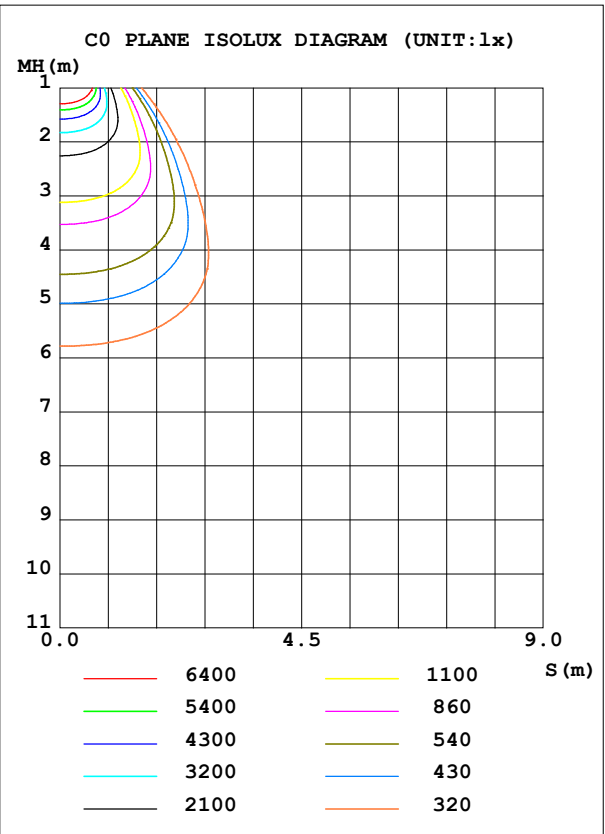
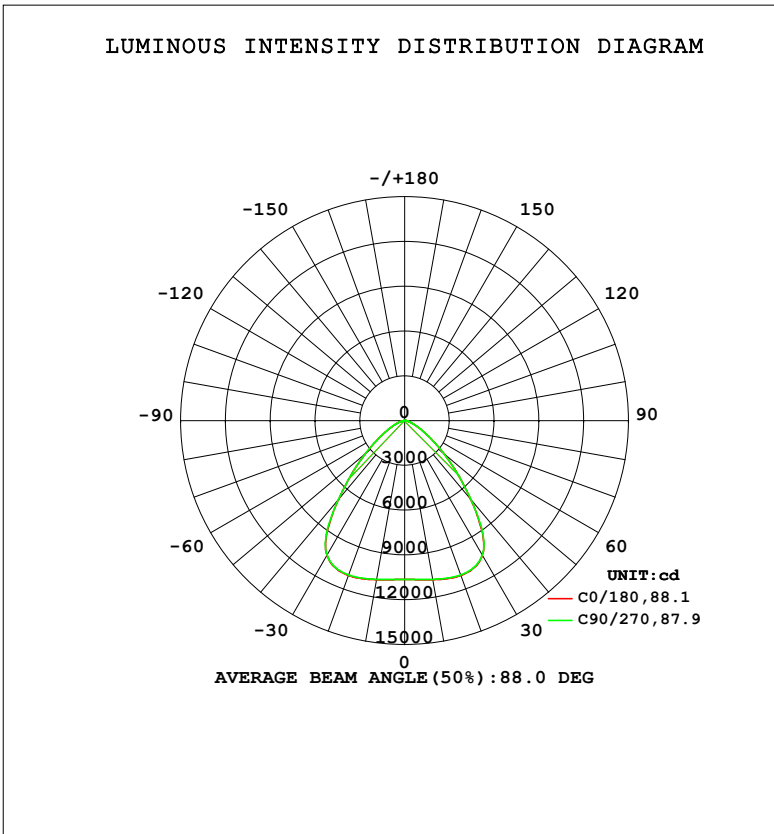


EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:229.8V I:0.6671A P:149.6W PF:0.9757 Freq:49.99Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:21997.8x1 lm		
NAME: HB39-150-5080-H00125	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 147.04 lm/W			
MODEL	/	I _{max} (cd)	11036	S/MH (C0/180)	1.25
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	1.25
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	21998	η UP, DN (C0-180)	0.0,50.0
NOMINAL FLUX (lm)	21997.8	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0,50.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	100.0	CIBSE SHR MAX	1.30



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: LCX
 Test Date: 2023-09-27

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.465
 Humidity: 65.0%
 Test Distance: 9.350m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1082	1081	1080	1081	1082	1081	1080	1081	0- 10	1024	1024	4.66,4.66
20	1104	1101	1100	1101	1104	1101	1100	1101	10- 20	3102	4127	18.8,18.8
30	1041	1038	1041	1038	1041	1038	1041	1038	20- 30	5006	9133	41.5,41.5
40	689.7	687.0	692.3	687.0	689.7	687.0	692.3	687.0	30- 40	5544	14676	66.7,66.7
50	343.3	354.4	341.8	354.4	343.3	354.4	341.8	354.4	40- 50	3866	18542	84.3,84.3
60	142.7	151.6	145.9	151.6	142.7	151.6	145.9	151.6	50- 60	2120	20662	93.9,93.9
70	53.46	54.70	54.04	54.70	53.46	54.70	54.04	54.70	60- 70	955.4	21617	98.3,98.3
80	13.04	13.12	13.16	13.12	13.04	13.12	13.16	13.12	70- 80	333.3	21951	99.8,99.8
90	0.5411	0.5472	0.5372	0.5472	0.5411	0.5472	0.5372	0.5472	80- 90	47.11	21998	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): 16852 lm

%lum = 76.6%

%lamp = 76.6%

Conical surface Flux(120deg): 20662 lm

%lum = 93.9%

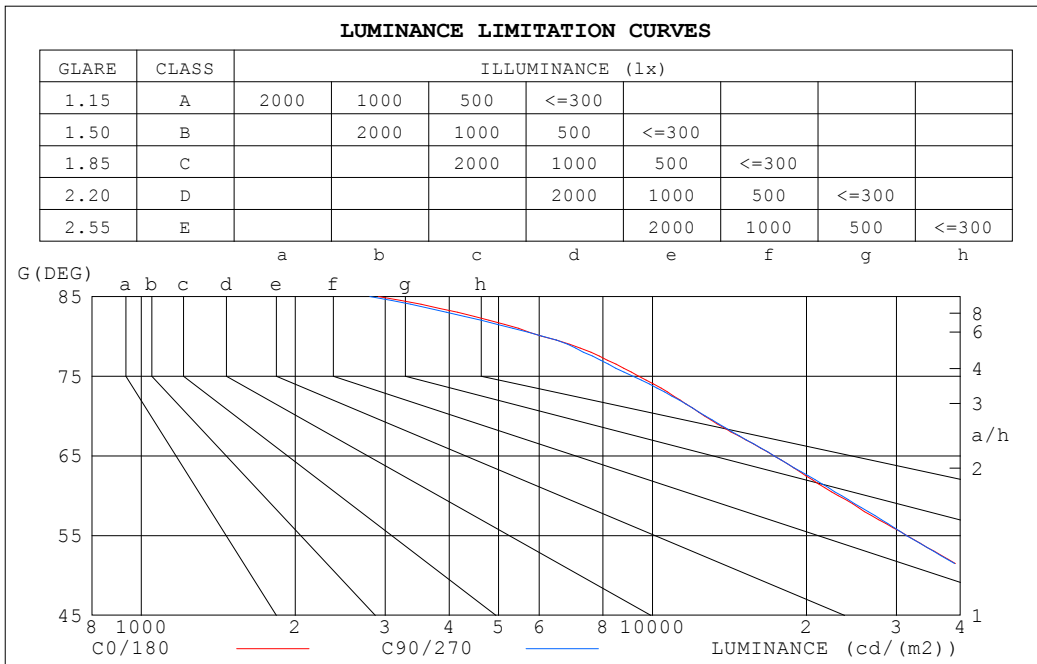
%lamp = 93.9%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:LCX
 Test Date:2023-09-27

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.465
 Humidity:65.0%
 Test Distance:9.350m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	2911	2800
80	6070	6087
75	9394	9151
70	12637	12693
65	17289	17298
60	23076	23434
55	31451	31409
50	43179	42712
45	57158	56452

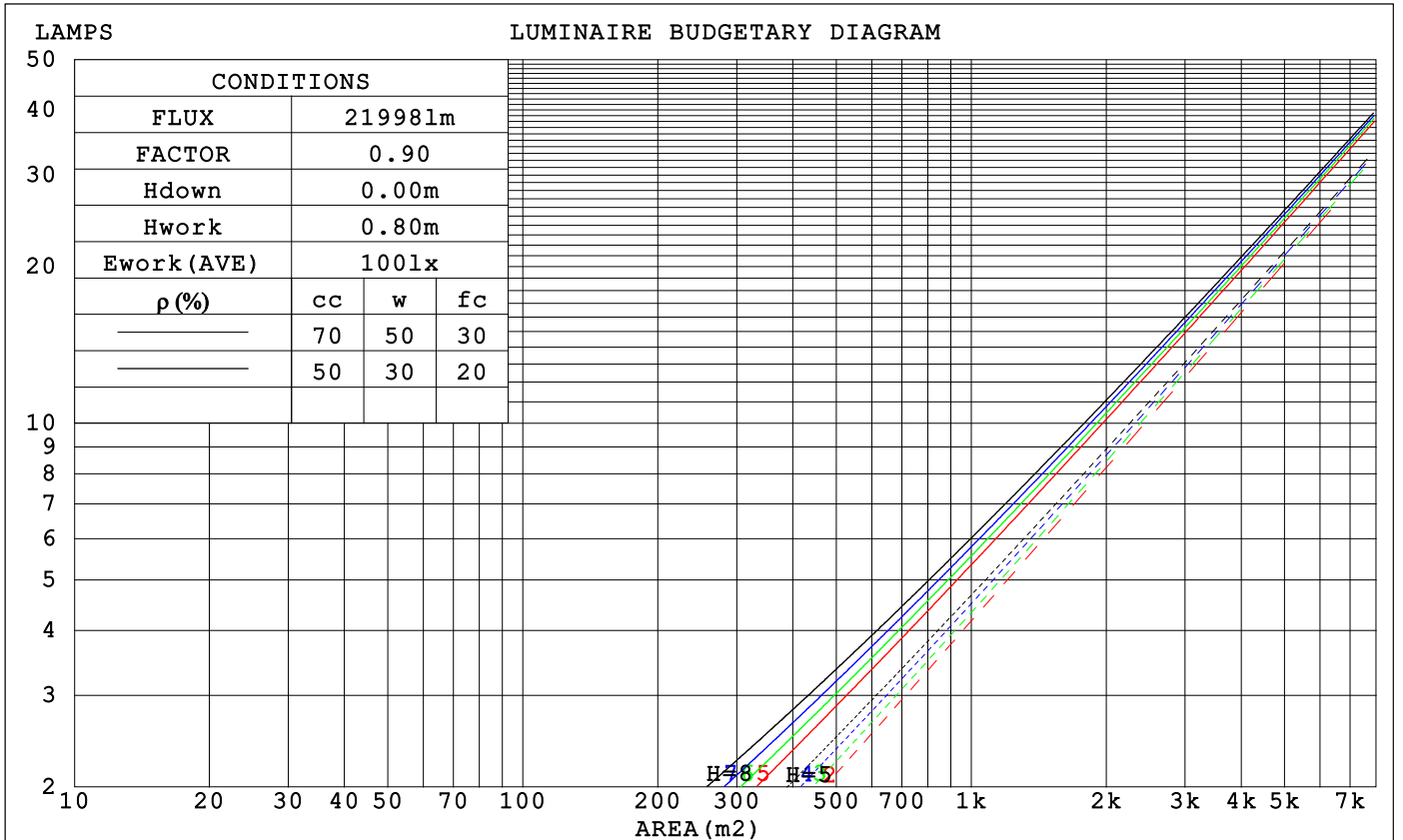
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: LCX
 Test Date: 2023-09-27

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.465
 Humidity: 65.0%
 Test Distance: 9.350m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	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	1.08	1.05	1.02	1.06	1.03	1.00	1.02	.99	.97	.98	.96	.94	.94	.93	.91	.90
2.0	.97	.92	.88	.96	.91	.87	.92	.88	.85	.89	.86	.83	.86	.83	.81	.79
3.0	.88	.81	.76	.86	.80	.76	.84	.79	.74	.81	.77	.73	.79	.75	.72	.70
4.0	.80	.73	.67	.79	.72	.67	.76	.70	.66	.74	.69	.65	.72	.68	.64	.62
5.0	.73	.65	.59	.72	.64	.59	.70	.63	.59	.68	.62	.58	.66	.61	.57	.56
6.0	.66	.59	.53	.65	.58	.53	.64	.57	.53	.62	.56	.52	.61	.56	.52	.50
7.0	.61	.53	.48	.60	.53	.48	.59	.52	.47	.57	.51	.47	.56	.51	.47	.45
8.0	.56	.49	.43	.55	.48	.43	.54	.48	.43	.53	.47	.43	.52	.47	.43	.41
9.0	.52	.44	.39	.51	.44	.39	.50	.44	.39	.49	.43	.39	.48	.43	.39	.37
10.0	.48	.41	.36	.48	.41	.36	.47	.40	.36	.46	.40	.36	.45	.40	.36	.34



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:LCX
 Test Date:2023-09-27

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.465
 Humidity:65.0%
 Test Distance:9.350m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.231	.131	.042	.224	.128	.041	.211	.121	.039	.200	.115	.037	.189	.109	.035	
2.0	.225	.123	.038	.219	.121	.037	.208	.116	.036	.198	.111	.035	.189	.107	.034	
3.0	.215	.114	.034	.210	.112	.034	.200	.108	.033	.191	.105	.032	.183	.101	.031	
4.0	.204	.106	.031	.199	.104	.031	.190	.101	.030	.183	.098	.030	.175	.095	.029	
5.0	.192	.098	.028	.188	.097	.028	.181	.094	.028	.174	.092	.027	.167	.089	.027	
6.0	.182	.091	.026	.178	.090	.026	.172	.088	.026	.165	.086	.025	.160	.084	.025	
7.0	.172	.085	.024	.169	.084	.024	.163	.082	.024	.157	.081	.023	.152	.079	.023	
8.0	.163	.080	.022	.160	.079	.022	.155	.077	.022	.150	.076	.022	.145	.074	.022	
9.0	.155	.075	.021	.152	.074	.021	.147	.073	.021	.143	.072	.020	.138	.070	.020	
10.0	.147	.071	.020	.145	.070	.020	.140	.069	.019	.136	.068	.019	.132	.067	.019	

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	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	.175	.157	.141	.150	.135	.121	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.163	.132	.106	.140	.114	.092	.096	.079	.064	.055	.046	.037	.018	.015	.012	
3.0	.154	.114	.082	.132	.098	.071	.091	.068	.050	.052	.040	.029	.017	.013	.010	
4.0	.146	.100	.065	.125	.086	.057	.086	.060	.040	.050	.035	.024	.016	.011	.008	
5.0	.138	.089	.053	.119	.077	.046	.082	.054	.032	.047	.032	.019	.015	.010	.006	
6.0	.132	.080	.044	.113	.070	.038	.078	.049	.027	.045	.029	.016	.015	.009	.005	
7.0	.125	.073	.037	.108	.064	.032	.074	.045	.023	.043	.026	.014	.014	.009	.004	
8.0	.120	.067	.032	.103	.058	.028	.071	.041	.020	.041	.024	.012	.013	.008	.004	
9.0	.114	.062	.027	.098	.054	.024	.068	.038	.017	.040	.023	.010	.013	.007	.003	
10.0	.109	.058	.024	.094	.051	.021	.065	.036	.015	.038	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: LCX
 Test Date: 2023-09-27

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.465
 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	21.9	23.3	22.3	23.6	23.9	21.8	23.1	22.1	23.4	23.7
3H	22.5	23.7	22.9	24.0	24.4	22.3	23.5	22.7	23.8	24.2
4H	22.6	23.7	23.0	24.1	24.5	22.5	23.6	22.9	23.9	24.3
6H	22.6	23.7	23.1	24.0	24.4	22.5	23.5	22.9	23.9	24.3
8H	22.6	23.6	23.1	24.0	24.4	22.5	23.4	22.9	23.8	24.2
12H	22.6	23.5	23.0	23.9	24.3	22.4	23.3	22.9	23.7	24.2
4H 2H	22.1	23.2	22.5	23.6	23.9	22.0	23.1	22.4	23.4	23.8
3H	22.8	23.7	23.2	24.1	24.5	22.7	23.6	23.1	24.0	24.4
4H	23.0	23.8	23.4	24.2	24.6	22.8	23.6	23.3	24.1	24.5
6H	23.1	23.7	23.5	24.2	24.7	22.9	23.6	23.4	24.1	24.5
8H	23.0	23.7	23.5	24.1	24.6	22.9	23.5	23.4	24.0	24.5
12H	23.0	23.6	23.5	24.1	24.5	22.9	23.4	23.3	23.9	24.4
8H 4H	23.0	23.6	23.4	24.1	24.5	22.8	23.5	23.3	23.9	24.4
6H	23.1	23.6	23.6	24.1	24.6	22.9	23.5	23.4	24.0	24.4
8H	23.1	23.5	23.6	24.0	24.5	22.9	23.4	23.4	23.9	24.4
12H	23.0	23.4	23.5	23.9	24.5	22.9	23.3	23.4	23.8	24.4
12H 4H	22.9	23.5	23.4	24.0	24.5	22.8	23.4	23.3	23.9	24.3
6H	23.0	23.5	23.6	24.0	24.5	22.9	23.4	23.4	23.8	24.4
8H	23.0	23.5	23.5	23.9	24.5	22.9	23.3	23.4	23.8	24.4
CIE190: 2010										

CIE190: 2010
 Area: 0.1244 m2

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:LCX
 Test Date:2023-09-27

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.465
 Humidity:65.0%
 Test Distance:9.350m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

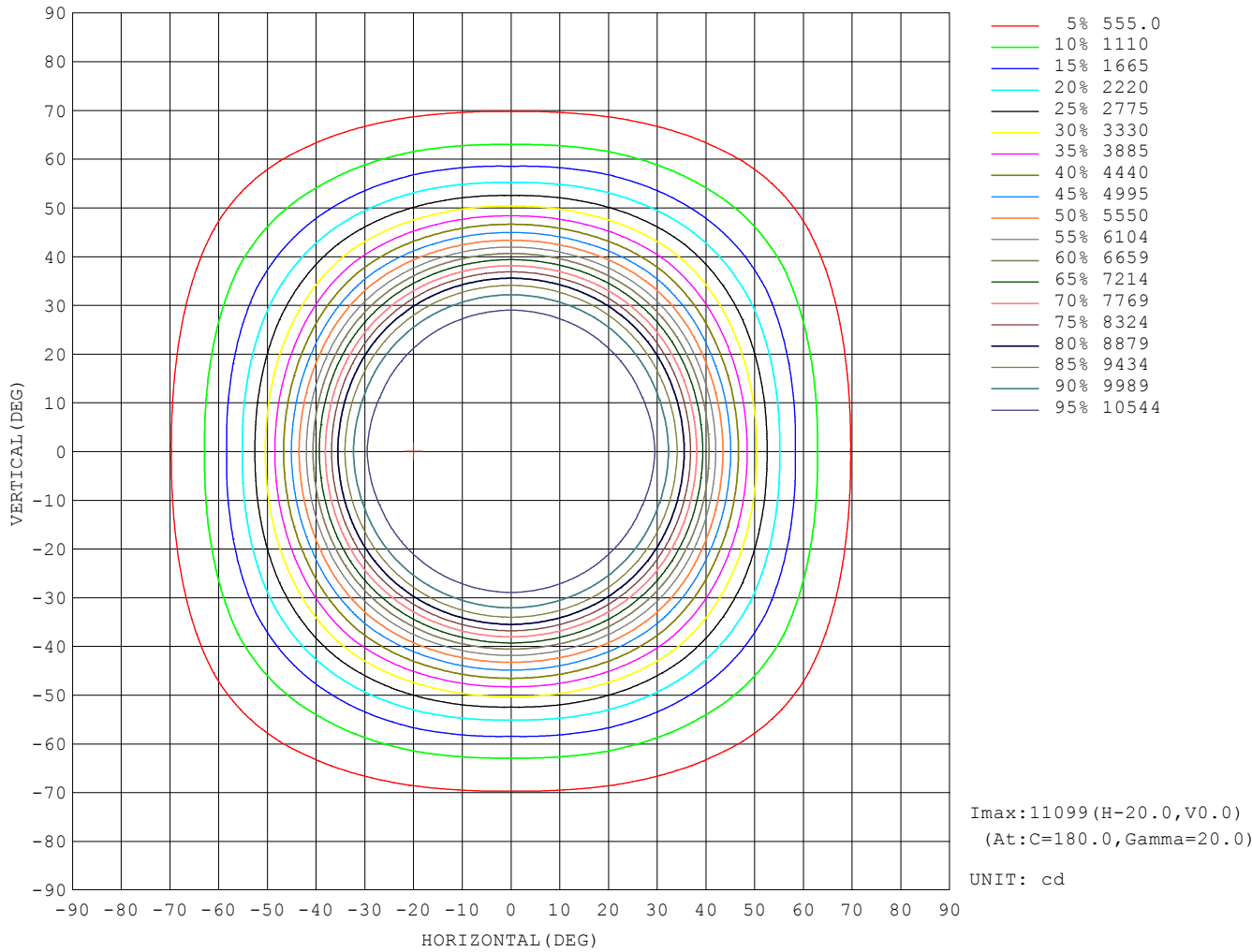
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	70	61	55	70	61	55	69	60	55	50
0.80	80	71	65	79	71	65	78	70	65	59
1.00	88	79	74	87	79	73	85	79	73	67
1.25	94	86	81	92	85	80	90	84	79	74
1.50	98	91	85	96	90	85	94	88	84	78
2.00	103	97	92	101	95	91	98	93	90	83
2.50	105	100	95	103	98	95	100	96	93	86
3.00	108	103	99	106	101	98	102	99	96	88
4.00	110	106	103	108	105	102	104	101	99	91
5.00	112	109	106	110	107	104	106	103	101	93
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: LCX
 Test Date: 2023-09-27

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.465
 Humidity: 65.0%
 Test Distance: 9.350m [K=1.0000]
 Remarks:

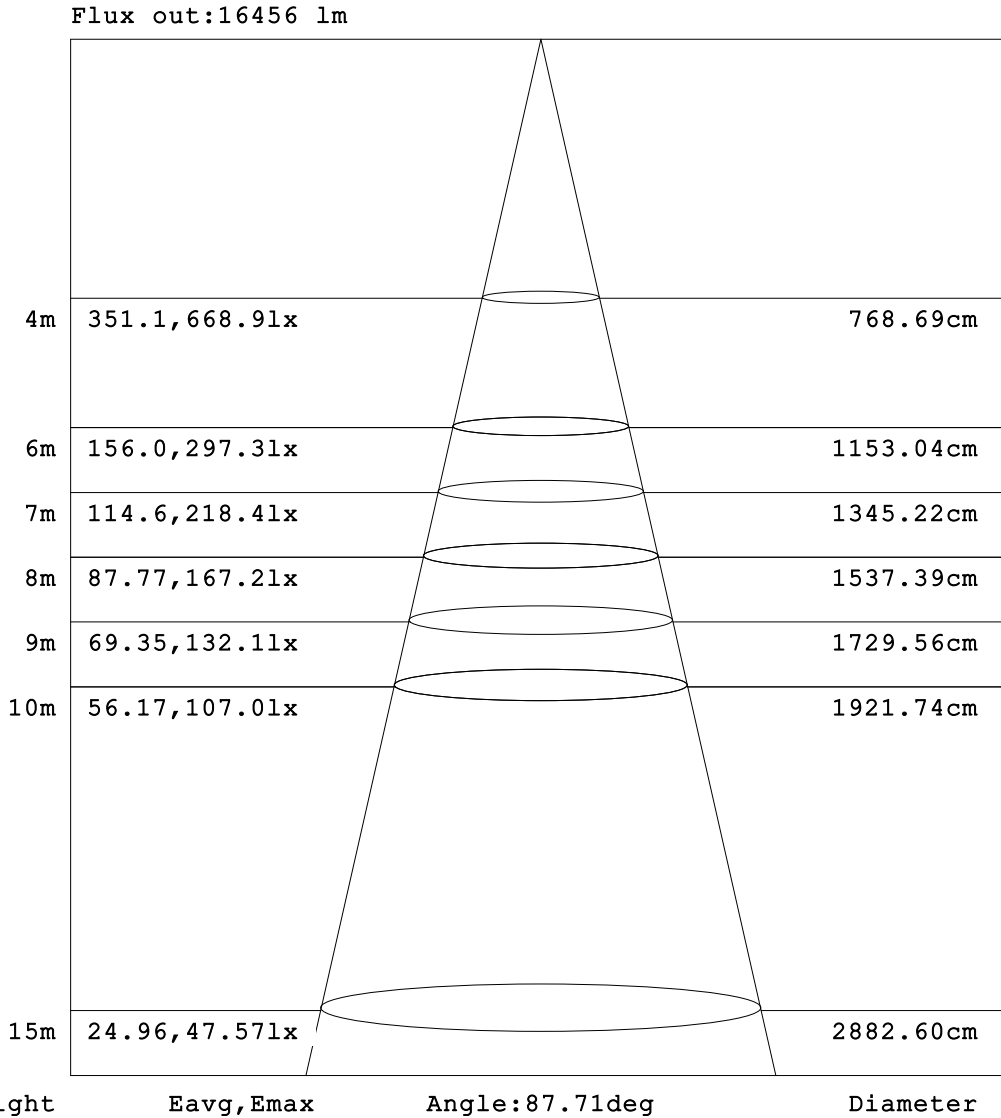
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: LCX
 Test Date: 2023-09-27

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.465
 Humidity: 65.0%
 Test Distance: 9.350m [K=1.0000]
 Remarks:

AAI Figure



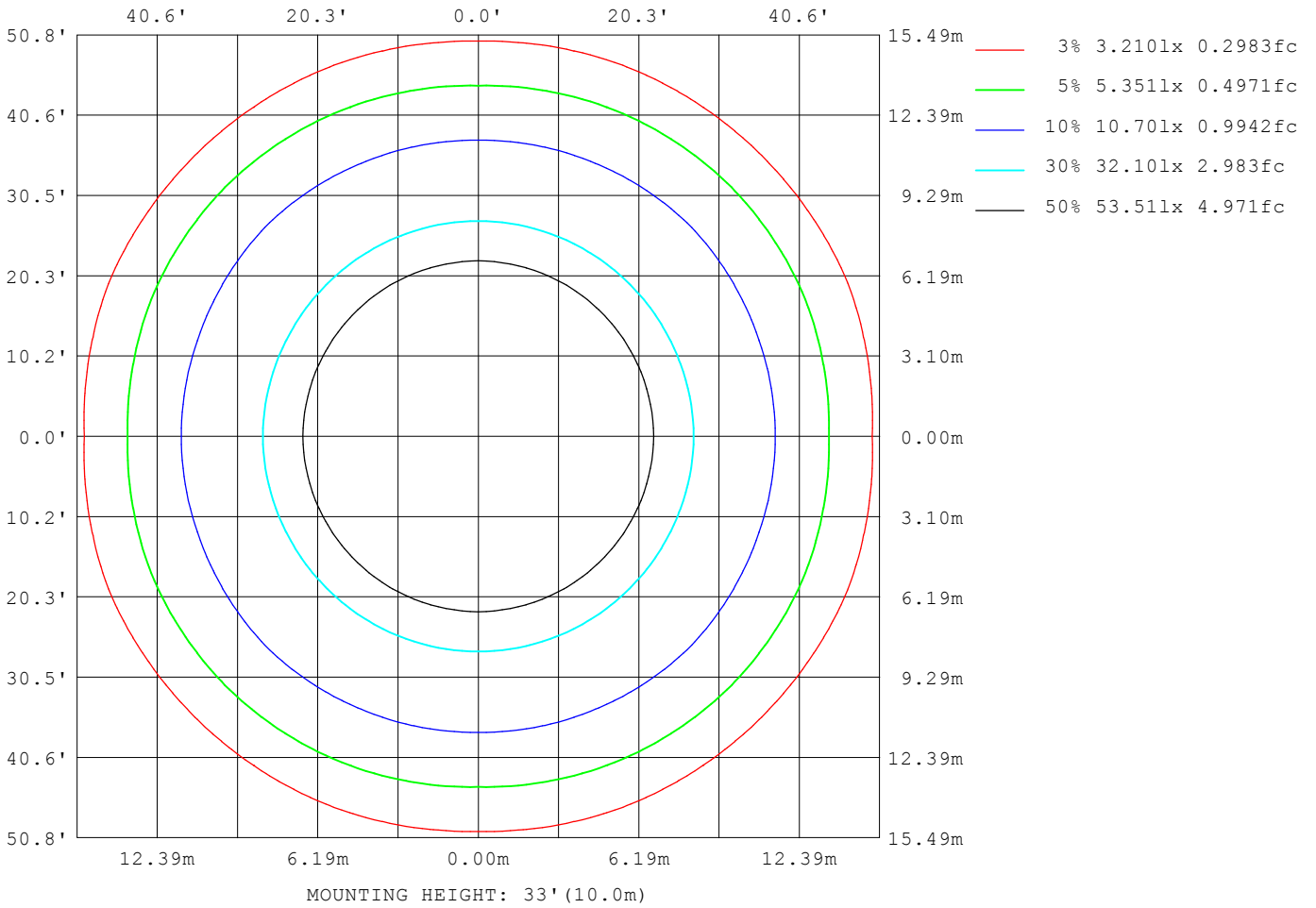
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: LCX
 Test Date: 2023-09-27

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.465
 Humidity: 65.0%
 Test Distance: 9.350m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

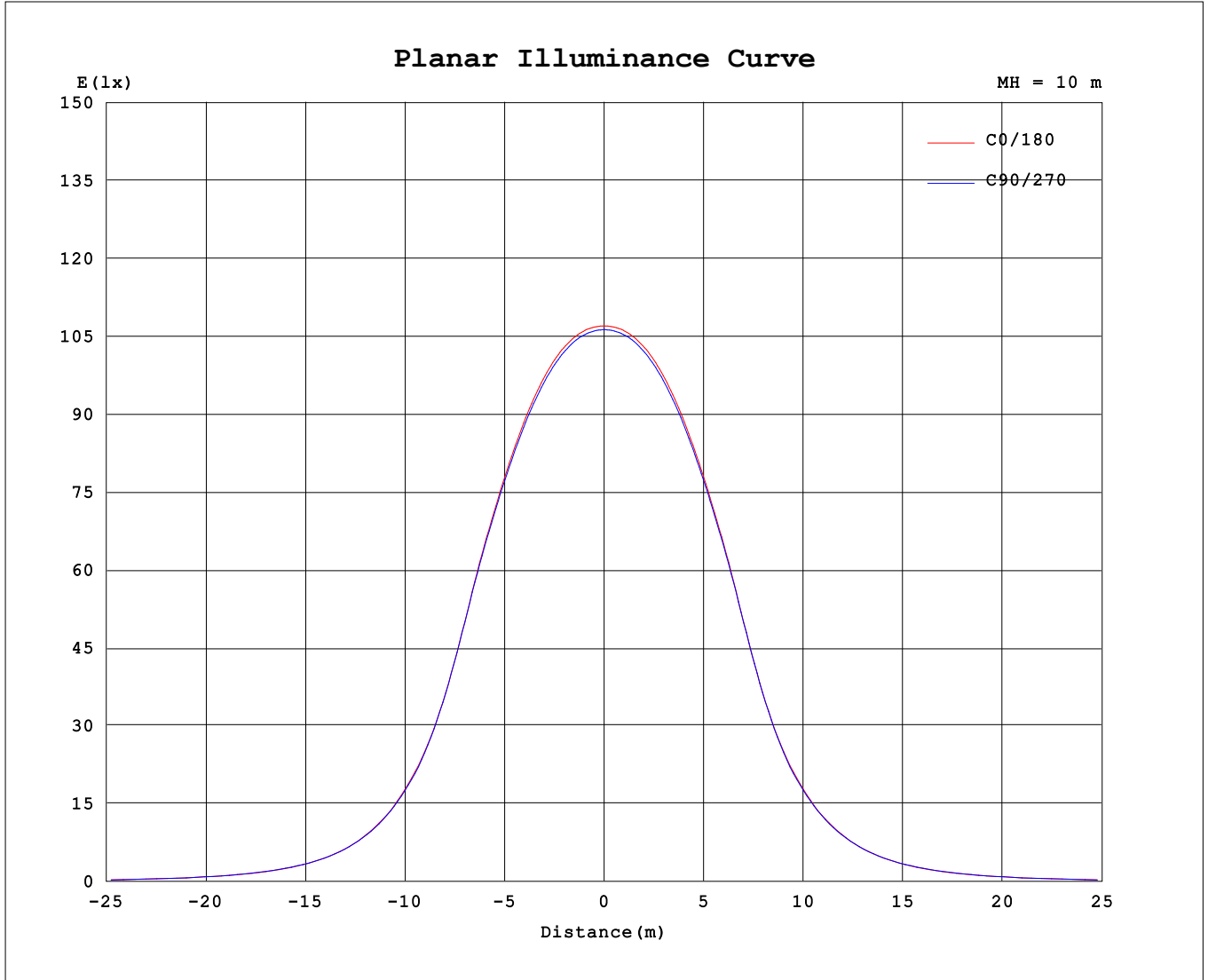
ISOLUX DIAGRAM



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: LCX
 Test Date: 2023-09-27

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.465
 Humidity: 65.0%
 Test Distance: 9.350m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: LCX
Test Date: 2023-09-27

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.465
Humidity: 65.0%
Test Distance: 9.350m [K=1.0000]
Remarks: