

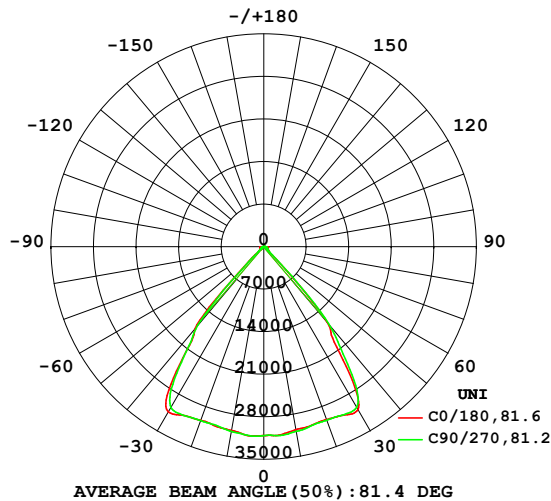
# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

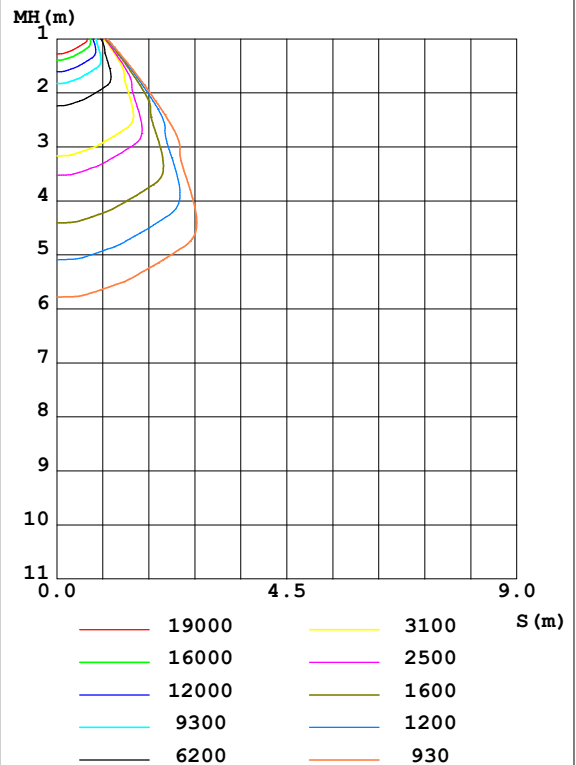
Test:U:230.00V I:1.3075A P:299.50W PF:0.9959 Freq:50.00Hz UTHDi:0% ITHDi:0% Lamp Flux:46701x1 lm		
NAME: LHB09-300-5070-L03902	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 155.93 lm/W			
MODEL	/	I <sub>max</sub> (cd)	31415	S/MH (C0/180)	1.20
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH (C90/270)	1.18
RATED VOLTAGE(V)	/	TOTAL FLUX (lm)	46701	η UP,DN (C0-180)	0.0,50.0
NOMINAL FLUX(lm)	46701	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)	230	η down (%)	100.0	CIBSE SHR MAX	0.85

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	3058	3065	3087	3084	3069	3062	3088	3055	0- 10	2956	2956	6.33,6.33
20	3026	2991	3040	2995	3040	3007	3046	2988	10- 20	8611	11567	24.8,24.8
30	3096	3019	3054	3042	3139	3040	3054	3006	20- 30	14094	25661	54.9,54.9
40	1628	1453	1673	1585	1753	1573	1695	1395	30- 40	15446	41108	88,88
50	81.56	98.24	91.24	97.11	87.53	101.4	85.05	87.95	40- 50	4179	45286	97,97
60	60.46	57.78	51.54	57.20	59.96	56.12	47.40	51.75	50- 60	591.0	45877	98.2,98.2
70	60.65	36.86	38.10	37.82	60.48	35.75	35.24	33.33	60- 70	426.3	46304	99.1,99.1
80	65.43	19.43	10.80	22.73	65.32	23.03	10.63	19.99	70- 80	304.8	46609	99.8,99.8
90	0.0826	0.0482	0.0481	0.0653	0.0998	0.1686	0.0859	0.0515	80- 90	92.62	46701	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): 44619 lm

%lum = 95.5%

%lamp = 95.5%

Conical surface Flux(120deg): 45877 lm

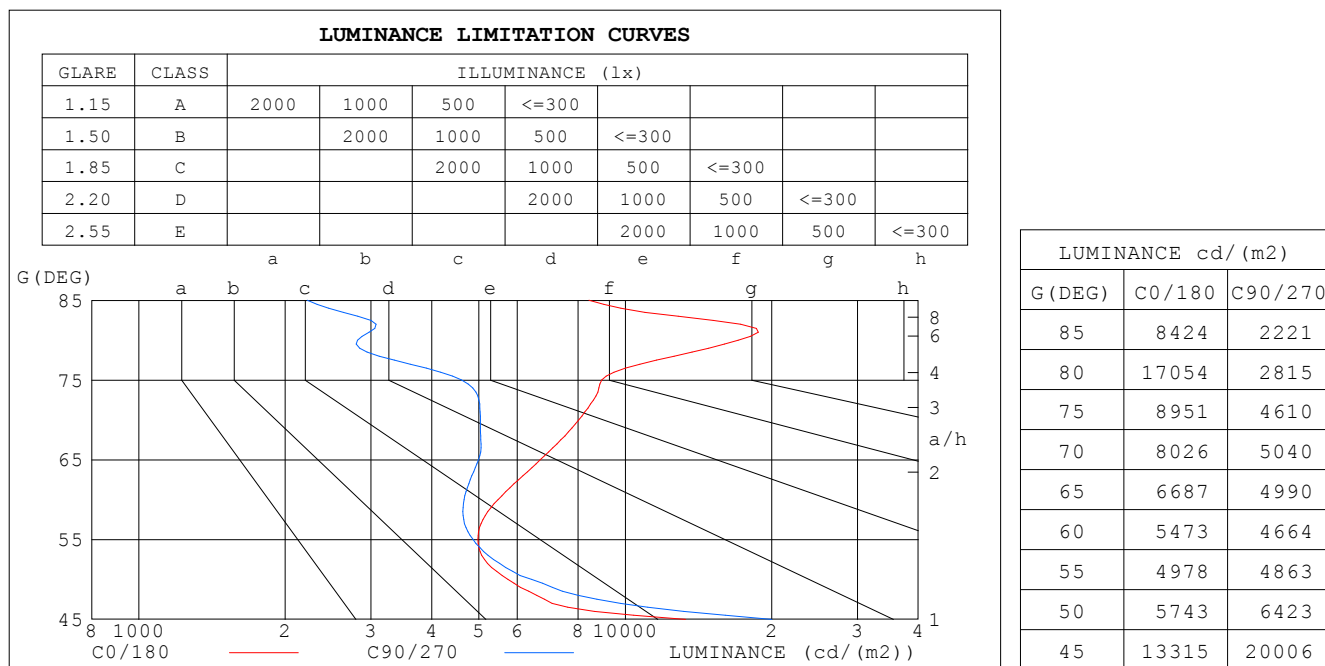
%lum = 98.2%

%lamp = 98.2%

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:

## LUMINANCE LIMITATION CURVES



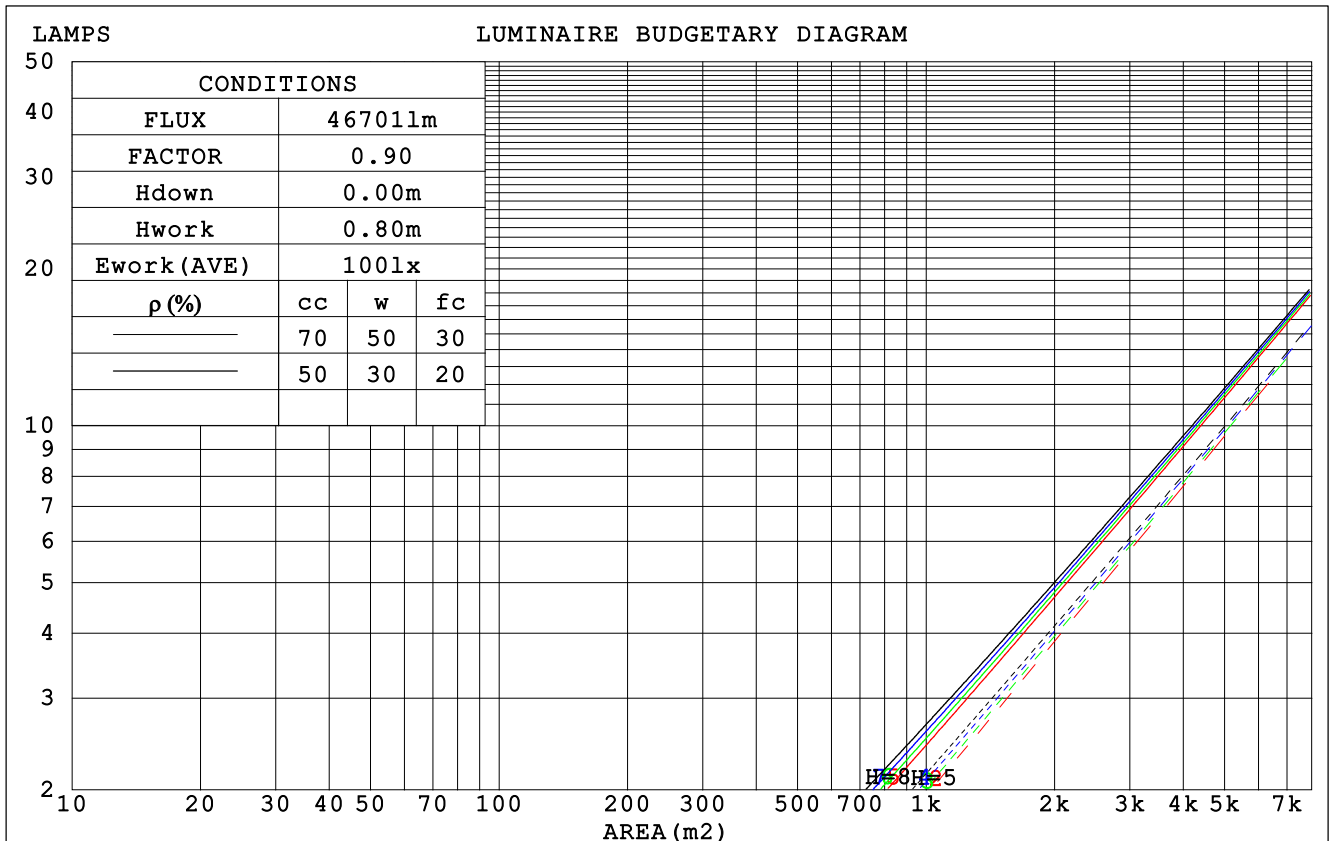
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
Test Date: 2021-03-01

$\gamma$  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

## 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	1.10	1.07	1.04	1.08	1.05	1.03	1.03	1.01	.00	.00	.98	.97	.96	.95	.94	.92
2.0	1.01	.96	.93	.99	.95	.92	.96	.92	.90	.93	.90	.88	.90	.88	.86	.84
3.0	.93	.87	.83	.92	.86	.82	.89	.85	.81	.86	.83	.80	.84	.81	.78	.77
4.0	.86	.80	.75	.85	.79	.74	.82	.77	.74	.80	.76	.73	.78	.75	.72	.70
5.0	.79	.73	.68	.78	.72	.68	.77	.71	.67	.75	.70	.66	.73	.69	.66	.64
6.0	.74	.67	.62	.73	.66	.62	.71	.66	.61	.70	.65	.61	.68	.64	.61	.59
7.0	.68	.62	.57	.68	.61	.57	.66	.61	.56	.65	.60	.56	.64	.59	.56	.54
8.0	.64	.57	.52	.63	.57	.52	.62	.56	.52	.61	.55	.52	.60	.55	.51	.50
9.0	.59	.53	.48	.59	.52	.48	.58	.52	.48	.57	.52	.48	.56	.51	.48	.46
10.0	.55	.49	.45	.55	.49	.45	.54	.48	.44	.53	.48	.44	.52	.48	.44	.43



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

## 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	.198	.113	.036	.192	.109	.035	.179	.103	.033	.167	.096	.031	.156	.091	.029	
2.0	.191	.105	.032	.185	.102	.031	.175	.097	.030	.165	.092	.029	.155	.088	.028	
3.0	.183	.097	.029	.178	.095	.029	.168	.091	.028	.160	.088	.027	.152	.084	.026	
4.0	.174	.091	.027	.170	.089	.026	.162	.086	.026	.154	.083	.025	.147	.080	.024	
5.0	.166	.085	.025	.162	.083	.024	.155	.081	.024	.149	.078	.023	.142	.076	.023	
6.0	.159	.080	.023	.155	.078	.023	.149	.076	.022	.143	.074	.022	.138	.072	.022	
7.0	.152	.075	.021	.149	.074	.021	.143	.072	.021	.138	.071	.021	.133	.069	.020	
8.0	.145	.071	.020	.142	.070	.020	.137	.069	.020	.132	.067	.019	.128	.066	.019	
9.0	.139	.067	.019	.136	.066	.019	.132	.065	.018	.127	.064	.018	.123	.063	.018	
10.0	.133	.064	.018	.131	.063	.018	.127	.062	.017	.123	.061	.017	.119	.060	.017	

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	.050	.019	.017	.016	
2.0	.159	.132	.110	.136	.114	.095	.093	.079	.066	.054	.046	.039	.017	.015	.013	
3.0	.148	.114	.087	.127	.098	.075	.087	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.138	.099	.069	.119	.086	.060	.082	.060	.043	.047	.035	.025	.015	.011	.008	
5.0	.130	.088	.057	.112	.076	.049	.077	.053	.035	.045	.031	.021	.014	.010	.007	
6.0	.124	.079	.047	.106	.068	.041	.073	.048	.029	.043	.028	.017	.014	.009	.006	
7.0	.118	.072	.040	.101	.062	.035	.070	.044	.024	.041	.026	.015	.013	.008	.005	
8.0	.112	.066	.034	.097	.057	.030	.067	.040	.021	.039	.024	.012	.013	.008	.004	
9.0	.107	.061	.029	.092	.053	.026	.064	.037	.018	.037	.022	.011	.012	.007	.004	
10.0	.103	.056	.026	.089	.049	.022	.061	.035	.016	.036	.020	.010	.012	.007	.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	8.9	10.0	9.3	10.3	10.6	9.0	10.1	9.4	10.4	10.7
3H	11.7	12.6	12.1	13.0	13.3	10.8	11.7	11.2	12.1	12.4
4H	13.1	14.0	13.5	14.3	14.7	11.6	12.5	12.0	12.8	13.2
6H	14.9	15.7	15.3	16.1	16.5	11.9	12.7	12.3	13.1	13.5
8H	15.9	16.6	16.3	17.0	17.4	12.0	12.8	12.5	13.1	13.6
12H	16.2	16.9	16.6	17.2	17.7	12.0	12.7	12.5	13.1	13.6
4H 2H	9.7	10.6	10.1	10.9	11.3	9.8	10.7	10.2	11.0	11.4
3H	12.4	13.1	12.8	13.5	13.9	11.7	12.4	12.1	12.8	13.2
4H	13.8	14.4	14.3	14.9	15.3	12.6	13.2	13.0	13.6	14.1
6H	15.4	16.0	15.9	16.4	16.9	13.0	13.5	13.5	14.0	14.5
8H	16.3	16.8	16.8	17.3	17.7	13.1	13.6	13.6	14.0	14.5
12H	16.6	17.1	17.1	17.6	18.0	13.1	13.6	13.6	14.1	14.5
8H 4H	14.1	14.6	14.6	15.0	15.5	13.1	13.6	13.6	14.0	14.5
6H	15.7	16.1	16.2	16.6	17.1	13.7	14.1	14.2	14.6	15.1
8H	16.6	16.9	17.1	17.4	17.9	13.8	14.2	14.4	14.7	15.2
12H	16.9	17.2	17.4	17.7	18.3	13.9	14.2	14.4	14.7	15.3
12H 4H	14.1	14.5	14.6	15.0	15.5	13.2	13.6	13.6	14.1	14.5
6H	15.7	16.1	16.3	16.6	17.1	13.8	14.2	14.4	14.7	15.2
8H	16.6	16.9	17.1	17.4	18.0	14.0	14.3	14.5	14.8	15.4
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

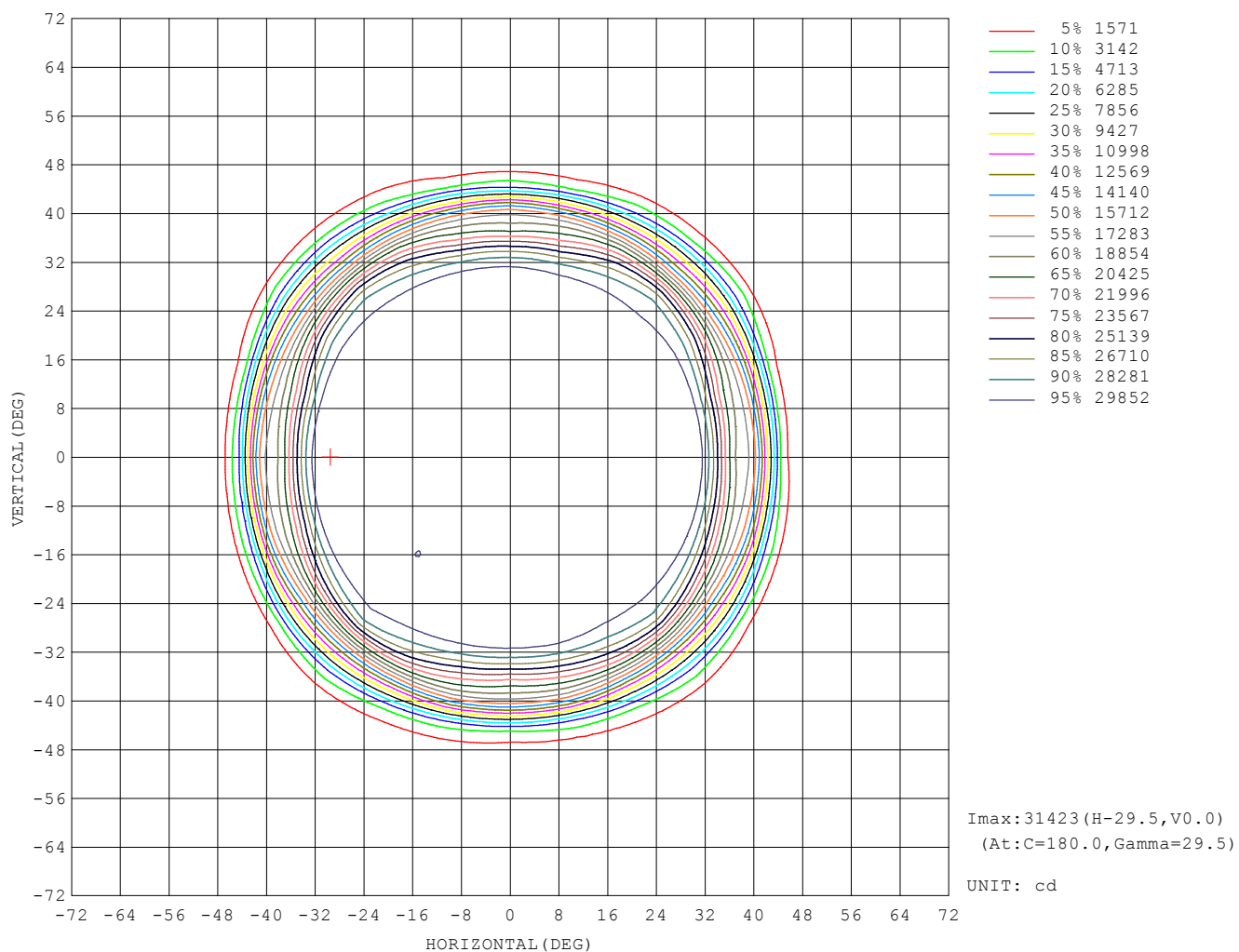
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	84	77	73	84	77	73	83	77	73	69
0.80	92	86	81	91	85	81	90	85	81	77
1.00	97	91	87	96	91	87	95	90	86	82
1.25	101	96	92	100	95	92	98	94	91	86
1.50	104	99	96	103	98	95	101	97	94	89
2.00	107	103	100	106	102	99	103	100	97	92
2.50	109	105	102	108	104	101	104	102	99	93
3.00	111	107	104	109	106	103	106	103	101	95
4.00	113	110	108	111	108	106	107	105	104	96
5.00	114	112	110	112	110	108	108	107	105	97
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
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 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

## ISOCANDELA DIAGRAM

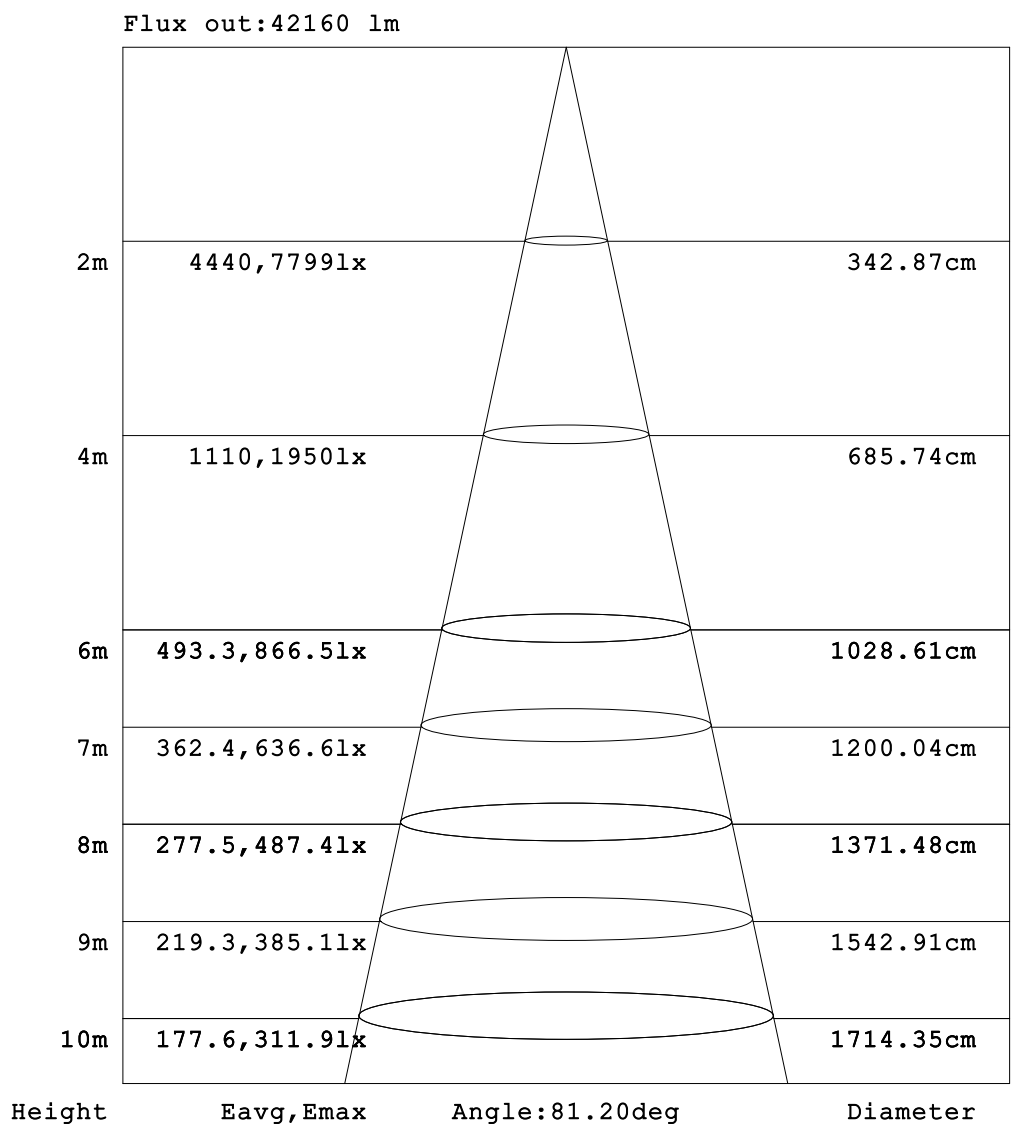


C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: LYJ  
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$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 26.000m [K=0.4574]  
Remarks:



## AAI Figure



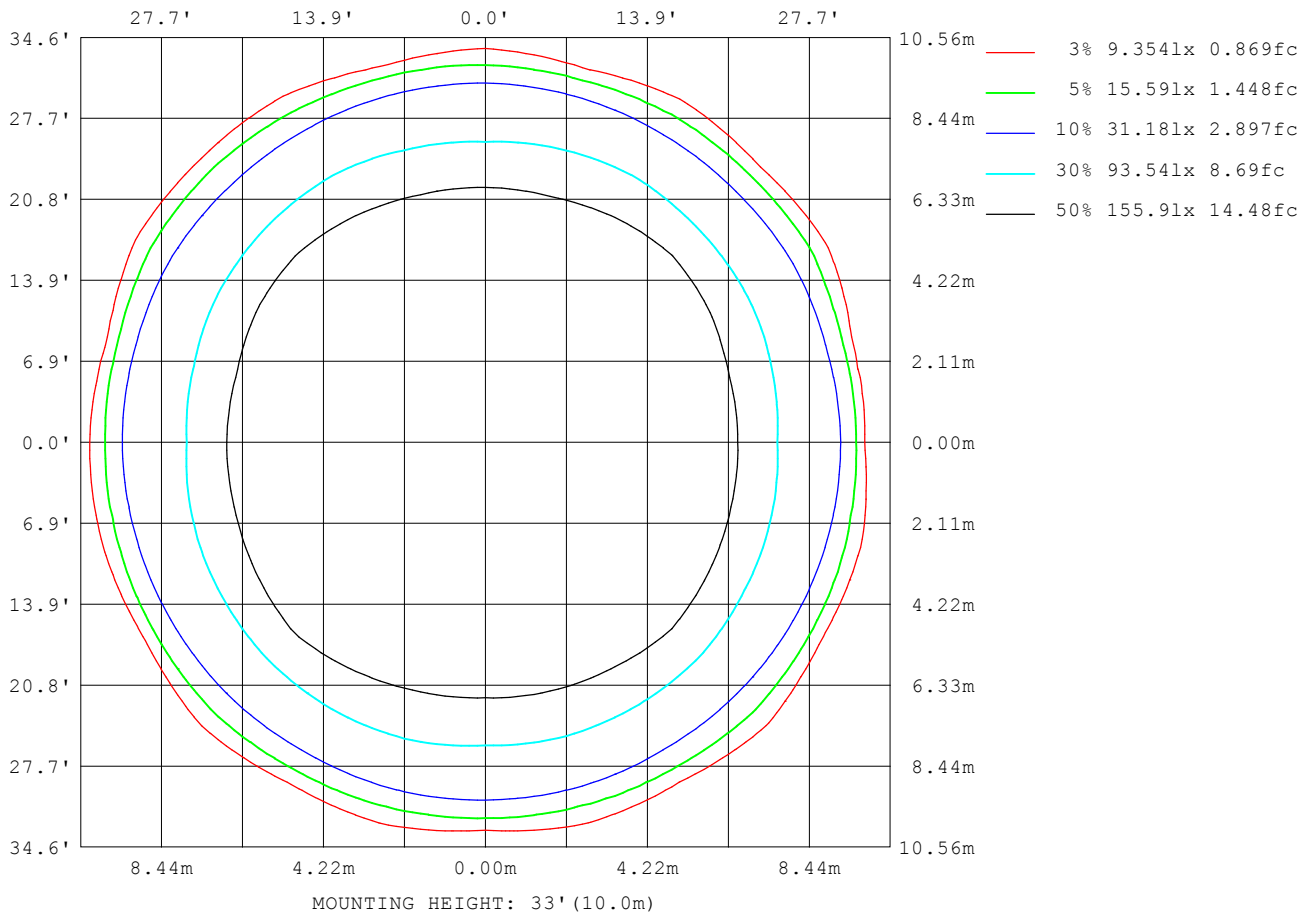
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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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

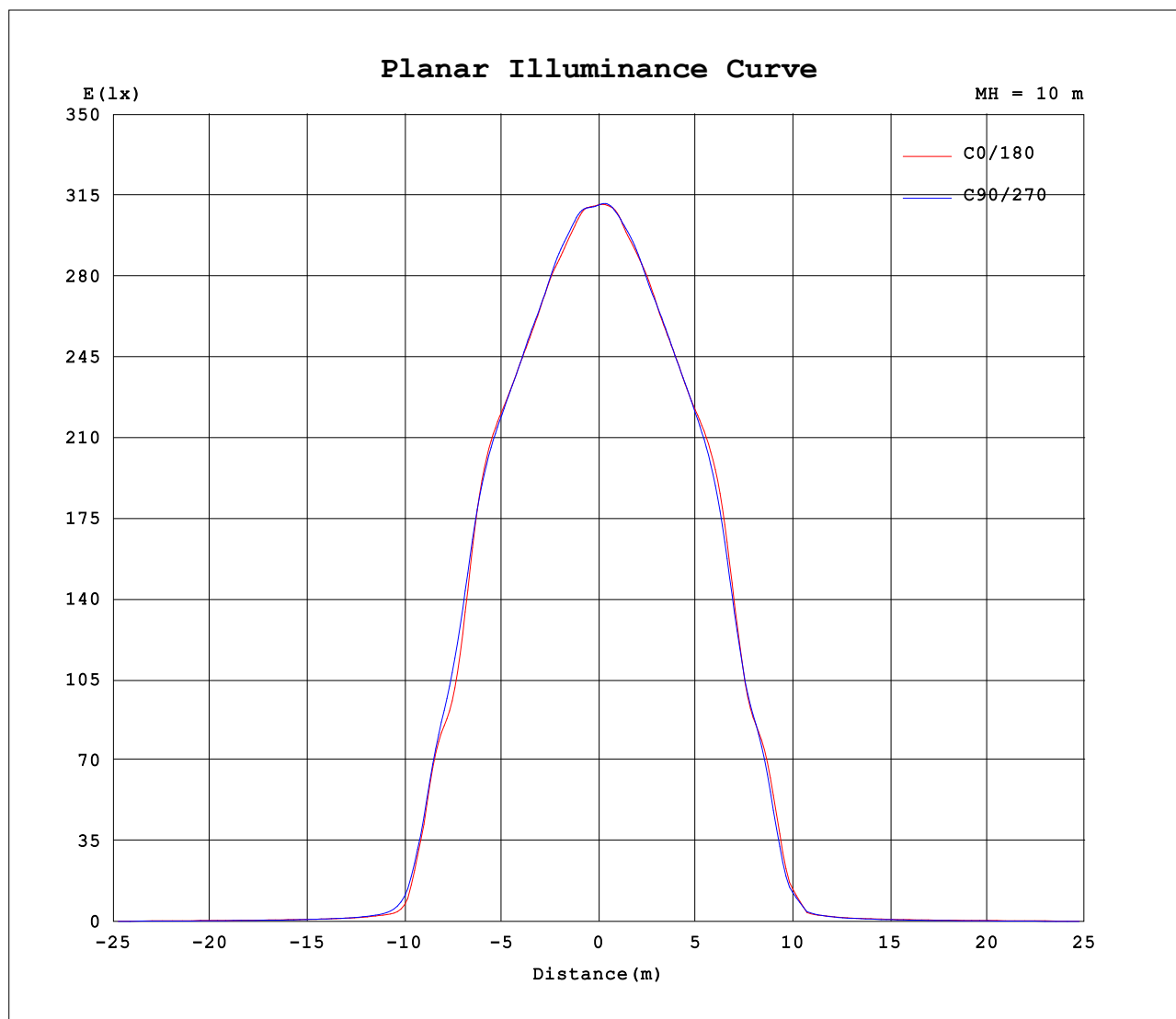
## ISOLUX DIAGRAM



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

$\gamma$  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:

## 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: