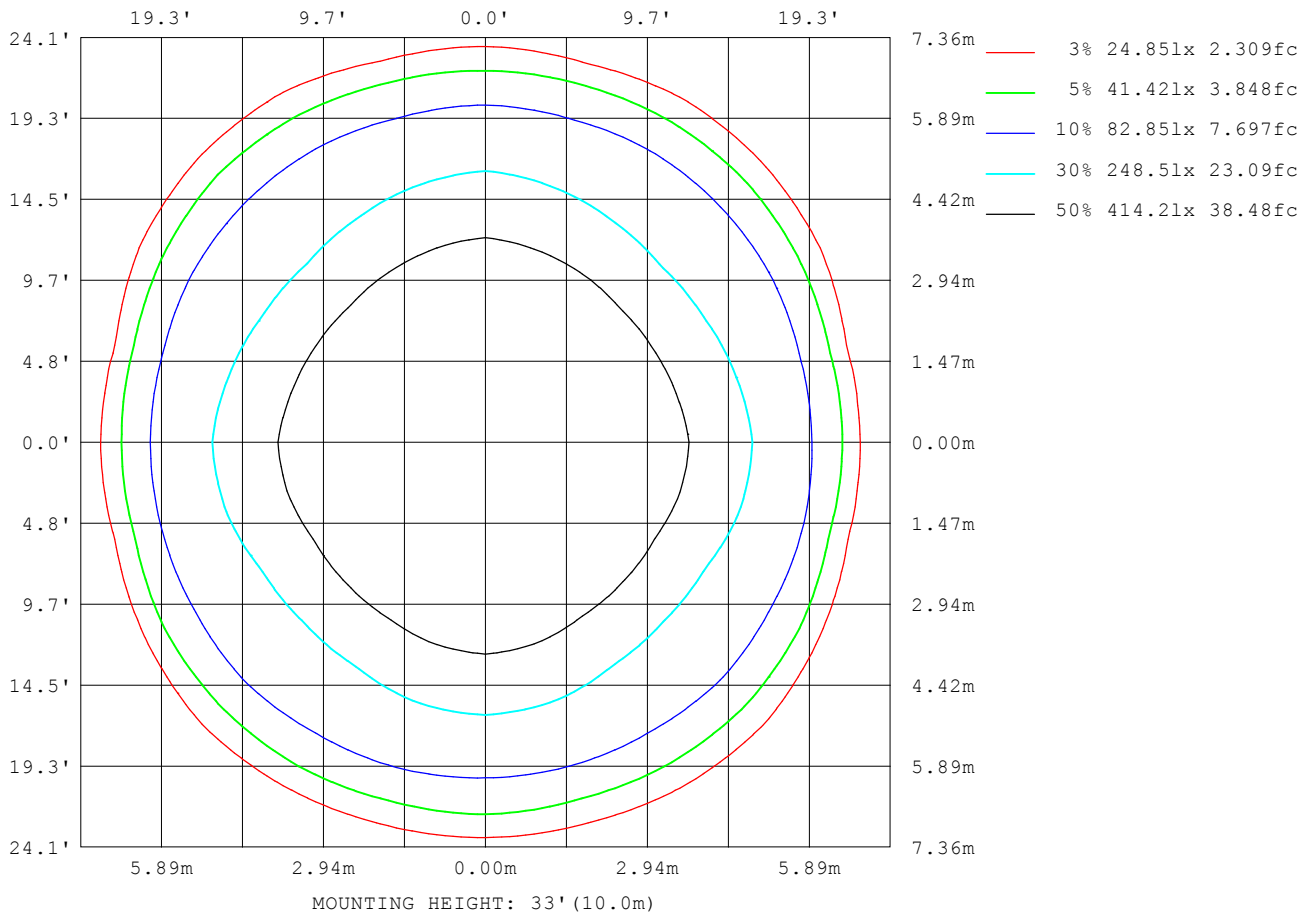
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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

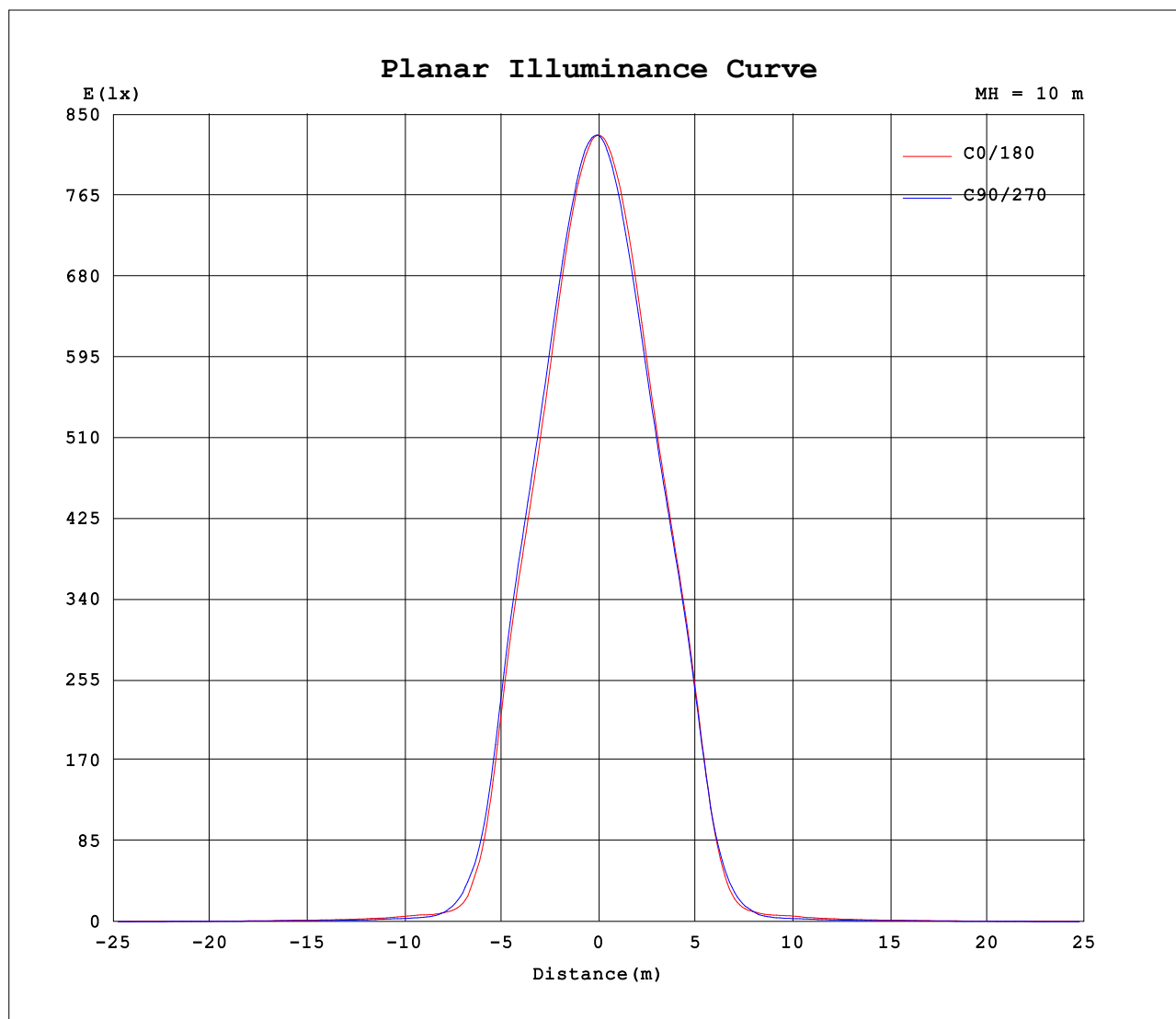
## ISOLUX DIAGRAM



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:

## Planar Illuminance Curve



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

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4574]  
Remarks: