

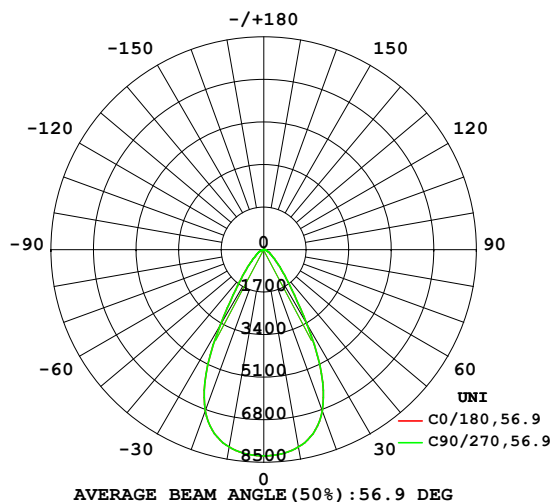
## EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## LUMINAIRE PHOTOMETRIC TEST REPORT

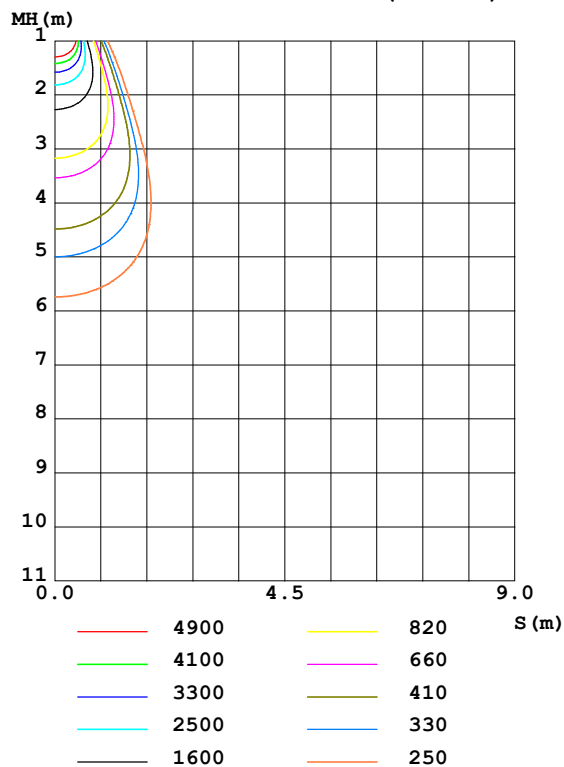
Test:U:230.0V I:0.2350A P:51.61W PF:0.9546 Freq:49.99Hz Lamp Flux:7828.49x1 lm		
NAME: FL23-050-5070-F06402	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 151.69 lm/W			
MODEL	-	I <sub>max</sub> (cd)	8240	S/MH (C0/180)	0.84
NOMINAL POWER(W)	50	LOR(%)	100.0	S/MH (C90/270)	0.84
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	7828.5	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	7828.49	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:WJH  
Test Date:2020-07-06

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:9.350m [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	8006	8006	8006	8006	8006	8006	8006	8006	0- 10	776.1	776.1	9.91,9.91
20	6840	6840	6840	6840	6840	6840	6840	6840	10- 20	2122	2898	37,37
30	3488	3488	3488	3488	3488	3488	3488	3488	20- 30	2431	5329	68.1,68.1
40	1227	1227	1227	1227	1227	1227	1227	1227	30- 40	1295	6624	84.6,84.6
50	515.1	515.1	515.1	515.1	515.1	515.1	515.1	515.1	40- 50	625.3	7249	92.6,92.6
60	251.6	251.6	251.6	251.6	251.6	251.6	251.6	251.6	50- 60	324.1	7573	96.7,96.7
70	114.6	114.6	114.6	114.6	114.6	114.6	114.6	114.6	60- 70	175.9	7749	99,99
80	26.56	26.56	26.56	26.56	26.56	26.56	26.56	26.56	70- 80	70.80	7820	99.9,99.9
90	1.237	1.237	1.237	1.237	1.237	1.237	1.237	1.237	80- 90	8.796	7828	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:cd									UNIT:lm		

Conical surface Flux(90deg): 6990.1 lm

%lum = 89.3%

%lamp = 89.3%

Conical surface Flux(120deg): 7573 lm

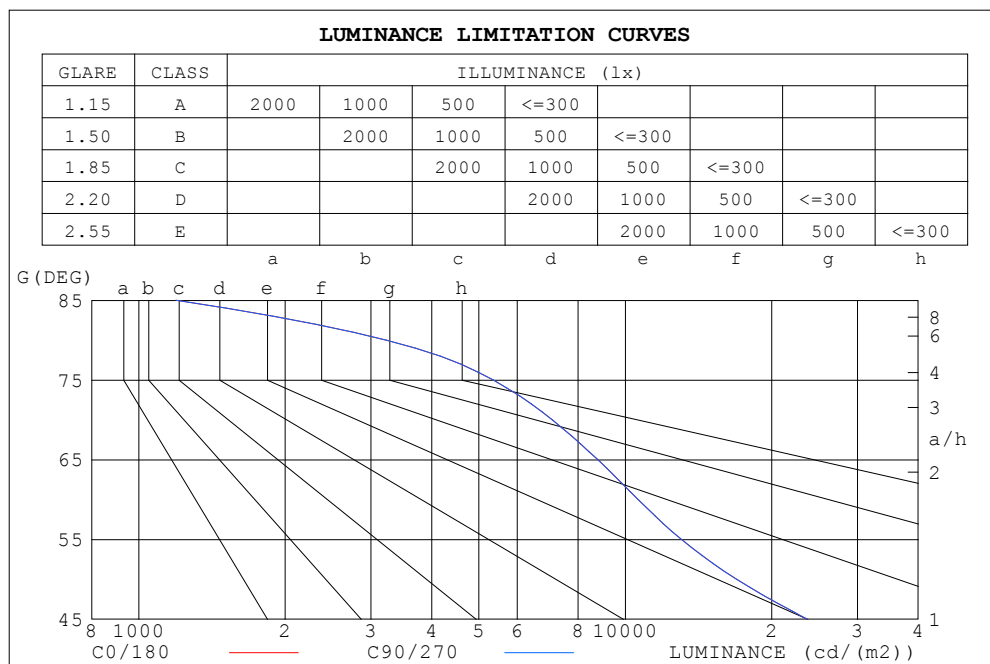
%lum = 96.7%

%lamp = 96.7%

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:WJH  
Test Date:2020-07-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:9.350m [K=1.0000]  
Remarks:

## LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	1192	1192
80	3234	3234
75	5353	5353
70	7082	7082
65	8786	8786
60	10637	10637
55	13044	13044
50	16943	16943
45	23651	23651

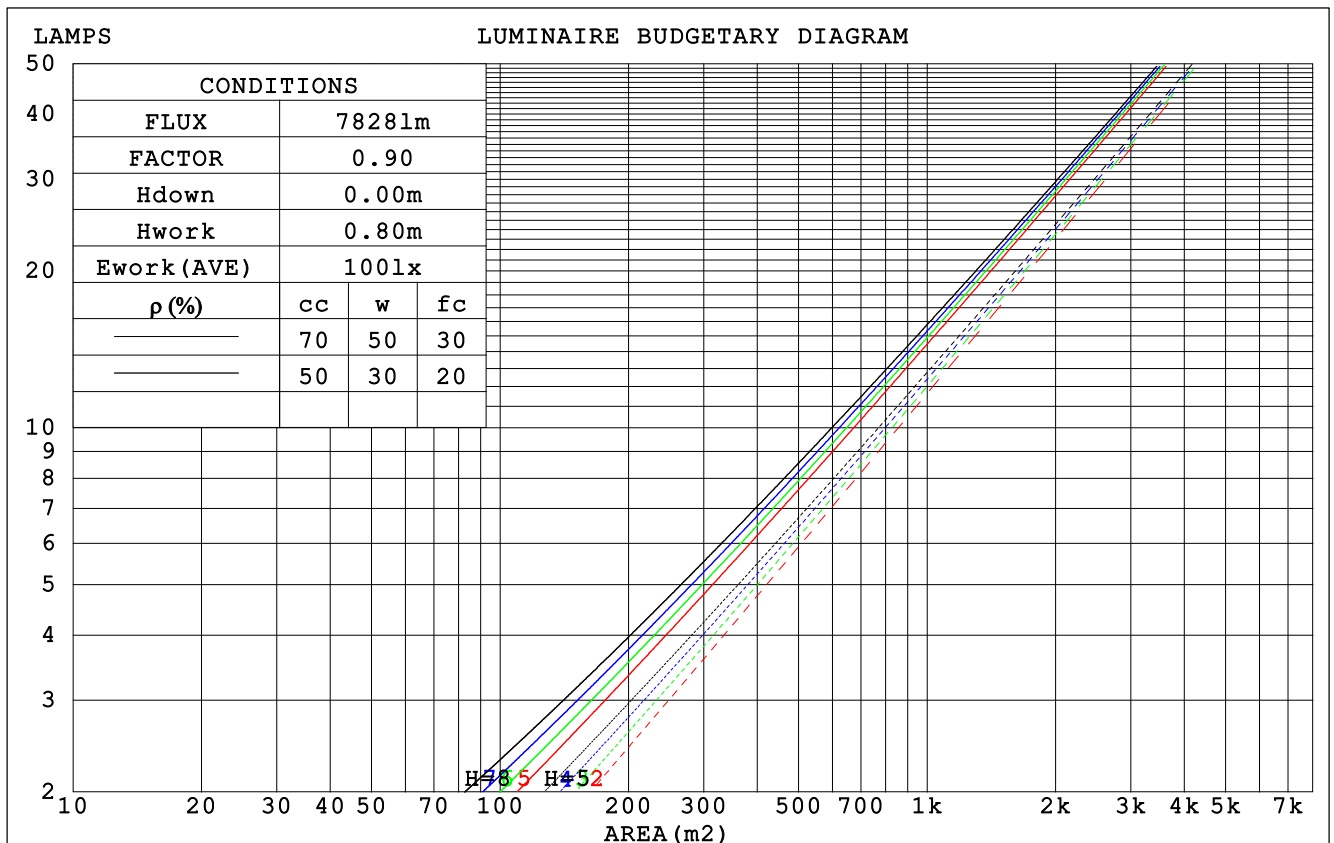
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: WJH  
Test Date: 2020-07-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 9.350m [K=1.0000]  
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	1.10	1.07	1.05	1.08	1.05	1.03	1.04	1.02	.00	.00	.98	.97	.97	.95	.94	.92
2.0	1.02	.97	.93	.00	.96	.92	.97	.93	.90	.93	.91	.88	.91	.89	.87	.85
3.0	.94	.89	.84	.93	.88	.84	.90	.86	.82	.87	.84	.81	.85	.82	.80	.78
4.0	.87	.81	.77	.86	.81	.76	.84	.79	.76	.82	.78	.75	.80	.77	.74	.72
5.0	.81	.75	.71	.81	.75	.70	.79	.74	.70	.77	.73	.69	.75	.72	.68	.67
6.0	.76	.70	.65	.75	.69	.65	.74	.69	.65	.72	.68	.64	.71	.67	.64	.62
7.0	.72	.65	.61	.71	.65	.61	.70	.64	.60	.68	.63	.60	.67	.63	.60	.58
8.0	.67	.61	.57	.67	.61	.57	.66	.60	.56	.65	.60	.56	.64	.59	.56	.54
9.0	.63	.57	.53	.63	.57	.53	.62	.57	.53	.61	.56	.53	.60	.56	.52	.51
10.0	.60	.54	.50	.60	.54	.50	.59	.53	.50	.58	.53	.50	.57	.53	.49	.48



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:WJH  
 Test Date:2020-07-06

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:9.350m [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	.193	.110	.035	.186	.106	.034	.174	.100	.032	.162	.093	.030	.151	.088	.028		
2.0	.185	.102	.031	.180	.099	.030	.169	.094	.029	.159	.089	.028	.150	.085	.027		
3.0	.176	.094	.028	.171	.092	.028	.162	.088	.027	.153	.084	.026	.145	.081	.025		
4.0	.167	.087	.025	.162	.085	.025	.154	.082	.024	.147	.079	.024	.140	.076	.023		
5.0	.158	.081	.023	.154	.079	.023	.147	.077	.023	.141	.074	.022	.135	.072	.022		
6.0	.150	.075	.022	.147	.074	.021	.141	.072	.021	.135	.070	.021	.129	.068	.020		
7.0	.143	.071	.020	.140	.070	.020	.134	.068	.020	.129	.066	.019	.124	.065	.019		
8.0	.136	.066	.019	.133	.066	.019	.128	.064	.018	.124	.063	.018	.120	.061	.018		
9.0	.130	.063	.018	.127	.062	.017	.123	.061	.017	.119	.060	.017	.115	.058	.017		
10.0	.124	.059	.016	.122	.059	.016	.118	.058	.016	.114	.057	.016	.111	.056	.016		

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	.172	.157	.144	.147	.135	.124	.101	.093	.085	.058	.054	.050	.019	.017	.016	
2.0	.158	.132	.111	.135	.114	.096	.093	.079	.067	.053	.046	.039	.017	.015	.013	
3.0	.146	.114	.088	.125	.098	.076	.086	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.137	.099	.071	.117	.086	.061	.081	.060	.043	.047	.035	.026	.015	.011	.008	
5.0	.128	.088	.058	.110	.076	.050	.076	.053	.036	.044	.031	.021	.014	.010	.007	
6.0	.121	.079	.048	.104	.068	.042	.072	.048	.030	.042	.028	.018	.013	.009	.006	
7.0	.114	.071	.041	.098	.062	.036	.068	.043	.025	.039	.025	.015	.013	.008	.005	
8.0	.108	.065	.035	.093	.056	.031	.065	.040	.022	.038	.023	.013	.012	.008	.004	
9.0	.103	.060	.030	.089	.052	.027	.062	.036	.019	.036	.022	.011	.012	.007	.004	
10.0	.098	.055	.027	.085	.048	.023	.059	.034	.017	.034	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:WJH  
 Test Date:2020-07-06

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
 Humidity:65.0%  
 Test Distance:9.350m [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	16.3	17.4	16.6	17.7	18.0	16.3	17.4	16.6	17.7	18.0
3H	17.2	18.2	17.6	18.5	18.9	17.2	18.2	17.6	18.5	18.9
4H	17.4	18.3	17.8	18.7	19.1	17.4	18.3	17.8	18.7	19.1
6H	17.5	18.3	17.9	18.7	19.1	17.5	18.3	17.9	18.7	19.1
8H	17.5	18.2	17.9	18.6	19.0	17.5	18.2	17.9	18.6	19.0
12H	17.4	18.2	17.9	18.5	19.0	17.4	18.2	17.9	18.5	19.0
4H 2H	16.5	17.4	16.9	17.8	18.2	16.5	17.4	16.9	17.8	18.2
3H	17.6	18.4	18.0	18.8	19.2	17.6	18.4	18.0	18.8	19.2
4H	17.9	18.6	18.4	19.0	19.5	17.9	18.6	18.4	19.0	19.5
6H	18.0	18.6	18.5	19.1	19.5	18.0	18.6	18.5	19.1	19.5
8H	18.0	18.5	18.5	19.0	19.5	18.0	18.5	18.5	19.0	19.5
12H	18.0	18.4	18.5	18.9	19.4	18.0	18.4	18.5	18.9	19.4
8H 4H	18.0	18.5	18.4	18.9	19.4	18.0	18.5	18.4	18.9	19.4
6H	18.1	18.5	18.6	19.0	19.5	18.1	18.5	18.6	19.0	19.5
8H	18.1	18.5	18.6	19.0	19.5	18.1	18.5	18.6	19.0	19.5
12H	18.1	18.4	18.6	18.9	19.5	18.1	18.4	18.6	18.9	19.5
12H 4H	17.9	18.4	18.4	18.9	19.3	17.9	18.4	18.4	18.9	19.3
6H	18.1	18.4	18.6	18.9	19.5	18.1	18.4	18.6	18.9	19.5
8H	18.1	18.4	18.6	18.9	19.5	18.1	18.4	18.6	18.9	19.5
CIE190: 2010										

CIE190: 2010  
Area: 0.0473 m2

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:WJH  
Test Date:2020-07-06

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
Humidity:65.0%  
Test Distance:9.350m [K=1.0000]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

## UTILIZATION FACTORS TABLE

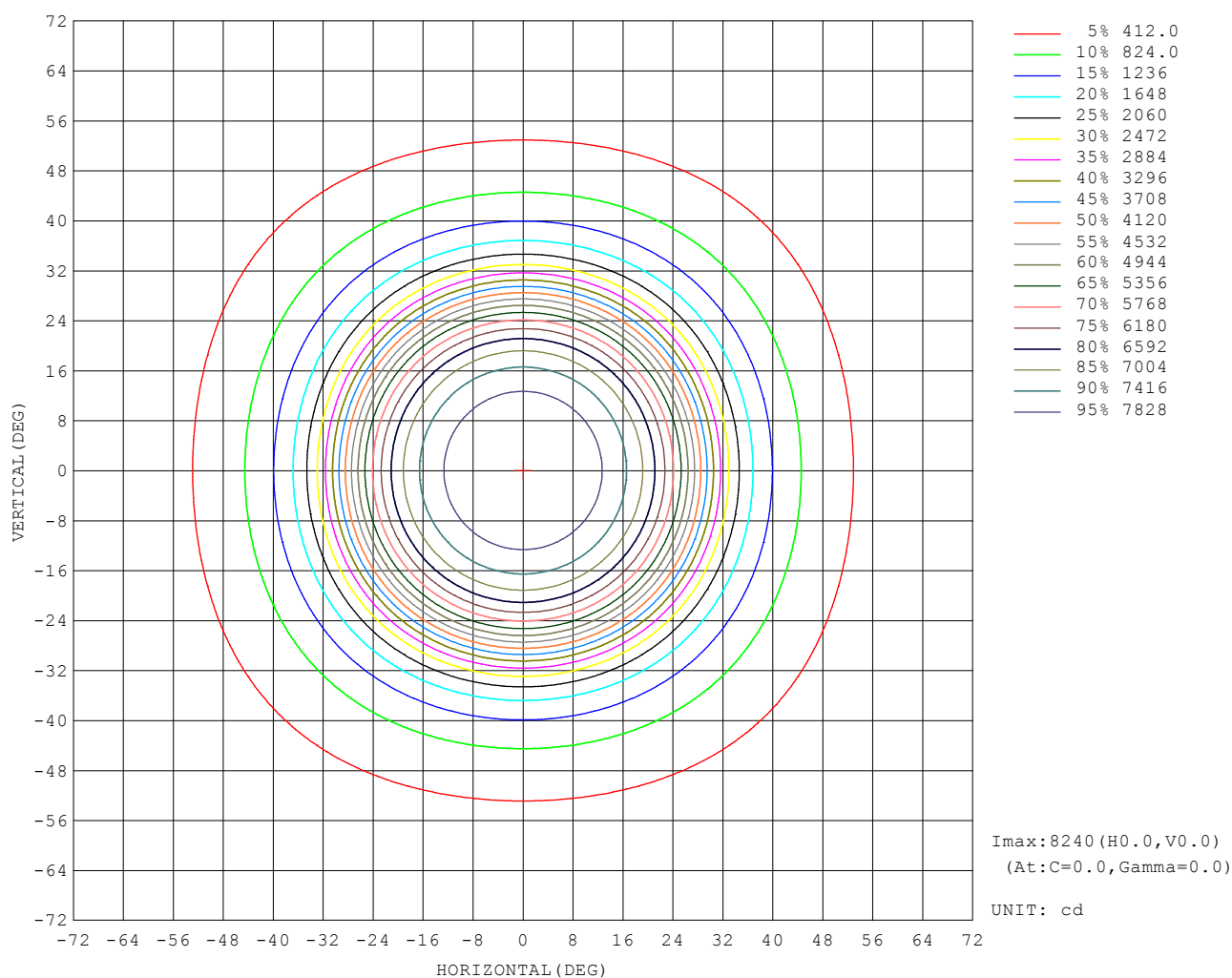
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	82	75	70	81	74	70	80	74	70	66
0.80	90	83	79	89	83	79	88	82	78	74
1.00	95	89	85	94	88	84	93	88	84	79
1.25	100	94	90	99	93	89	97	92	89	84
1.50	103	98	94	102	97	93	99	95	92	87
2.00	106	102	98	105	101	97	102	99	96	90
2.50	109	104	101	107	103	100	104	100	98	92
3.00	110	106	103	109	105	102	105	102	100	93
4.00	113	109	107	111	108	106	107	105	103	95
5.00	114	111	109	112	110	108	108	106	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  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: WJH  
 Test Date: 2020-07-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
 Humidity: 65.0%  
 Test Distance: 9.350m [K=1.0000]  
 Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

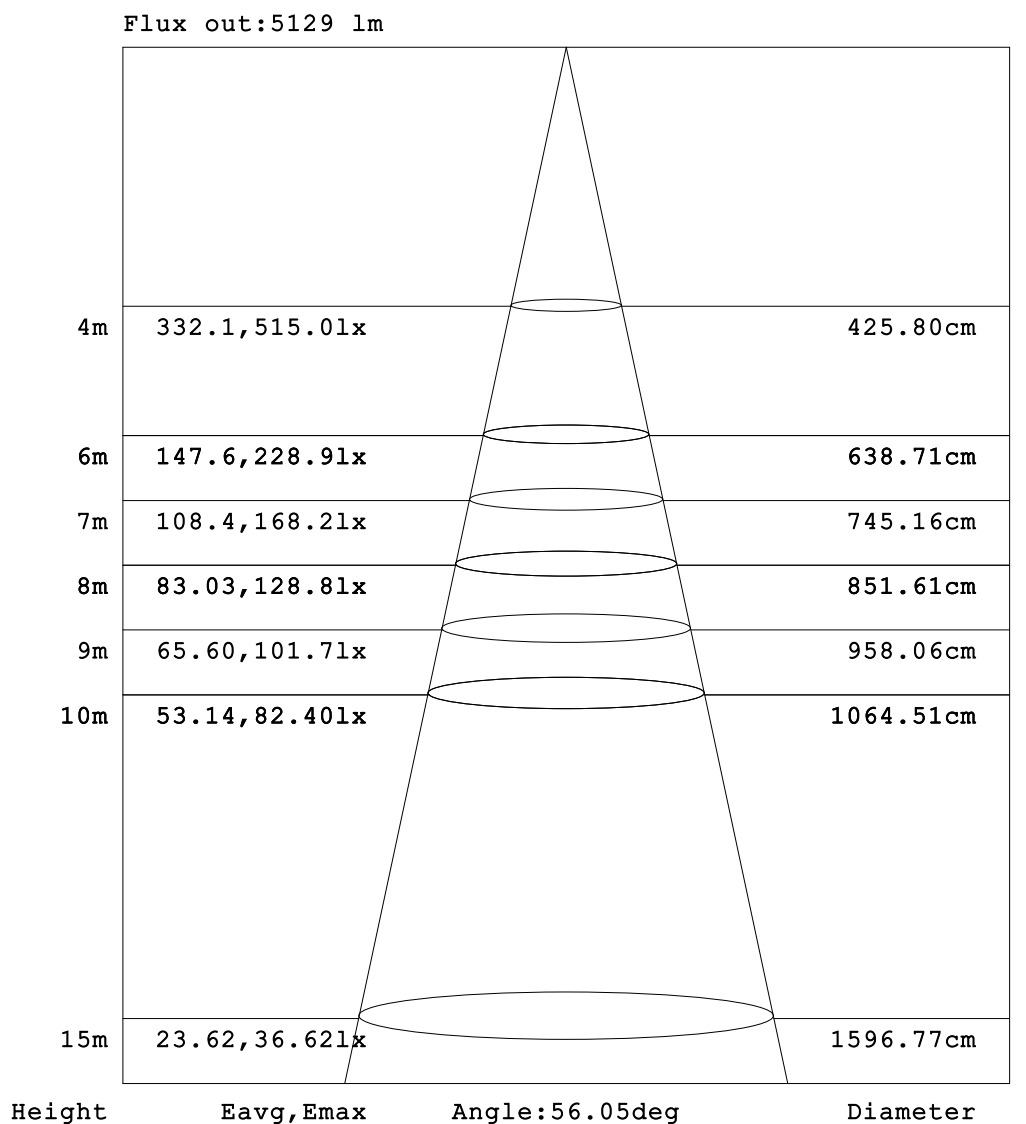
## ISOCANDELA DIAGRAM



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: WJH  
Test Date: 2020-07-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 9.350m [K=1.0000]  
Remarks:

## AAI Figure



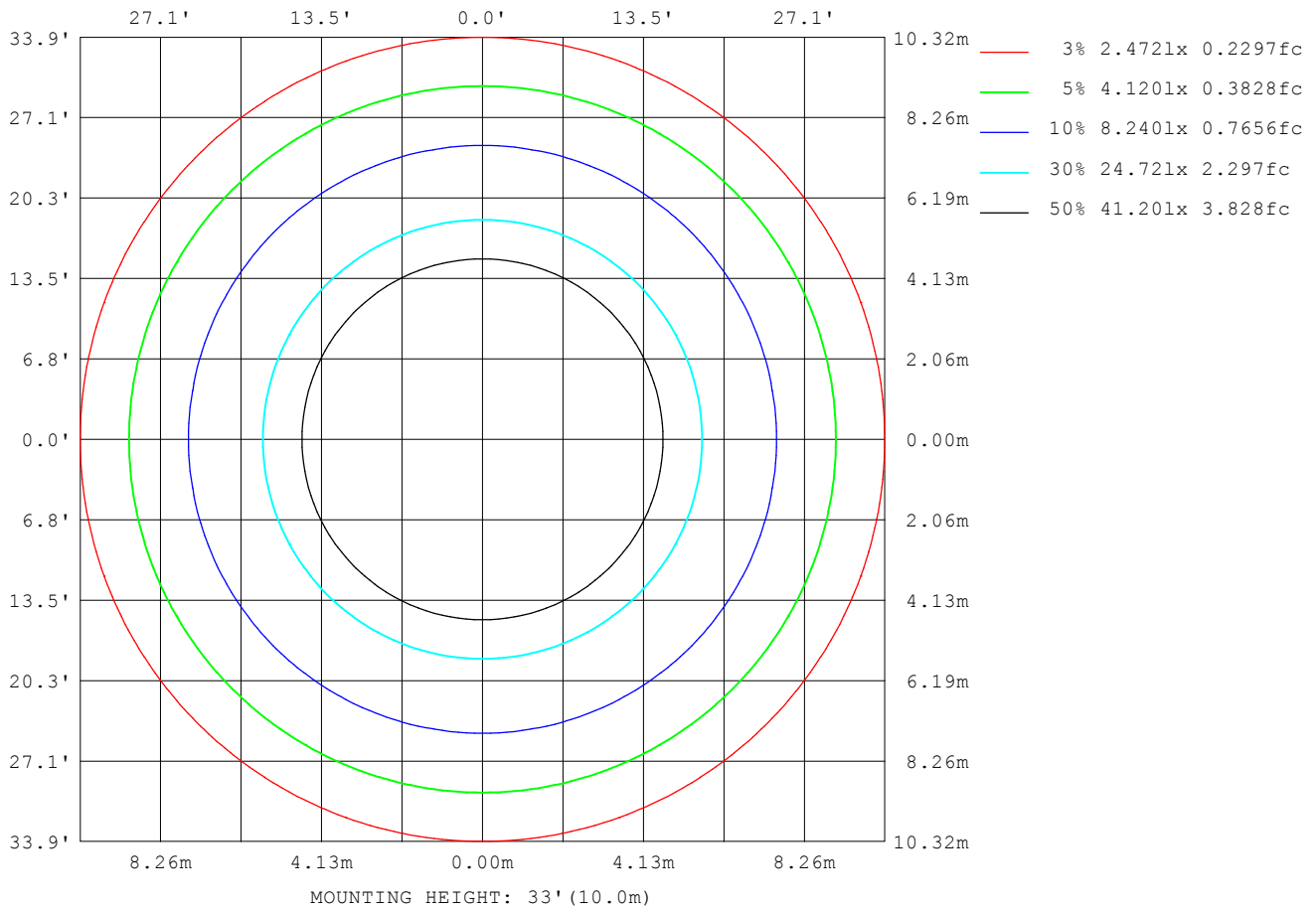
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360 DEG  
C Interval: 15.0 DEG  
Test Speed: HIGH  
Temperature: 25.3 DEG  
Operators: WJH  
Test Date: 2020-07-06

$\gamma$  Range: 0 - 90 DEG  
 $\gamma$  Interval: 1.0 DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 9.350m [K=1.0000]  
Remarks:

# EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

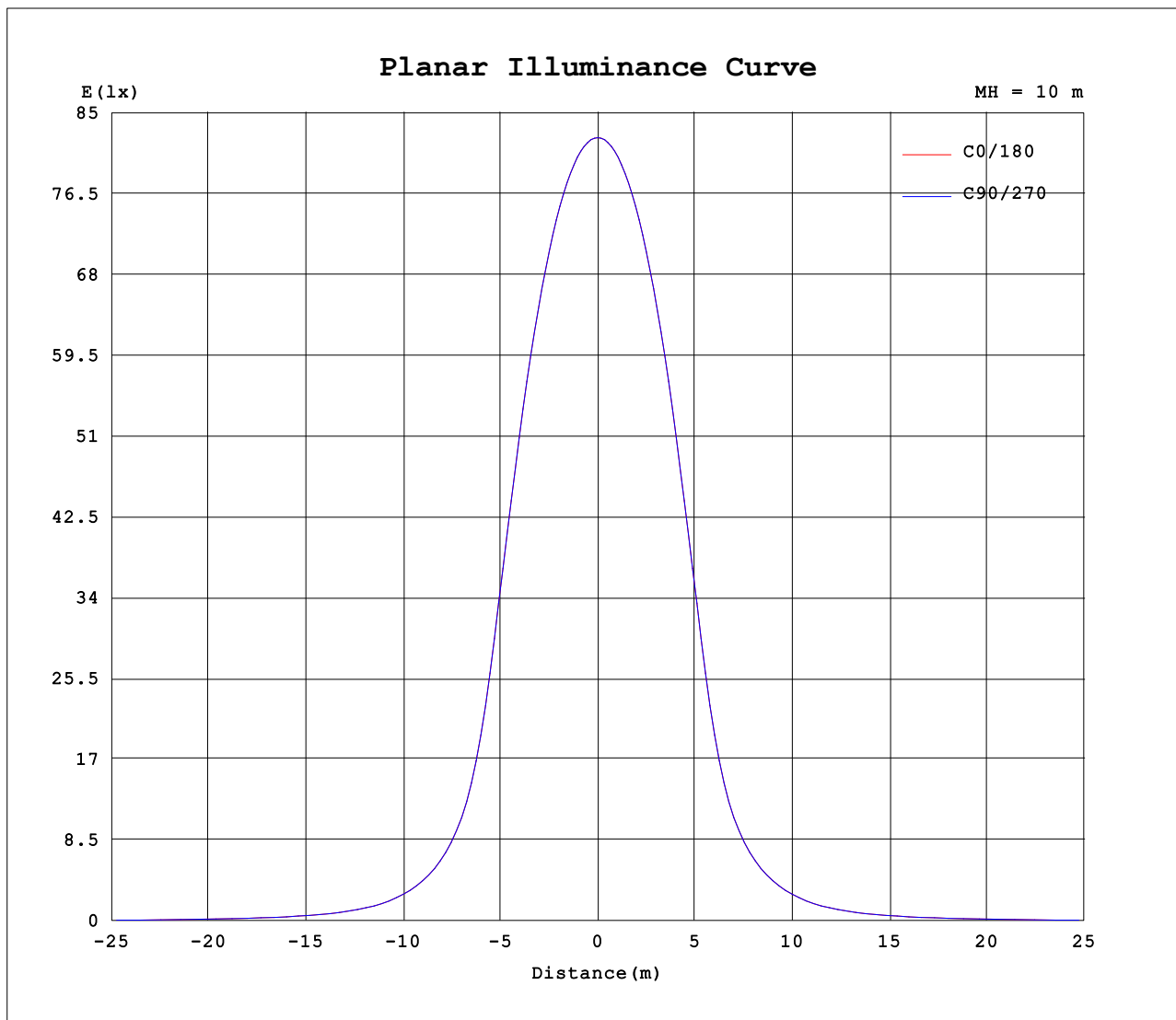
## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: WJH  
Test Date: 2020-07-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 9.350m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: WJH  
Test Date: 2020-07-06

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.00.426  
Humidity: 65.0%  
Test Distance: 9.350m [K=1.0000]  
Remarks: