

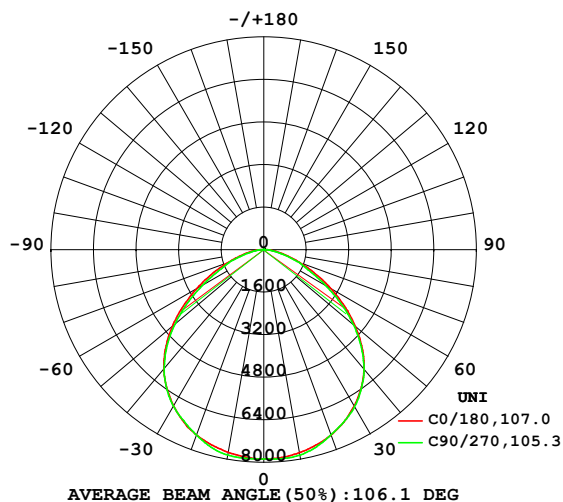
## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

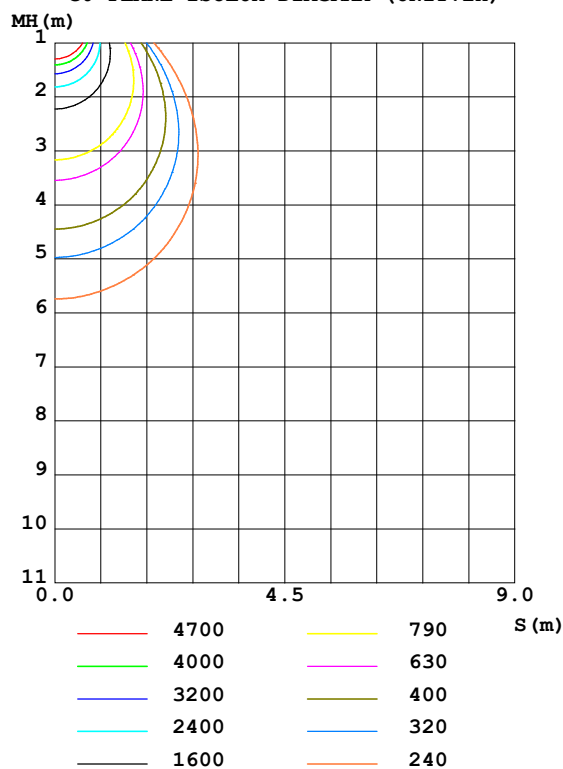
Test:U:229.7V I:0.6532A P:148.4W PF:0.9889 Freq:50.01Hz UTHDi:0% ITHDi:0% Lamp Flux:20665.2x1 lm		
NAME: LHB09-150-5070-L00404	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 139.26 lm/W			
MODEL	/	I <sub>max</sub> (cd)	7891	S/MH (C0/180)	1.28
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH (C90/270)	1.28
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	20665	η UP,DN(C0-180)	0.0,50.1
NOMINAL FLUX(lm)	20665.2	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.9
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:26.6DEG  
Operators:LYJ  
Test Date:2020-11-11

γ Range: 0 - 180DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:49.8%  
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	7750	7817	7843	7797	7737	7793	7842	7817	0- 10	748.6	748.6	3.62,3.62
20	7417	7469	7411	7456	7414	7477	7416	7480	10- 20	2163	2912	14.1,14.1
30	6796	6804	6828	6787	6787	6768	6800	6788	20- 30	3301	6213	30.1,30.1
40	5870	5863	5874	5844	5848	5824	5830	5844	30- 40	3986	10199	49.4,49.4
50	4500	4492	4417	4460	4491	4438	4365	4468	40- 50	4009	14208	68.8,68.8
60	2900	2863	2675	2830	2887	2798	2615	2817	50- 60	3245	17453	84.5,84.5
70	1461	1394	1403	1365	1449	1348	1360	1356	60- 70	2026	19479	94.3,94.3
80	524.3	509.4	427.9	495.5	523.9	489.8	410.0	492.2	70- 80	947.7	20427	98.8,98.8
90	0	0	0	0	0	0	0	0	80- 90	238.4	20665	100,100
100	0	0	0	0	0	0	0	0	90-100	0	20665	100,100
110	0	0	0	0	0	0	0	0	100-110	0	20665	100,100
120	0	0	0	0	0	0	0	0	110-120	0	20665	100,100
130	0	0	0	0	0	0	0	0	120-130	0	20665	100,100
140	0	0	0	0	0	0	0	0	130-140	0	20665	100,100
150	0	0	0	0	0	0	0	0	140-150	0	20665	100,100
160	0	0	0	0	0	0	0	0	150-160	0	20665	100,100
170	0	0	0	0	0	0	0	0	160-170	0	20665	100,100
180	0	0	0	0	0	0	0	0	170-180	0	20665	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 12252 lm

%lum = 59.3%

%lamp = 59.3%

Conical surface Flux(120deg): 17453 lm

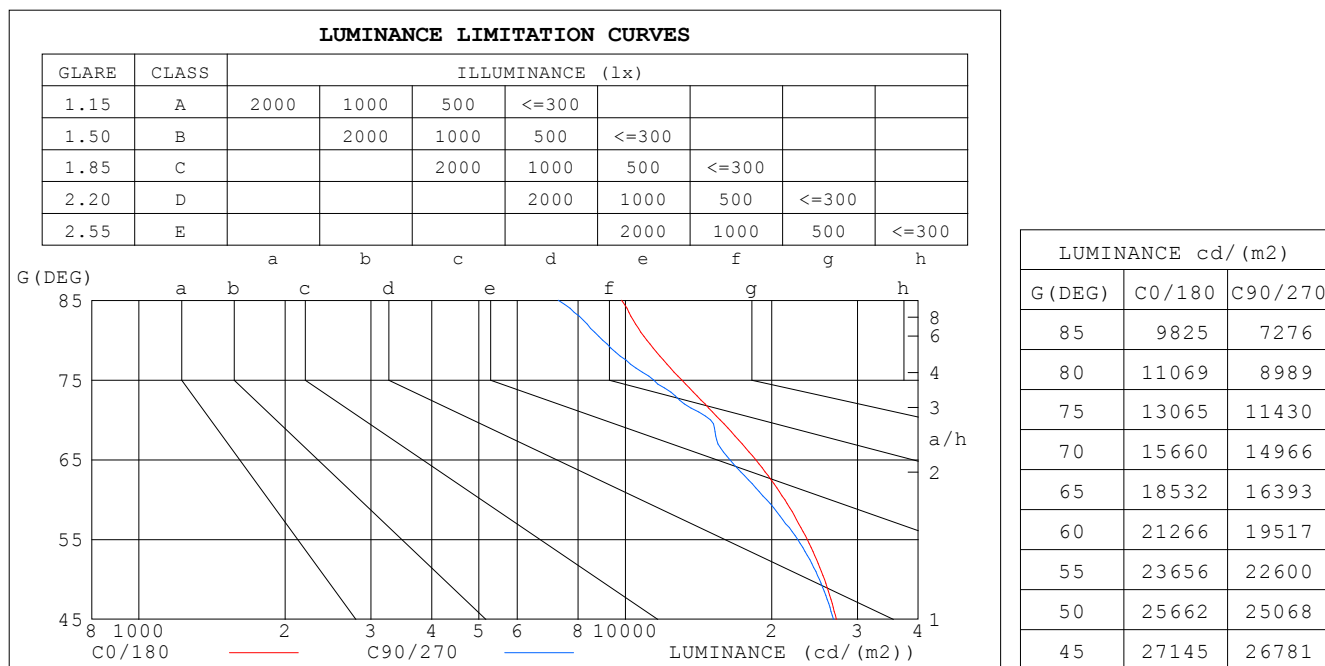
%lum = 84.5%

%lamp = 84.5%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:26.6DEG  
Operators:LYJ  
Test Date:2020-11-11

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:49.8%  
Test Distance:26.000m [K=0.4574]  
Remarks:

## LUMINANCE LIMITATION CURVES



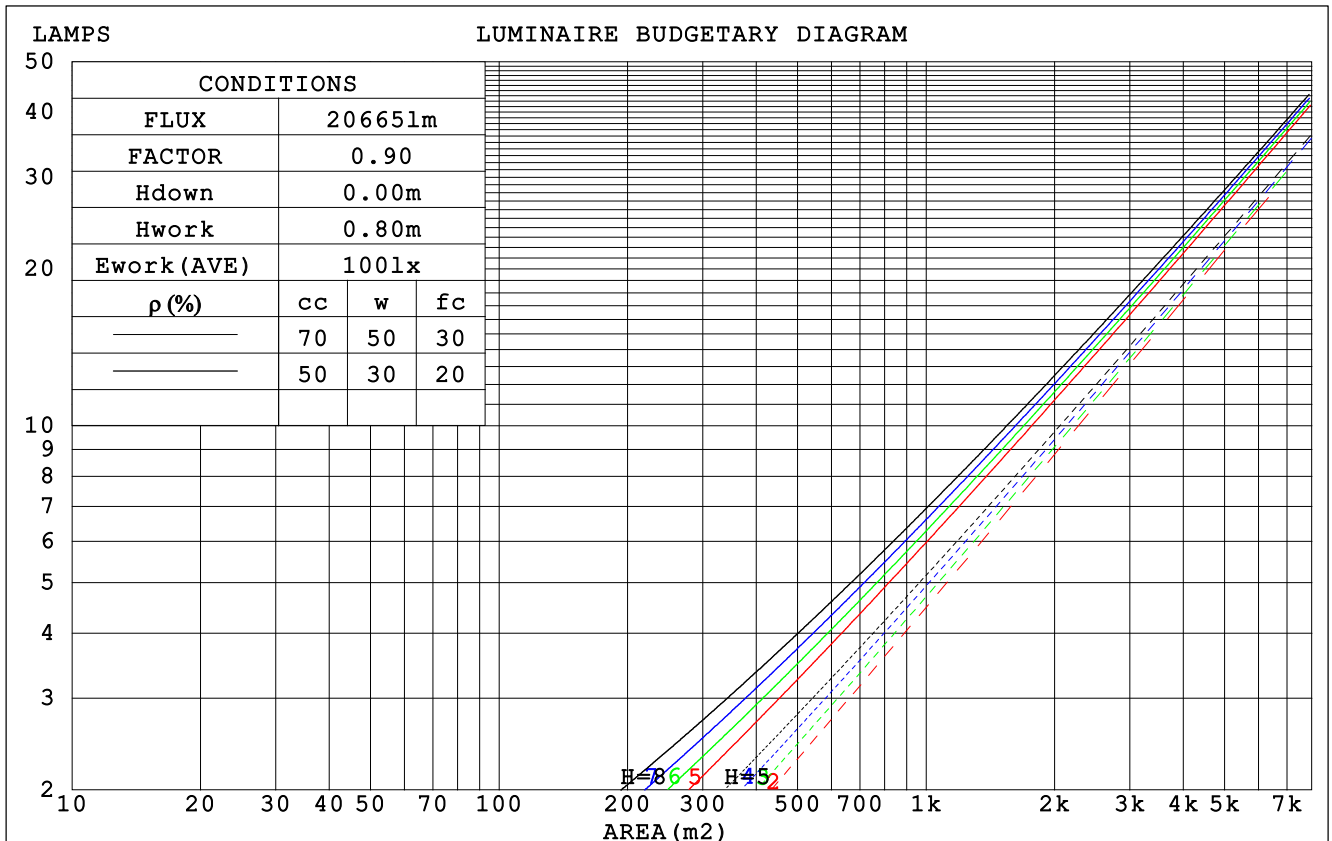
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 26.6DEG  
Operators: LYJ  
Test Date: 2020-11-11

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 49.8%  
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 <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p <sub>fc</sub>	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	1.05	1.01	.98	1.03	.99	.96	.99	.96	.93	.95	.93	.90	.91	.89	.88	.86
2.0	.93	.86	.81	.91	.85	.80	.87	.82	.78	.84	.80	.76	.81	.78	.75	.73
3.0	.82	.74	.68	.80	.73	.67	.77	.71	.66	.75	.70	.65	.72	.68	.64	.62
4.0	.73	.65	.58	.72	.64	.58	.69	.62	.57	.67	.61	.56	.65	.60	.55	.53
5.0	.65	.57	.50	.64	.56	.50	.62	.55	.50	.60	.54	.49	.58	.53	.49	.46
6.0	.59	.50	.44	.58	.50	.44	.56	.49	.44	.55	.48	.43	.53	.47	.43	.41
7.0	.54	.45	.39	.53	.45	.39	.51	.44	.39	.50	.43	.38	.49	.43	.38	.36
8.0	.49	.41	.35	.48	.40	.35	.47	.40	.35	.46	.39	.34	.45	.39	.34	.32
9.0	.45	.37	.32	.44	.37	.31	.43	.36	.31	.42	.36	.31	.41	.35	.31	.29
10.0	.42	.34	.29	.41	.34	.29	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 26.6DEG  
Operators: LYJ  
Test Date: 2020-11-11

γ Range: 0 - 180DEG  
γ Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 49.8%  
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	.283	.161	.051	.276	.157	.050	.262	.151	.048	.250	.144	.046	.239	.139	.045															
2.0	.270	.148	.045	.264	.146	.045	.253	.141	.044	.242	.136	.043	.232	.131	.041															
3.0	.253	.135	.040	.248	.133	.040	.238	.129	.039	.228	.125	.038	.220	.122	.038															
4.0	.236	.123	.036	.231	.121	.036	.222	.118	.035	.214	.115	.035	.206	.112	.034															
5.0	.220	.112	.032	.216	.111	.032	.208	.108	.032	.200	.106	.031	.193	.103	.031															
6.0	.205	.103	.029	.202	.102	.029	.195	.100	.029	.188	.098	.029	.182	.096	.028															
7.0	.192	.095	.027	.189	.094	.027	.182	.092	.027	.176	.090	.026	.171	.089	.026															
8.0	.180	.088	.025	.177	.087	.025	.171	.086	.024	.166	.084	.024	.161	.083	.024															
9.0	.169	.082	.023	.167	.081	.023	.162	.080	.023	.157	.079	.023	.152	.077	.022															
10.0	.160	.077	.021	.157	.076	.021	.153	.075	.021	.148	.074	.021	.144	.073	.021															

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	.178	.156	.137	.153	.134	.117	.104	.092	.081	.060	.053	.047	.019	.017	.015		
2.0	.169	.132	.101	.145	.114	.087	.099	.079	.061	.057	.046	.036	.018	.015	.012		
3.0	.161	.114	.077	.138	.099	.066	.095	.068	.047	.055	.040	.027	.018	.013	.009		
4.0	.154	.101	.060	.132	.087	.052	.091	.061	.037	.052	.036	.022	.017	.012	.007		
5.0	.146	.090	.049	.126	.078	.042	.087	.055	.030	.050	.032	.018	.016	.010	.006		
6.0	.139	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.015	.010	.005		
7.0	.133	.075	.034	.114	.065	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004		
8.0	.127	.069	.029	.109	.060	.026	.075	.042	.018	.044	.025	.011	.014	.008	.004		
9.0	.121	.064	.026	.104	.056	.022	.072	.039	.016	.042	.023	.010	.014	.008	.003		
10.0	.115	.060	.023	.099	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003		

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:26.6DEG  
 Operators:LYJ  
 Test Date:2020-11-11

γ Range: 0 - 180DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity:49.8%  
 Test Distance:26.000m [K=0.4574]  
 Remarks:

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EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

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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	26.1	27.7	26.5	28.0	28.3	25.7	27.3	26.1	27.6	27.9
3H	27.4	28.8	27.8	29.1	29.5	26.9	28.3	27.3	28.6	29.0
4H	27.8	29.1	28.2	29.5	29.8	27.2	28.6	27.6	28.9	29.3
6H	28.1	29.3	28.5	29.7	30.0	27.4	28.7	27.9	29.0	29.4
8H	28.2	29.3	28.6	29.7	30.1	27.5	28.7	27.9	29.1	29.5
12H	28.2	29.3	28.6	29.7	30.1	27.5	28.6	28.0	29.0	29.5
4H 2H	26.6	27.9	27.0	28.2	28.6	26.2	27.5	26.6	27.8	28.2
3H	28.0	29.1	28.4	29.5	29.9	27.5	28.6	28.0	29.0	29.4
4H	28.5	29.5	29.0	29.9	30.4	28.0	29.0	28.4	29.4	29.8
6H	28.9	29.8	29.4	30.2	30.7	28.3	29.2	28.7	29.6	30.1
8H	29.0	29.8	29.5	30.3	30.7	28.4	29.2	28.8	29.6	30.1
12H	29.1	29.8	29.6	30.3	30.8	28.4	29.2	28.9	29.6	30.1
8H 4H	28.7	29.5	29.1	29.9	30.4	28.2	29.0	28.6	29.4	29.9
6H	29.2	29.8	29.7	30.3	30.8	28.6	29.2	29.1	29.7	30.2
8H	29.3	29.9	29.9	30.4	30.9	28.7	29.3	29.2	29.8	30.3
12H	29.5	30.0	30.0	30.5	31.1	28.8	29.3	29.3	29.8	30.4
12H 4H	28.7	29.4	29.2	29.9	30.3	28.2	28.9	28.7	29.4	29.9
6H	29.2	29.8	29.7	30.2	30.8	28.6	29.2	29.1	29.7	30.2
8H	29.4	29.9	29.9	30.4	31.0	28.8	29.3	29.3	29.8	30.3
CIE190: 2010										

CIE190: 2010  
Area: 0.1105 m2

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:26.6DEG  
Operators:LYJ  
Test Date:2020-11-11

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:49.8%  
Test Distance:26.000m [K=0.4574]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## UTILIZATION FACTORS TABLE

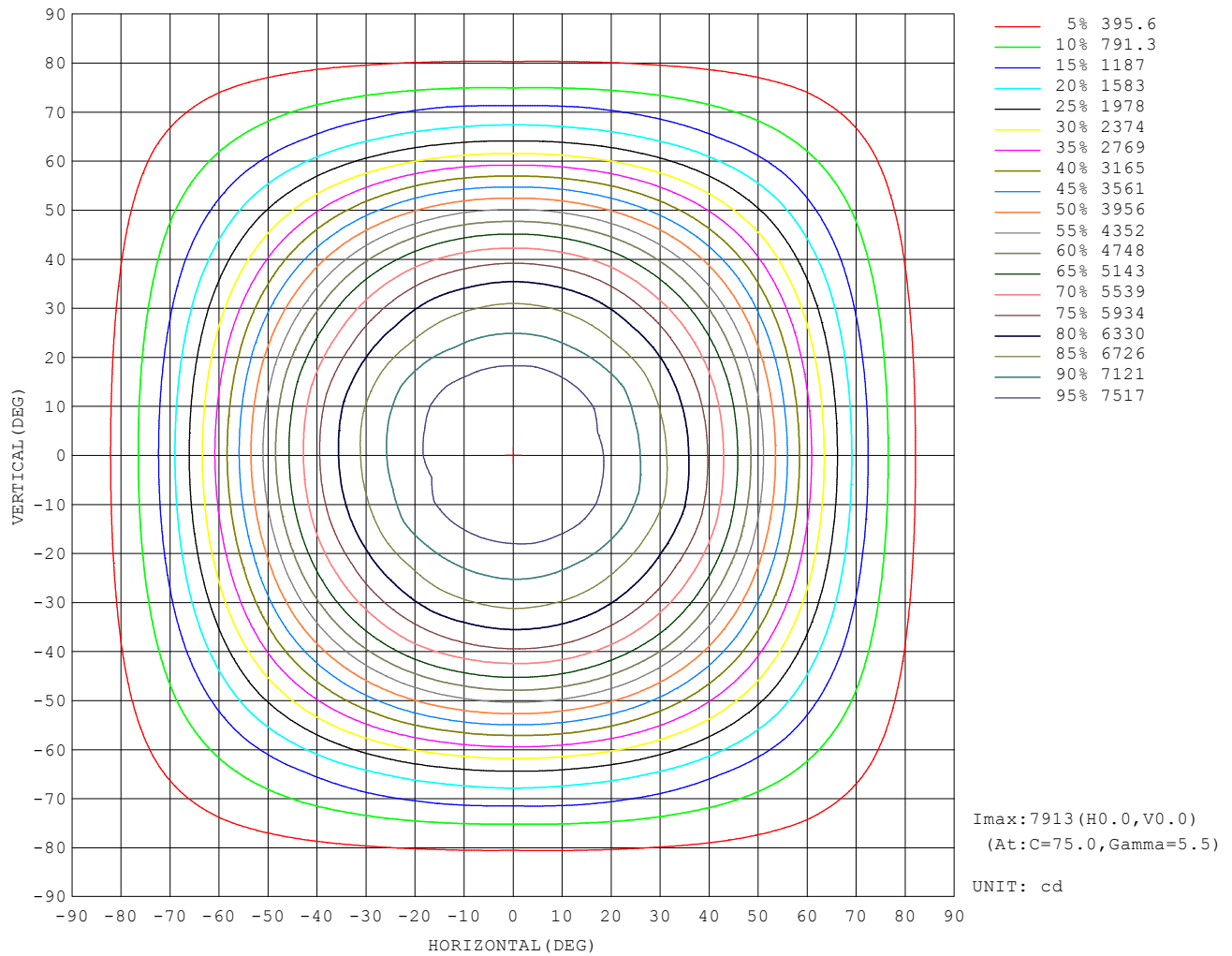
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	60	49	42	59	49	42	58	48	42	36
0.80	70	59	52	69	59	52	68	58	52	45
1.00	79	68	62	78	68	61	76	69	61	54
1.25	86	76	69	84	75	69	82	74	68	61
1.50	91	82	75	89	81	75	86	79	74	66
2.00	97	89	83	95	88	83	92	86	81	74
2.50	101	94	88	99	92	87	95	90	85	77
3.00	104	98	93	102	96	91	98	93	89	81
4.00	108	102	98	105	101	97	101	97	94	85
5.00	110	105	102	107	103	100	103	100	97	88
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
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 Temperature: 26.6DEG  
 Operators: LYJ  
 Test Date: 2020-11-11

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
 Humidity: 49.8%  
 Test Distance: 26.000m [K=0.4574]  
 Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## ISOCANDELA DIAGRAM

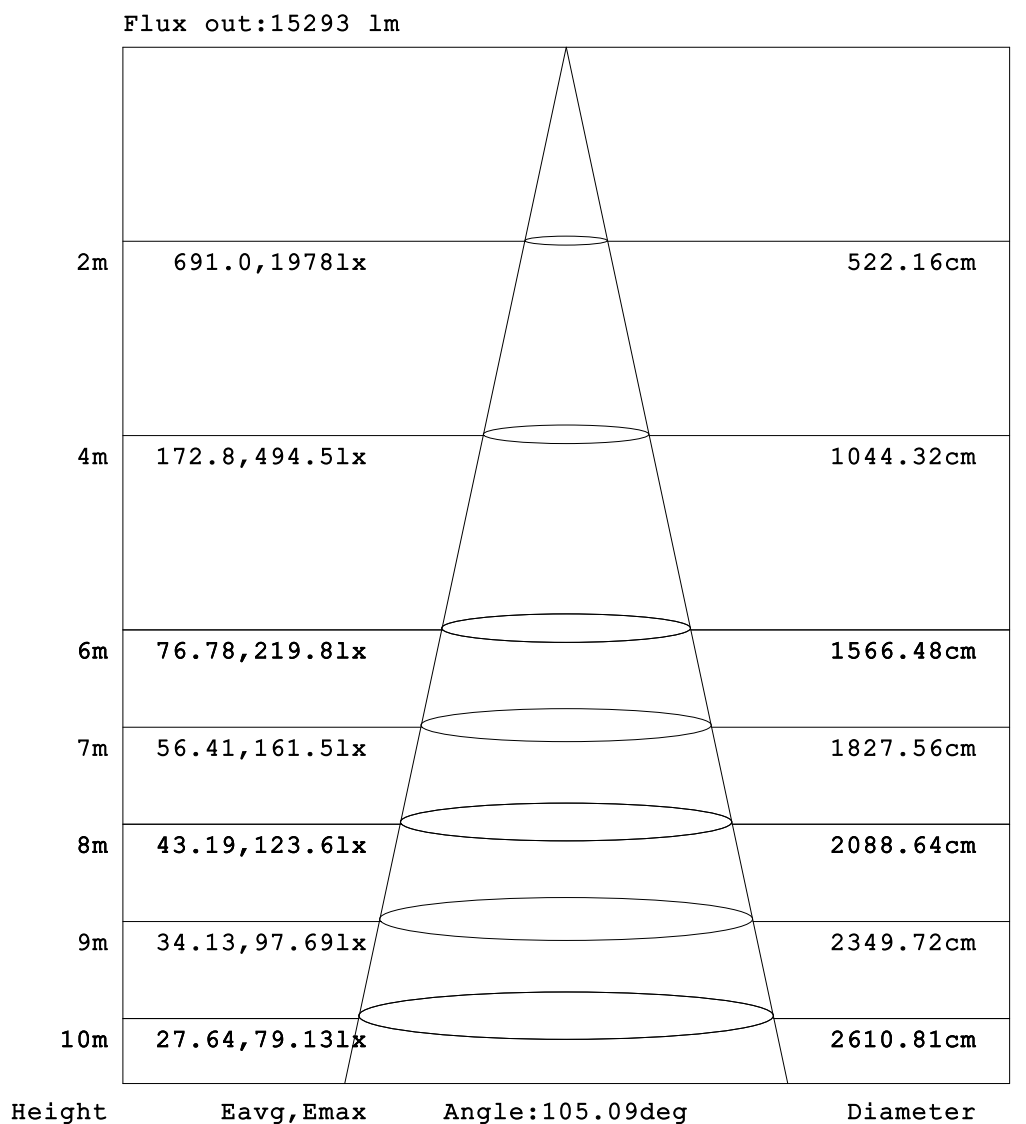


C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 26.6DEG  
Operators: LYJ  
Test Date: 2020-11-11

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 49.8%  
Test Distance: 26.000m [K=0.4574]  
Remarks:



## AAI Figure



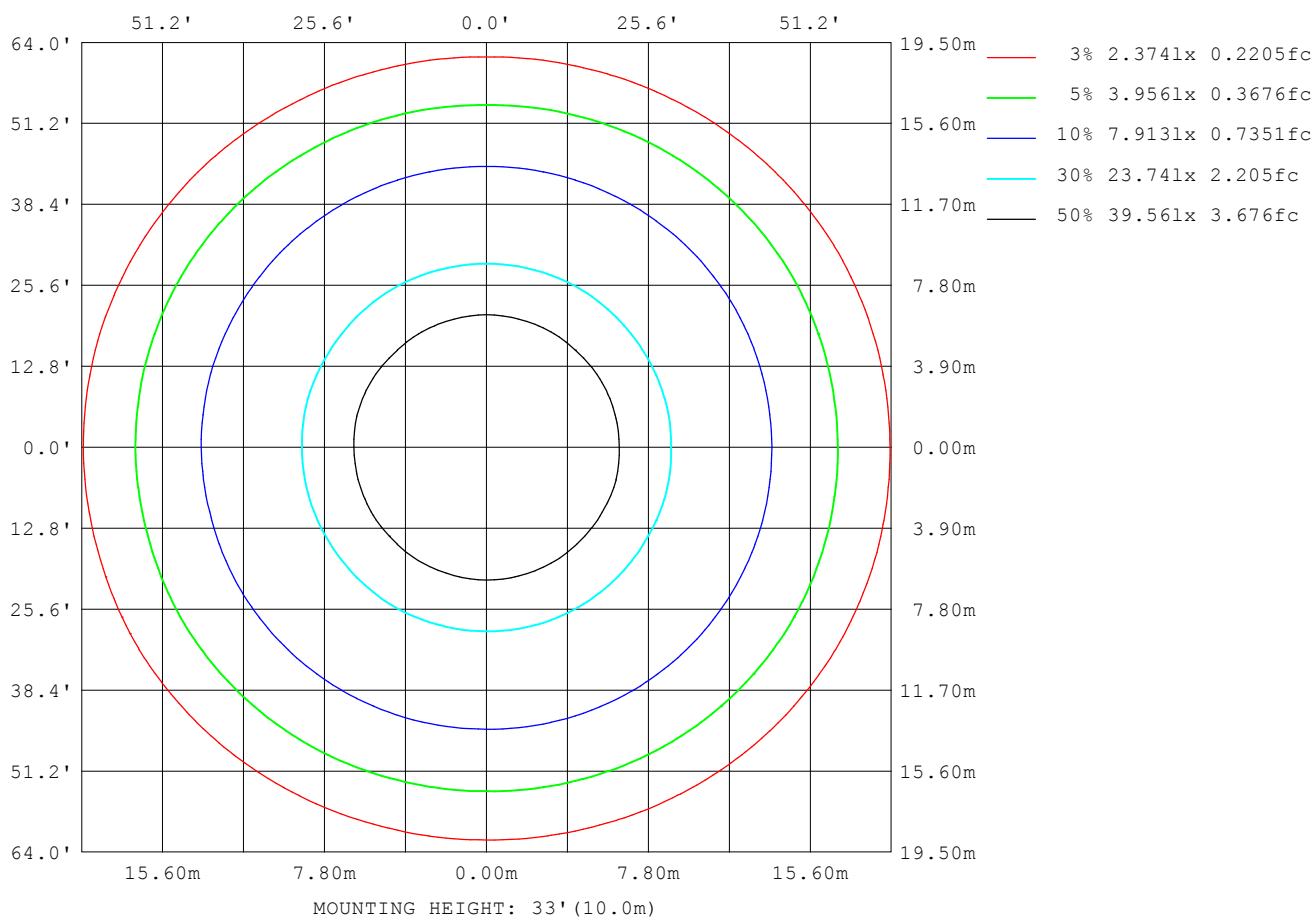
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:26.6DEG  
Operators:LYJ  
Test Date:2020-11-11

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity:49.8%  
Test Distance:26.000m [K=0.4574]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

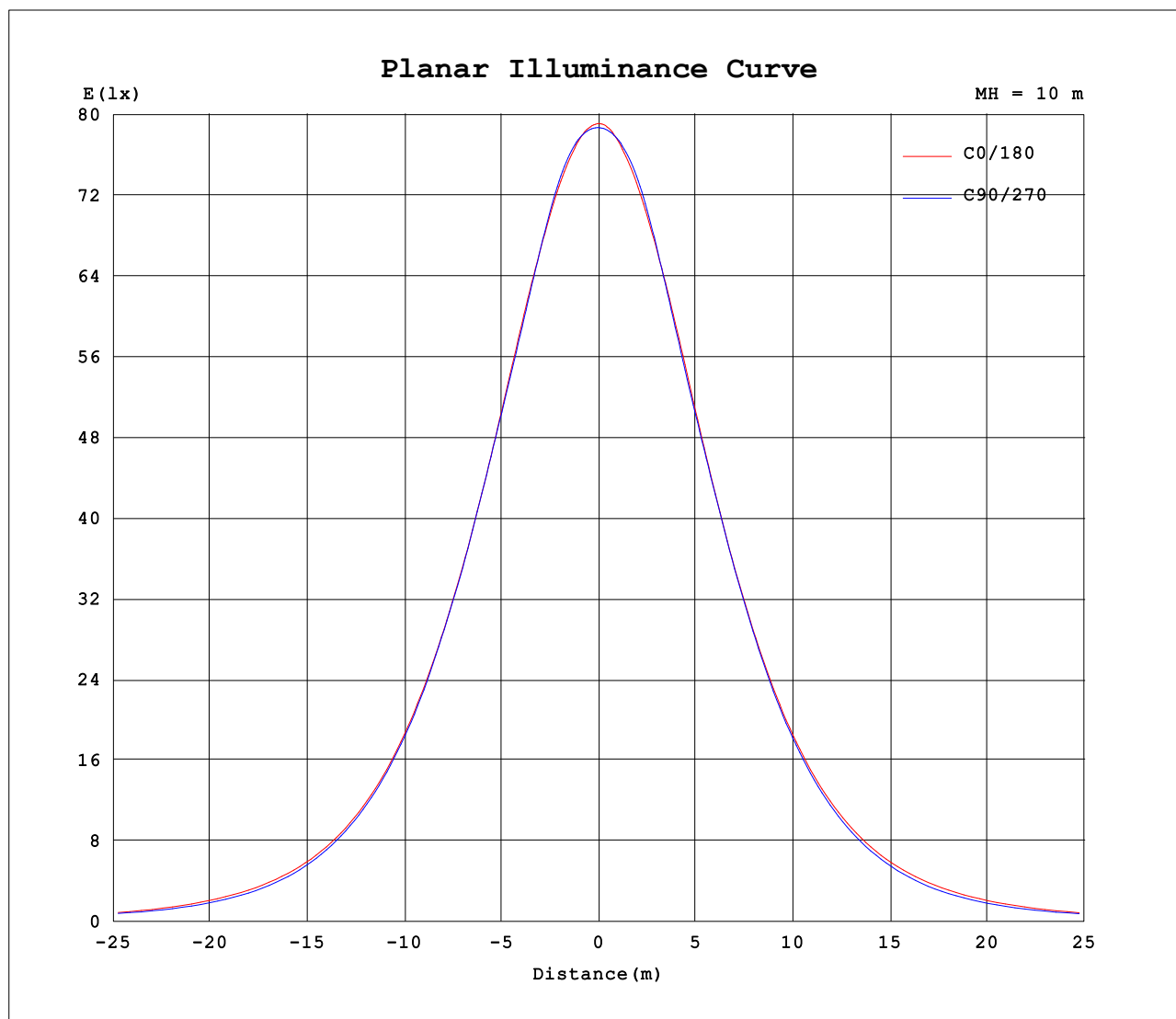
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 26.6DEG  
Operators: LYJ  
Test Date: 2020-11-11

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 49.8%  
Test Distance: 26.000m [K=0.4574]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 26.6DEG  
Operators: LYJ  
Test Date: 2020-11-11

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 49.8%  
Test Distance: 26.000m [K=0.4574]  
Remarks: