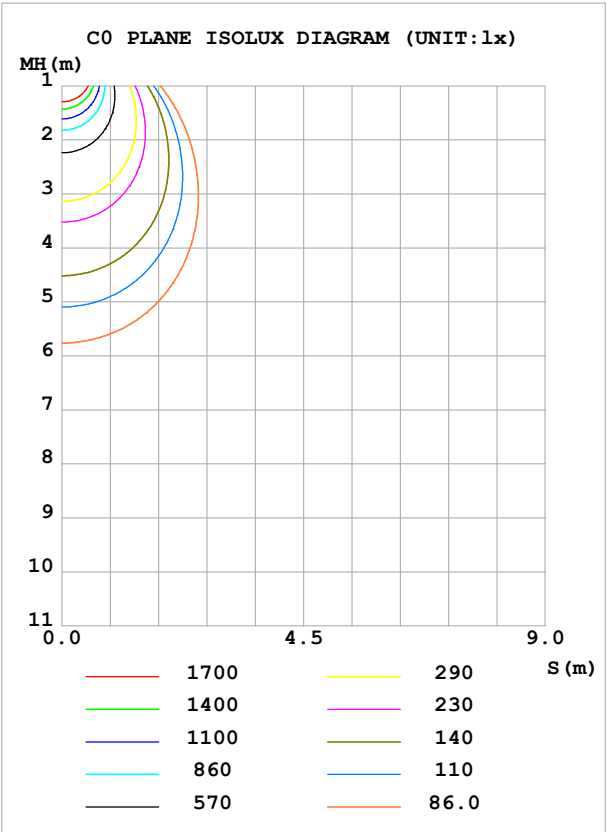
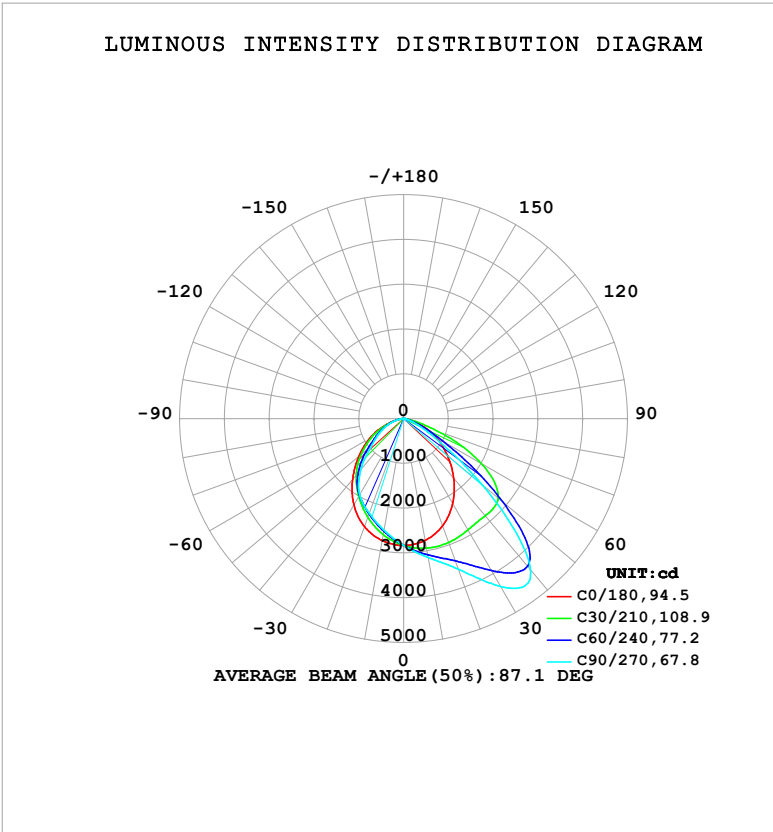


EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:229.6V I:0.2650A P:47.8W PF:0.7851 Freq:50.01Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:7857.39x1 lm		
NAME: X501-457KA-9060 (50W 4000K)	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 164.43 lm/W
MODEL	/	I _{max} (cd)	4613	S/MH(C0/180)	1.18	
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.05	
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	7857.4	η UP,DN(C0-180)	0.0,63.2	
NOMINAL FLUX(lm)	7857.39	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,36.8	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	/	η down (%)	100.0	CIBSE SHR MAX	1.30	



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:HXL
Test Date:2024-10-28

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.487
Humidity:65.0%
Test Distance:9.990m [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	2762	3019	3147	3014	2766	2584	2534	2585	0- 10	268.9	268.9	3.42,3.42
20	2547	3172	3580	3155	2566	2292	2249	2294	10- 20	783.4	1052	13.4,13.4
30	2193	3411	4325	3357	2225	1981	1969	1979	20- 30	1252	2304	29.3,29.3
40	1743	3752	4410	3720	1777	1628	1491	1610	30- 40	1645	3949	50.3,50.3
50	1275	3345	2272	3506	1307	1164	931.9	1138	40- 50	1702	5651	71.9,71.9
60	835.6	1677	699.3	1897	866.9	702.7	606.0	682.6	50- 60	1243	6894	87.7,87.7
70	397.3	505.5	207.0	592.8	433.8	371.3	330.7	349.3	60- 70	688.8	7583	96.5,96.5
80	79.90	49.27	27.82	74.34	99.03	107.7	93.20	91.86	70- 80	247.9	7831	99.7,99.7
90	2.612	1.935	1.631	1.788	2.115	3.112	1.896	2.862	80- 90	26.74	7857	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		

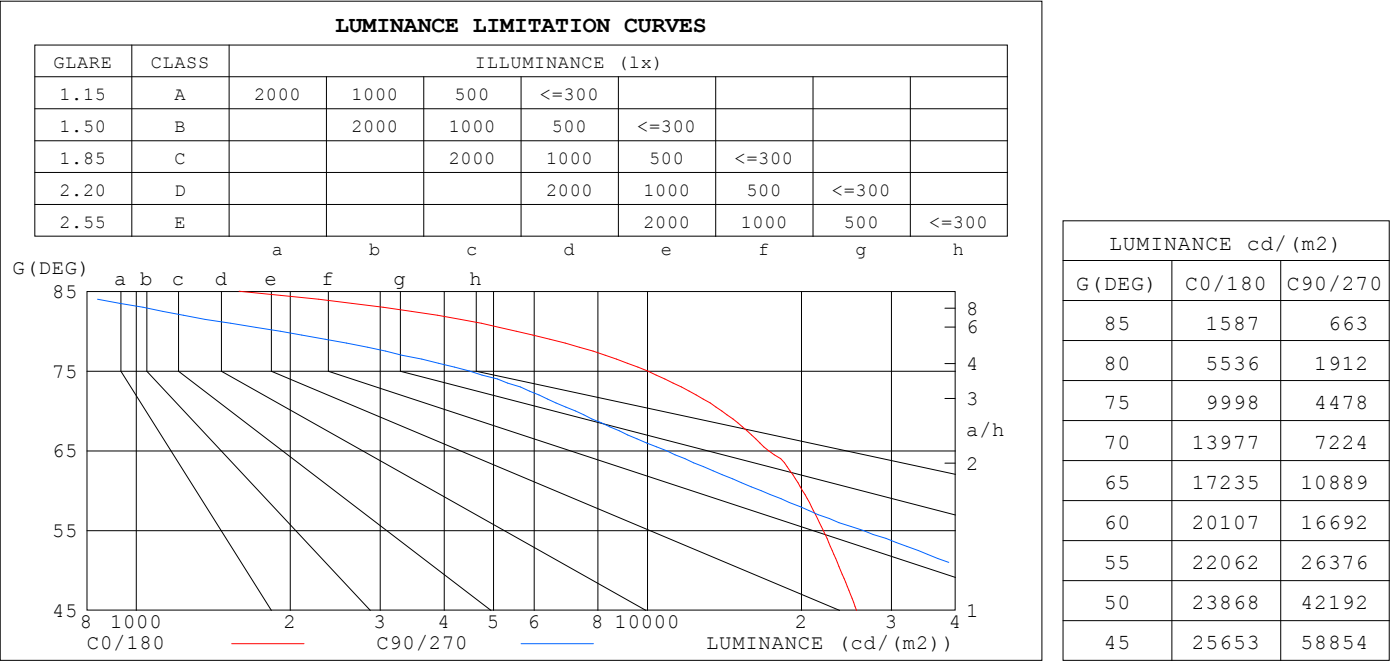
Conical surface Flux(90deg): 4831.3 lm

%lum = 61.5%
%lamp = 61.5%

Conical surface Flux(120deg): 6893.9 lm

%lum = 87.7%
%lamp = 87.7%

LUMINANCE LIMITATION CURVES

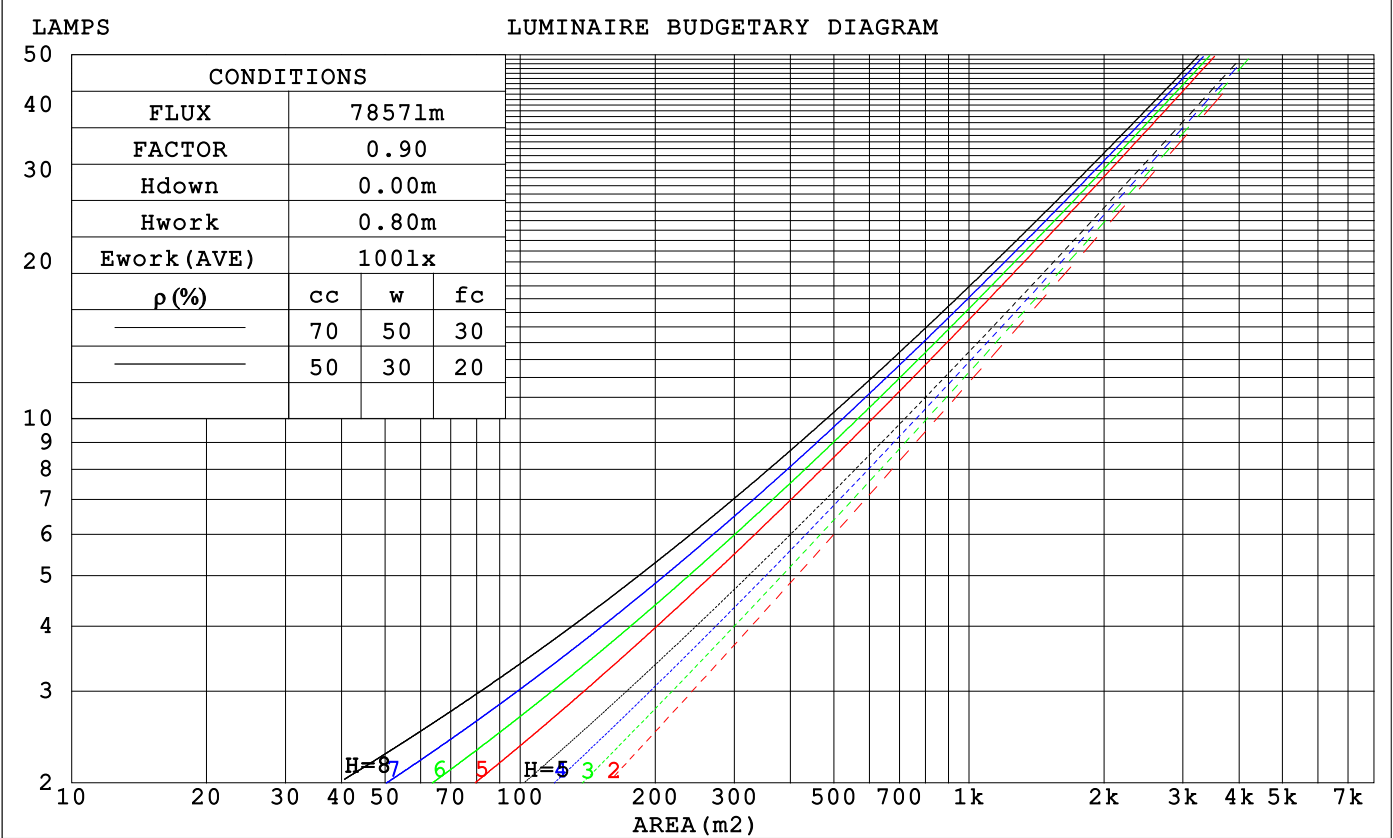


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:HXL
Test Date:2024-10-28

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.487
Humidity:65.0%
Test Distance:9.990m [K=1.0000]
Remarks:

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	.00
1.0	1.06	1.02	.99	1.04	1.01	.98	.00	.97	.94	.96	.94	.92	.92	.91	.89	.87
2.0	.94	.88	.83	.92	.86	.82	.88	.84	.80	.85	.81	.78	.82	.79	.76	.74
3.0	.83	.76	.70	.82	.75	.69	.79	.73	.68	.76	.71	.67	.73	.69	.66	.63
4.0	.74	.66	.60	.73	.65	.59	.70	.64	.58	.68	.62	.58	.66	.61	.57	.55
5.0	.66	.58	.51	.65	.57	.51	.63	.56	.51	.61	.55	.50	.59	.54	.50	.48
6.0	.60	.51	.45	.59	.51	.45	.57	.50	.44	.55	.49	.44	.54	.48	.44	.42
7.0	.54	.46	.40	.53	.45	.40	.52	.45	.39	.50	.44	.39	.49	.43	.39	.37
8.0	.49	.41	.35	.49	.41	.35	.47	.40	.35	.46	.40	.35	.45	.39	.35	.33
9.0	.45	.37	.32	.45	.37	.32	.44	.37	.32	.42	.36	.31	.41	.36	.31	.29
10.0	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.28	.38	.33	.28	.27



C Range: 0 - 360DEG

C Interval: 15.0DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:HXL

Test Date:2024-10-28

γ Range: 0 - 90DEG

γ Interval: 0.5DEG

Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.487

Humidity:65.0%

Test Distance:9.990m [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	.266	.151	.048	.259	.148	.047	.246	.141	.045	.234	.135	.043	.223	.129	.042	
2.0	.260	.142	.044	.254	.140	.043	.242	.135	.042	.232	.130	.041	.222	.126	.040	
3.0	.246	.131	.039	.241	.129	.039	.231	.125	.038	.221	.121	.037	.213	.118	.036	
4.0	.231	.120	.035	.227	.119	.035	.218	.115	.034	.209	.112	.034	.202	.110	.033	
5.0	.217	.110	.032	.212	.109	.032	.205	.107	.031	.197	.104	.031	.190	.102	.031	
6.0	.203	.102	.029	.199	.101	.029	.192	.099	.029	.186	.096	.028	.179	.094	.028	
7.0	.191	.094	.027	.187	.093	.027	.181	.091	.026	.175	.090	.026	.169	.088	.026	
8.0	.179	.088	.025	.176	.087	.025	.171	.085	.024	.165	.084	.024	.160	.082	.024	
9.0	.169	.082	.023	.166	.081	.023	.161	.080	.023	.156	.078	.022	.152	.077	.022	
10.0	.159	.076	.021	.157	.076	.021	.152	.075	.021	.148	.074	.021	.144	.072	.021	

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	.177	.157	.138	.152	.134	.119	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.168	.132	.102	.144	.114	.088	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.160	.114	.078	.137	.098	.067	.094	.068	.047	.054	.040	.028	.017	.013	.009	
4.0	.152	.101	.061	.131	.087	.053	.090	.061	.037	.052	.035	.022	.017	.012	.007	
5.0	.145	.090	.049	.125	.078	.043	.086	.054	.030	.050	.032	.018	.016	.010	.006	
6.0	.139	.082	.041	.119	.071	.035	.082	.049	.025	.048	.029	.015	.015	.010	.005	
7.0	.132	.075	.034	.114	.065	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004	
8.0	.126	.069	.030	.109	.060	.026	.075	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.121	.064	.026	.104	.056	.023	.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:25.3℃
 Operators: HXL
 Test Date:2024-10-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.487
 Humidity:65.0%
 Test Distance:9.990m [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	25.3	26.9	25.7	27.2	27.5	23.1	24.7	23.5	25.0	25.3
3H	26.3	27.6	26.6	28.0	28.3	23.3	24.7	23.7	25.1	25.4
4H	26.5	27.7	26.8	28.1	28.5	23.4	24.7	23.8	25.0	25.4
6H	26.5	27.7	26.9	28.0	28.4	23.3	24.5	23.7	24.9	25.3
8H	26.5	27.6	26.9	28.0	28.4	23.3	24.4	23.7	24.8	25.2
12H	26.4	27.5	26.9	27.9	28.3	23.3	24.3	23.7	24.7	25.1
4H 2H	25.7	27.0	26.1	27.4	27.7	24.2	25.5	24.6	25.9	26.2
3H	26.9	28.0	27.3	28.4	28.8	24.5	25.6	24.9	26.0	26.4
4H	27.2	28.2	27.6	28.6	29.0	24.5	25.5	25.0	25.9	26.3
6H	27.3	28.1	27.7	28.5	29.0	24.5	25.3	25.0	25.8	26.2
8H	27.3	28.0	27.7	28.5	28.9	24.5	25.2	24.9	25.7	26.1
12H	27.2	27.9	27.7	28.4	28.9	24.4	25.1	24.9	25.6	26.1
8H 4H	27.2	27.9	27.6	28.4	28.9	24.8	25.6	25.3	26.0	26.5
6H	27.2	27.9	27.7	28.4	28.8	24.8	25.4	25.2	25.9	26.4
8H	27.2	27.8	27.7	28.3	28.8	24.7	25.3	25.2	25.8	26.3
12H	27.2	27.7	27.7	28.2	28.8	24.7	25.2	25.2	25.7	26.2
12H 4H	27.1	27.8	27.6	28.3	28.8	24.8	25.5	25.3	26.0	26.4
6H	27.2	27.8	27.7	28.2	28.8	24.7	25.3	25.3	25.8	26.3
8H	27.2	27.7	27.7	28.2	28.8	24.7	25.2	25.2	25.7	26.3
CIE190: 2010										

CIE190: 2010
Area: 0.08378 m2

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:HXL
Test Date:2024-10-28

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.487
Humidity:65.0%
Test Distance:9.990m [K=1.0000]
Remarks:

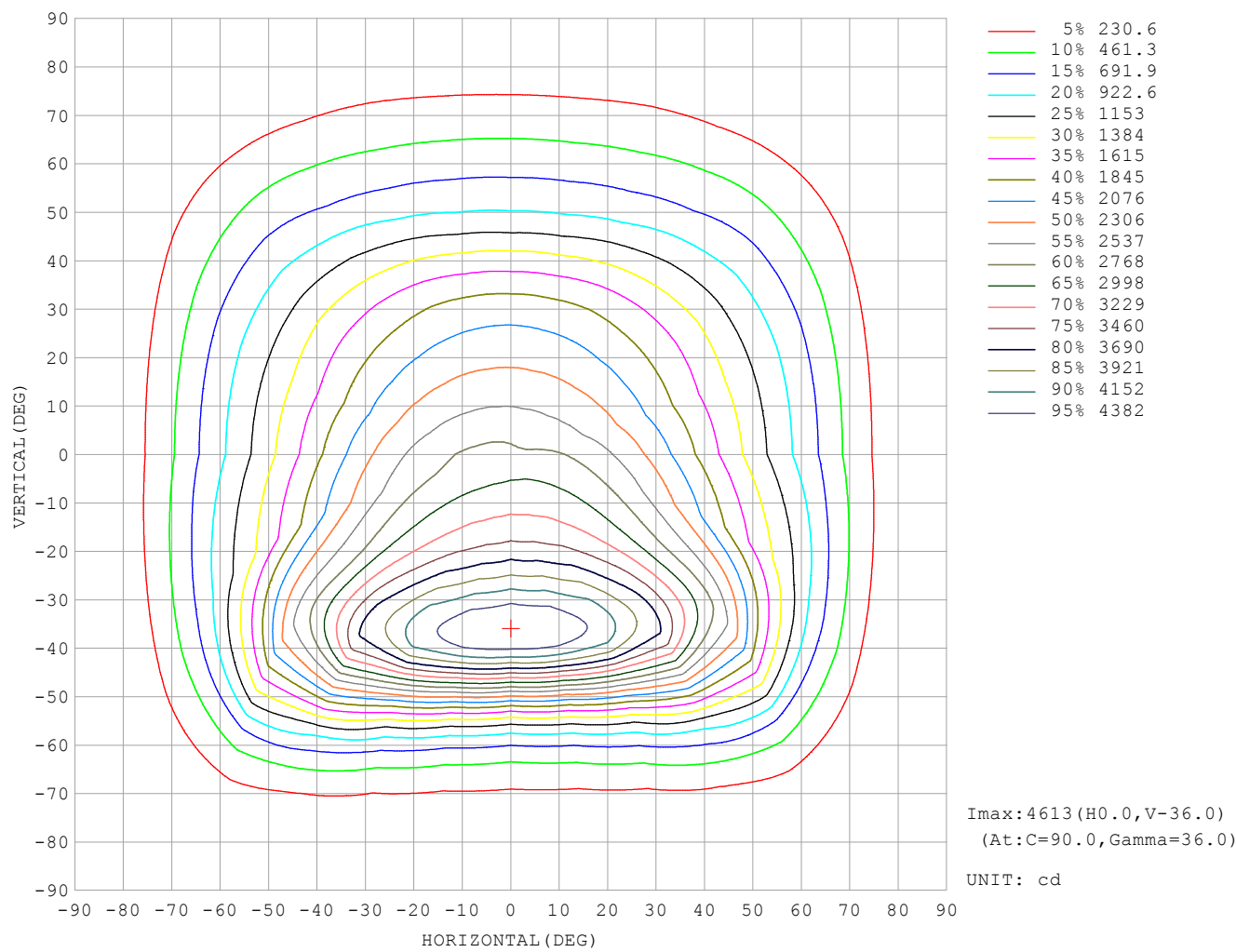
UTILIZATION FACTORS TABLE

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	71	60	53	70	59	53	68	59	52	46
1.00	80	70	63	79	69	63	76	70	62	55
1.25	87	77	71	86	77	71	83	75	70	63
1.50	92	83	77	90	82	76	87	80	75	68
2.00	98	91	85	97	90	84	93	87	83	76
2.50	102	95	90	100	94	89	96	91	87	79
3.00	105	99	94	103	97	93	99	94	91	83
4.00	108	103	99	106	102	98	102	98	95	87
5.00	110	106	102	108	104	101	103	100	98	89
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:25.3°C
Operators:HXL
Test Date:2024-10-28

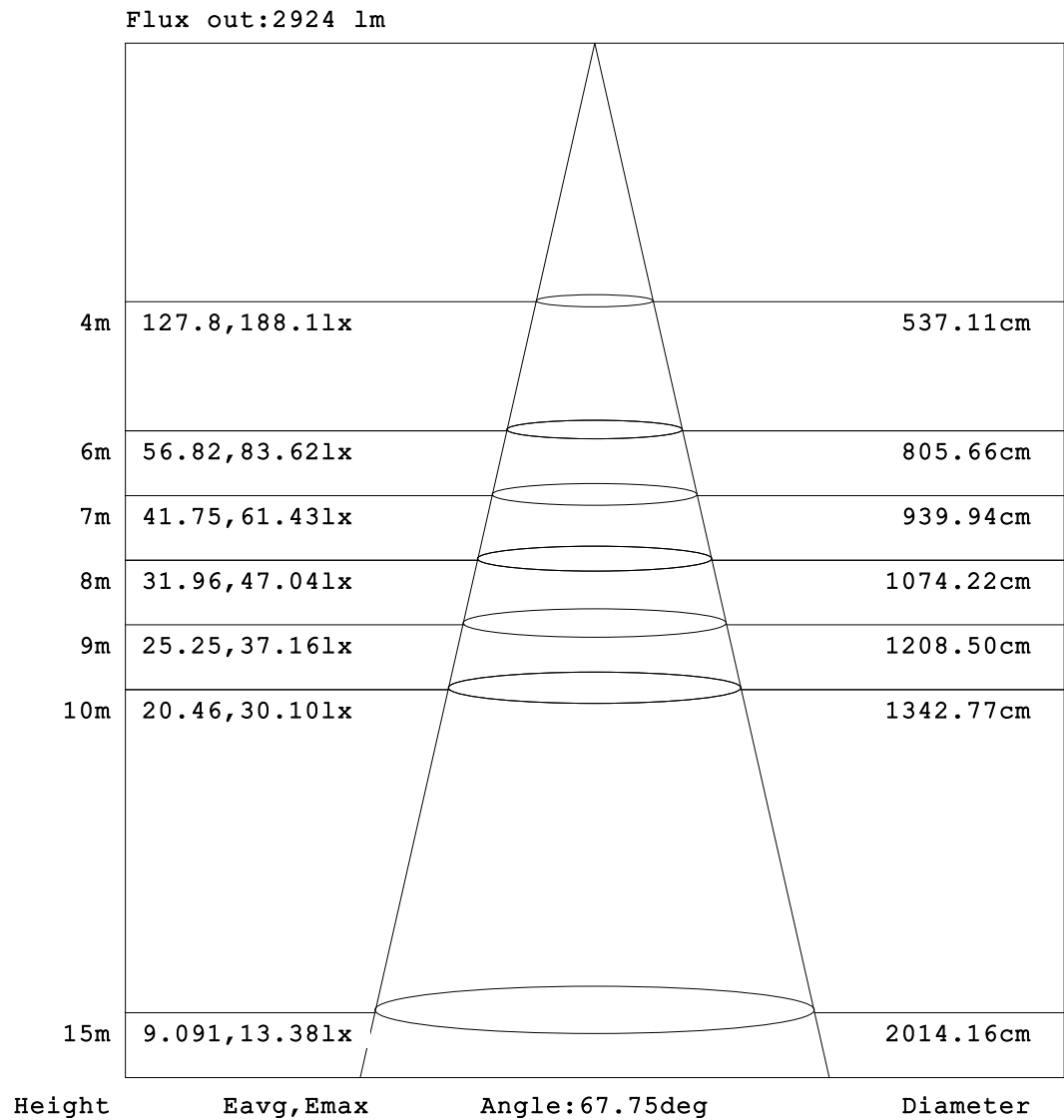
γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 γ Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.487
Humidity:65.0%
Test Distance:9.990m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM



C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 15.0DEG	γ Interval: 0.5DEG
Test Speed: HIGH	Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.487
Temperature: 25.3°C	Humidity: 65.0%
Operators: HXL	Test Distance: 9.990m [K=1.0000]
Test Date: 2024-10-28	Remarks:

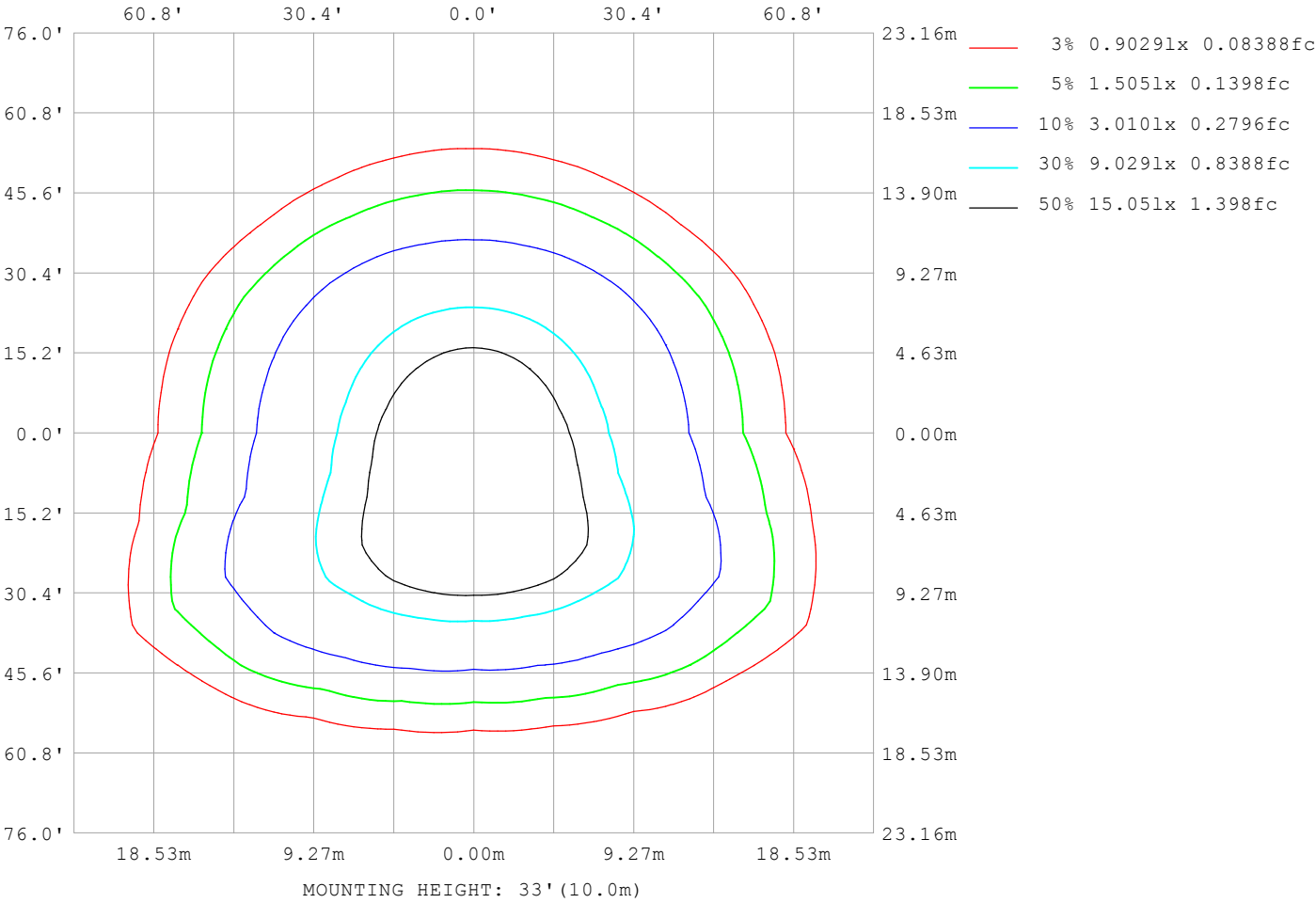
AAI Figure



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

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

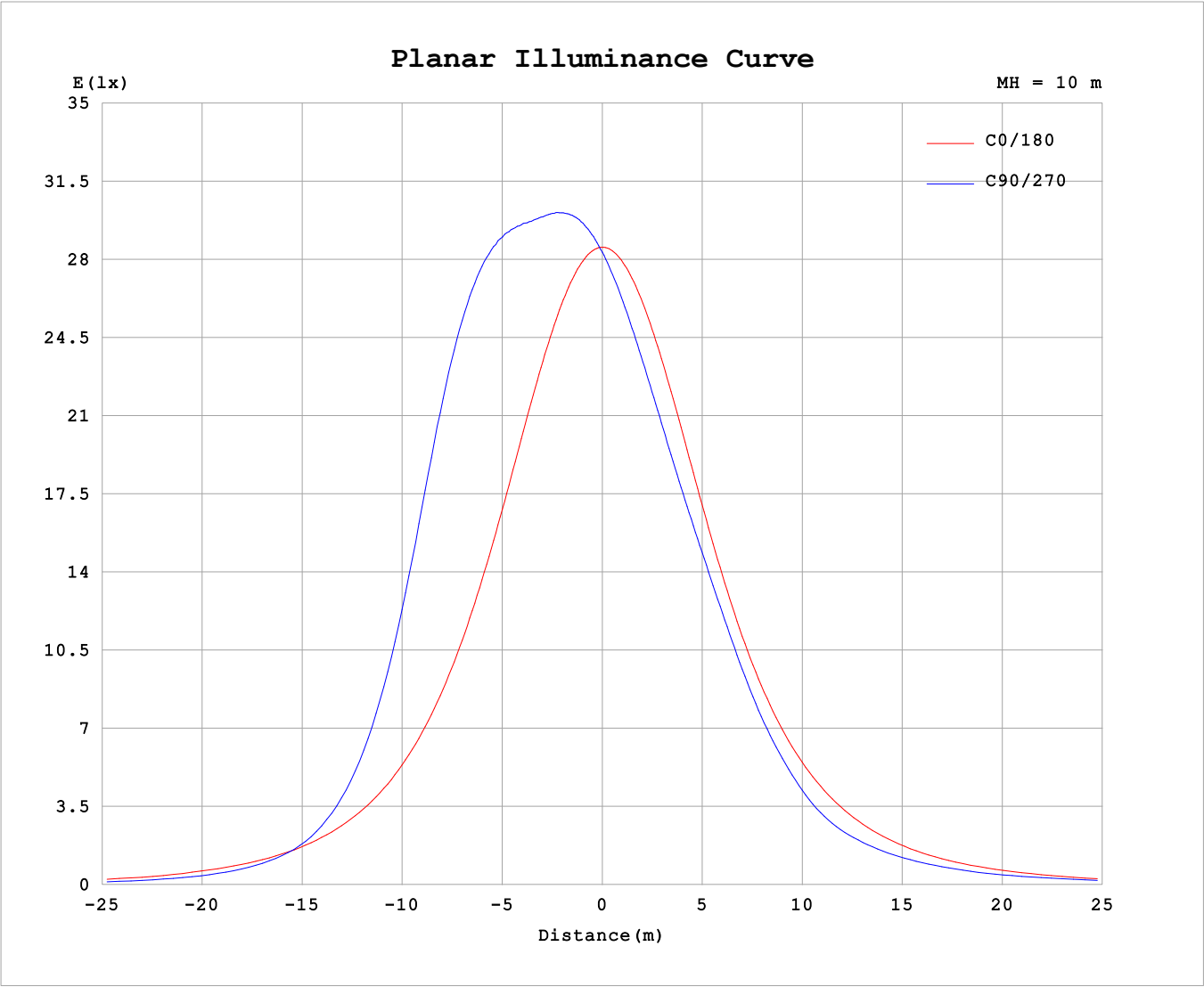
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:HXL
Test Date:2024-10-28

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.487
Humidity:65.0%
Test Distance:9.990m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 15.0DEG	γ Interval: 0.5DEG
Test Speed: HIGH	Test System:EVERFINE GO-2000A_V1 SYSTEM V2.00.487
Temperature:25.3℃	Humidity:65.0%
Operators:HXL	Test Distance:9.990m [K=1.0000]
Test Date:2024-10-28	Remarks: