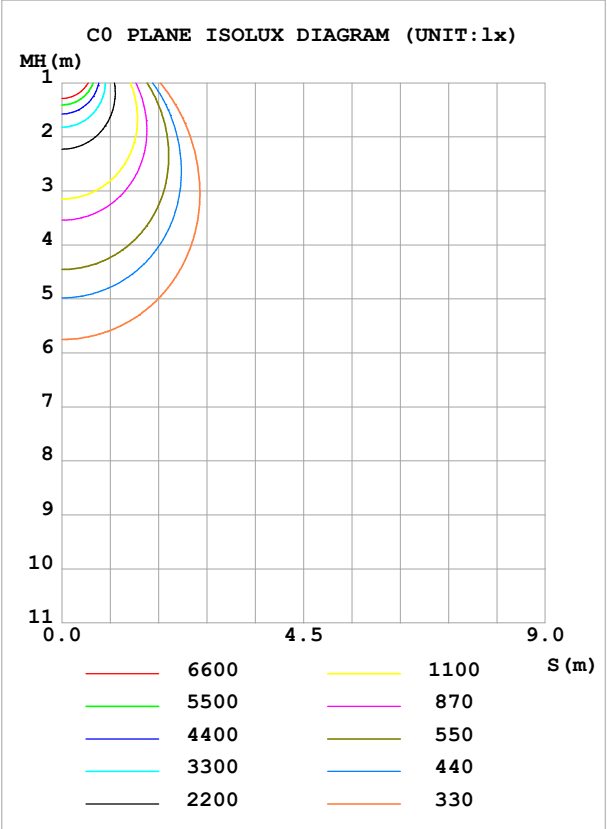
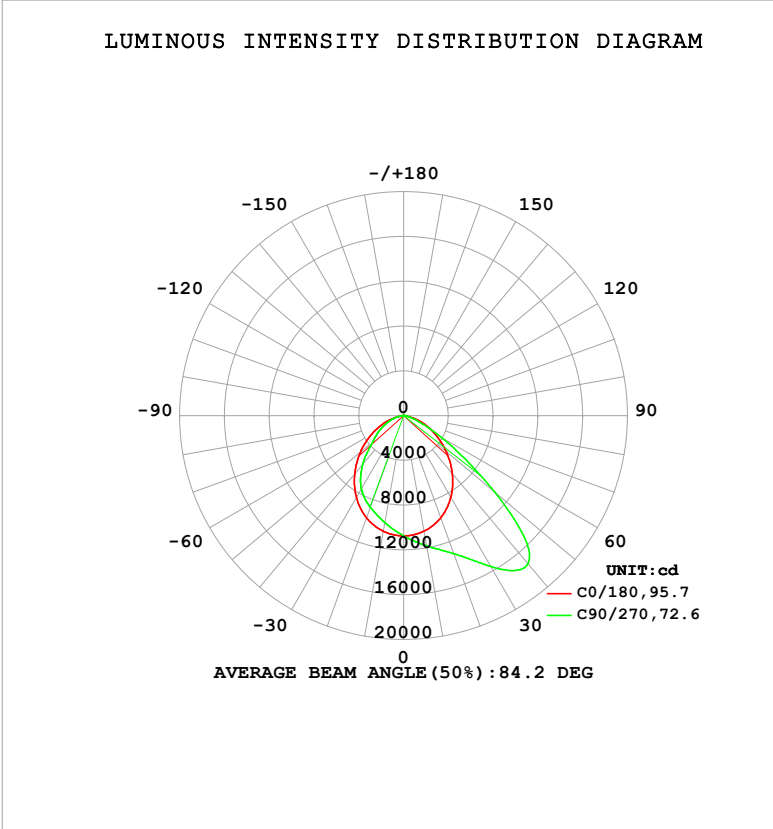


EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:229.6V I:0.8861A P:197.9W PF:0.9728 Freq:50.01Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:30632.6x1 lm		
NAME: X503-457KA-9060 (200W 4000K)	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 154.80 lm/W
MODEL	/	I _{max} (cd)	17345	S/MH(C0/180)	1.18	
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.07	
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	30633	η UP,DN(C0-180)	0.0,63.8	
NOMINAL FLUX(lm)	30632.6	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,36.2	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25	
TEST VOLTAGE(V)	/	η down (%)	100.0	CIBSE SHR MAX	1.35	



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:HXL
Test Date:2024-11-11

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	1048	1138	1181	1134	1049	988.7	971.0	990.3	0- 10	1020	1020	3.33,3.33
20	971.4	1183	1312	1172	972.2	882.7	870.8	885.6	10- 20	2965	3985	13,13
30	843.6	1242	1556	1209	845.5	767.2	757.8	768.9	20- 30	4692	8676	28.3,28.3
40	677.6	1366	1727	1306	681.6	626.7	571.3	622.7	30- 40	6137	14813	48.4,48.4
50	495.0	1333	1067	1336	502.9	446.2	359.2	440.0	40- 50	6614	21428	70,70
60	318.4	738.4	390.0	841.4	329.0	264.1	234.4	259.1	50- 60	5093	26520	86.6,86.6
70	164.1	259.9	116.2	308.4	172.3	136.5	127.8	131.1	60- 70	2897	29417	96,96
80	30.14	38.86	23.81	52.75	37.64	40.52	33.03	34.56	70- 80	1094	30511	99.6,99.6
90	0.9677	0.6859	0.6278	0.8034	0.8916	1.168	0.7260	1.250	80- 90	121.4	30633	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): 18188 lm

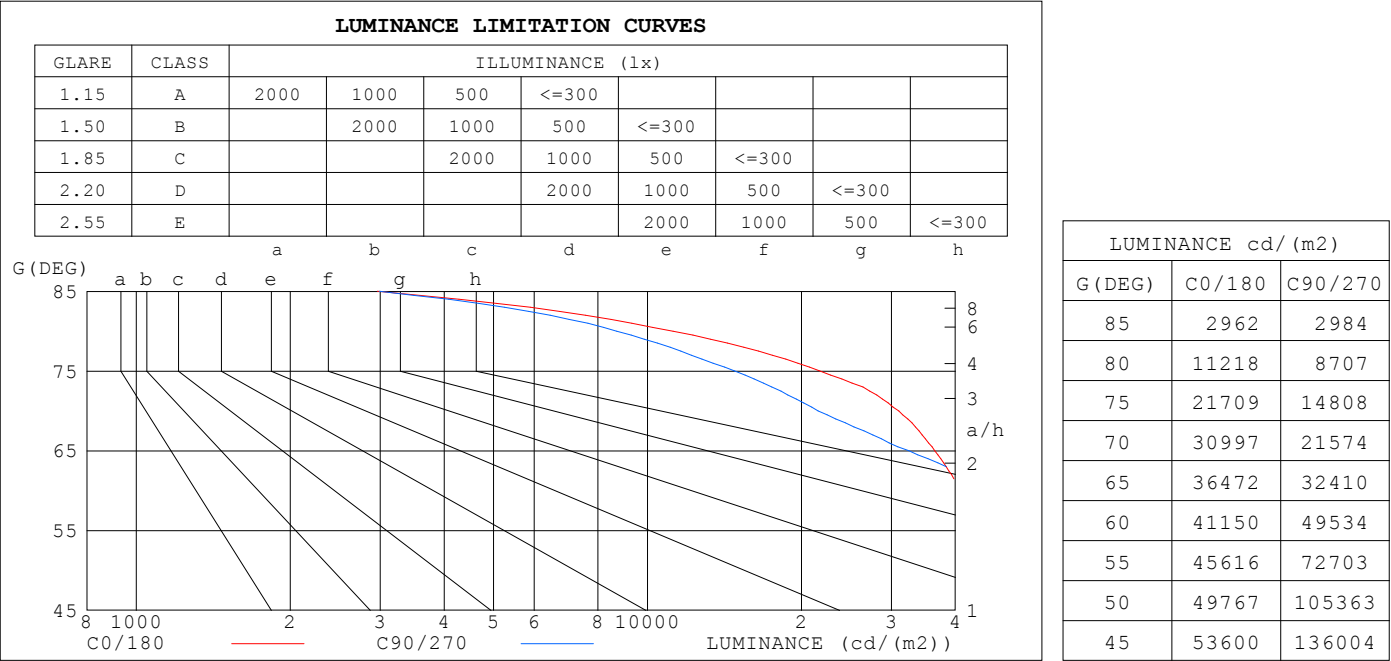
%lum = 59.4%
%lamp = 59.4%

Conical surface Flux(120deg): 26520 lm

%lum = 86.6%
%lamp = 86.6%

C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 22.5DEG	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:2024-11-11	Remarks:

LUMINANCE LIMITATION CURVES

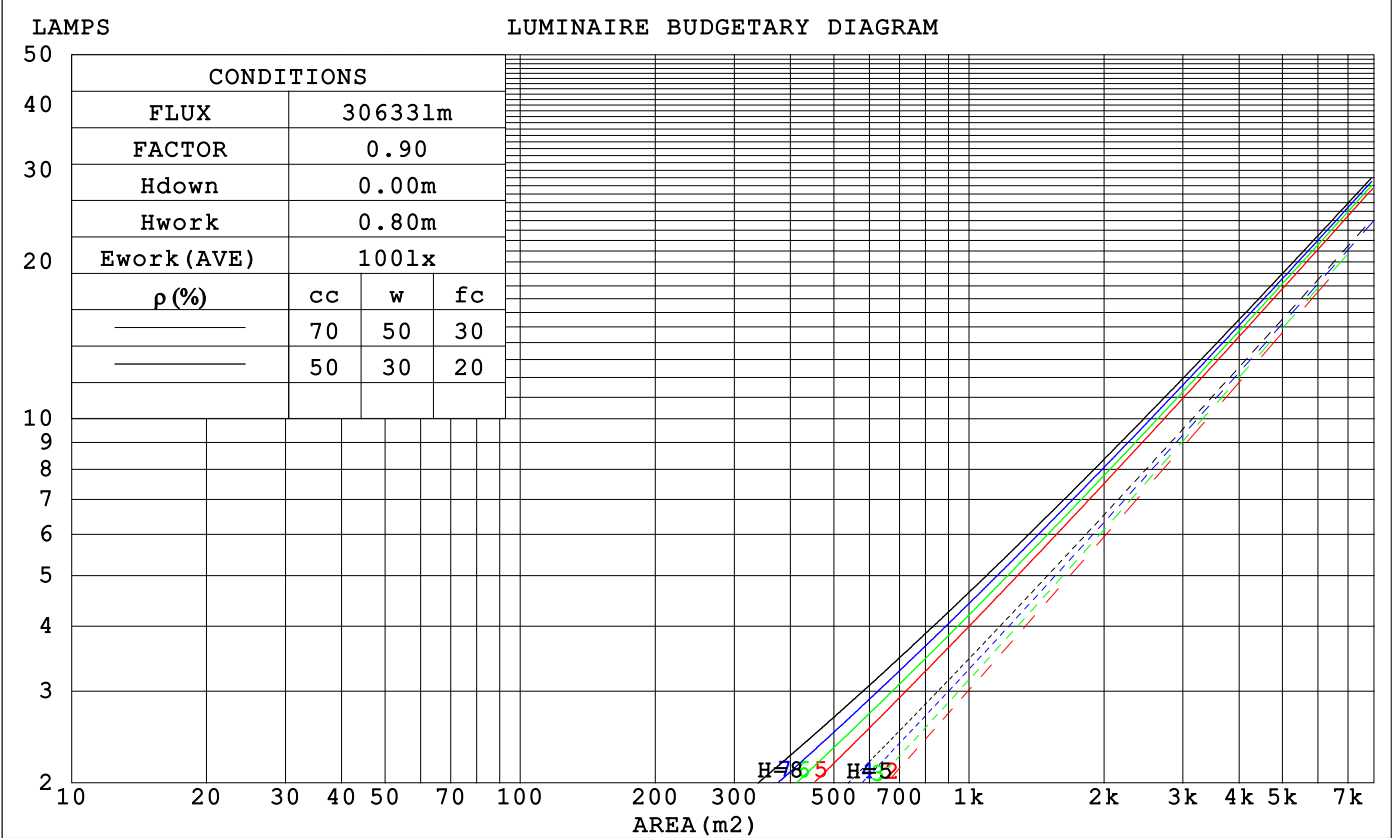


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:HXL
Test Date:2024-11-11

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	1.00	.97	.99	.97	.94	.96	.93	.91	.92	.90	.88	.86
2.0	.93	.87	.82	.91	.86	.81	.88	.83	.79	.85	.81	.77	.82	.78	.75	.73
3.0	.82	.75	.69	.81	.74	.68	.78	.72	.67	.75	.70	.66	.73	.68	.65	.63
4.0	.73	.65	.59	.72	.64	.58	.69	.63	.57	.67	.61	.57	.65	.60	.56	.54
5.0	.65	.57	.50	.64	.56	.50	.62	.55	.50	.60	.54	.49	.59	.53	.49	.47
6.0	.59	.50	.44	.58	.50	.44	.56	.49	.43	.55	.48	.43	.53	.47	.43	.41
7.0	.53	.45	.39	.53	.44	.39	.51	.44	.38	.50	.43	.38	.48	.42	.38	.36
8.0	.49	.40	.35	.48	.40	.34	.47	.39	.34	.45	.39	.34	.44	.38	.34	.32
9.0	.45	.36	.31	.44	.36	.31	.43	.36	.31	.42	.35	.31	.41	.35	.30	.29
10.0	.41	.33	.28	.40	.33	.28	.39	.33	.28	.39	.32	.28	.38	.32	.28	.26



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:HXL
Test Date:2024-11-11

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	.272	.155	.049	.265	.151	.048	.252	.144	.046	.240	.138	.044	.229	.133	.043	
2.0	.265	.145	.045	.259	.142	.044	.247	.137	.043	.237	.133	.042	.227	.128	.040	
3.0	.250	.133	.040	.245	.131	.040	.235	.127	.039	.226	.124	.038	.217	.120	.037	
4.0	.235	.122	.036	.230	.120	.036	.221	.117	.035	.213	.114	.034	.205	.111	.034	
5.0	.220	.112	.032	.216	.111	.032	.208	.108	.032	.200	.106	.031	.193	.103	.031	
6.0	.206	.103	.030	.202	.102	.029	.195	.100	.029	.188	.098	.029	.182	.096	.028	
7.0	.193	.095	.027	.189	.094	.027	.183	.093	.027	.177	.091	.026	.171	.089	.026	
8.0	.181	.088	.025	.178	.088	.025	.172	.086	.025	.167	.085	.024	.162	.083	.024	
9.0	.170	.082	.023	.168	.082	.023	.163	.080	.023	.158	.079	.023	.153	.078	.022	
10.0	.161	.077	.021	.158	.076	.021	.154	.075	.021	.149	.074	.021	.145	.073	.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	.178	.156	.137	.152	.134	.118	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.169	.132	.101	.144	.114	.088	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.161	.114	.077	.138	.098	.067	.095	.068	.047	.055	.040	.028	.018	.013	.009	
4.0	.153	.101	.060	.132	.087	.053	.090	.061	.037	.052	.036	.022	.017	.012	.007	
5.0	.146	.090	.049	.126	.078	.042	.087	.054	.030	.050	.032	.018	.016	.010	.006	
6.0	.140	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.015	.010	.005	
7.0	.133	.075	.034	.115	.065	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004	
8.0	.127	.069	.029	.109	.060	.026	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.121	.064	.026	.104	.056	.022	.072	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:HXL
 Test Date:2024-11-11

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	28.2	29.8	28.6	30.1	30.4	27.7	29.3	28.0	29.6	29.9
3H	29.4	30.8	29.8	31.1	31.5	28.0	29.4	28.3	29.7	30.1
4H	29.6	30.9	30.0	31.3	31.7	28.0	29.3	28.4	29.7	30.0
6H	29.7	30.9	30.1	31.2	31.6	28.0	29.2	28.4	29.6	30.0
8H	29.6	30.8	30.1	31.2	31.6	28.0	29.1	28.4	29.5	29.9
12H	29.6	30.7	30.0	31.1	31.5	27.9	29.0	28.4	29.4	29.8
4H 2H	28.8	30.2	29.2	30.5	30.9	28.6	29.9	29.0	30.3	30.7
3H	30.2	31.3	30.6	31.7	32.1	29.0	30.1	29.5	30.5	30.9
4H	30.5	31.5	31.0	31.9	32.4	29.1	30.1	29.5	30.5	30.9
6H	30.6	31.5	31.1	31.9	32.4	29.1	29.9	29.6	30.4	30.8
8H	30.6	31.4	31.1	31.8	32.3	29.1	29.9	29.5	30.3	30.8
12H	30.6	31.3	31.1	31.8	32.2	29.0	29.7	29.5	30.2	30.7
8H 4H	30.5	31.3	31.0	31.8	32.2	29.3	30.1	29.8	30.5	31.0
6H	30.7	31.3	31.2	31.8	32.3	29.3	29.9	29.8	30.4	30.9
8H	30.7	31.2	31.2	31.8	32.2	29.3	29.8	29.8	30.4	30.8
12H	30.6	31.2	31.2	31.7	32.2	29.2	29.8	29.7	30.2	30.8
12H 4H	30.5	31.2	31.0	31.7	32.2	29.3	30.0	29.8	30.5	30.9
6H	30.6	31.2	31.2	31.7	32.2	29.3	29.9	29.8	30.3	30.9
8H	30.6	31.2	31.2	31.7	32.2	29.3	29.8	29.8	30.3	30.8
CIE190: 2010										

CIE190: 2010
Area: 0.15719 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:HXL
Test Date:2024-11-11

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

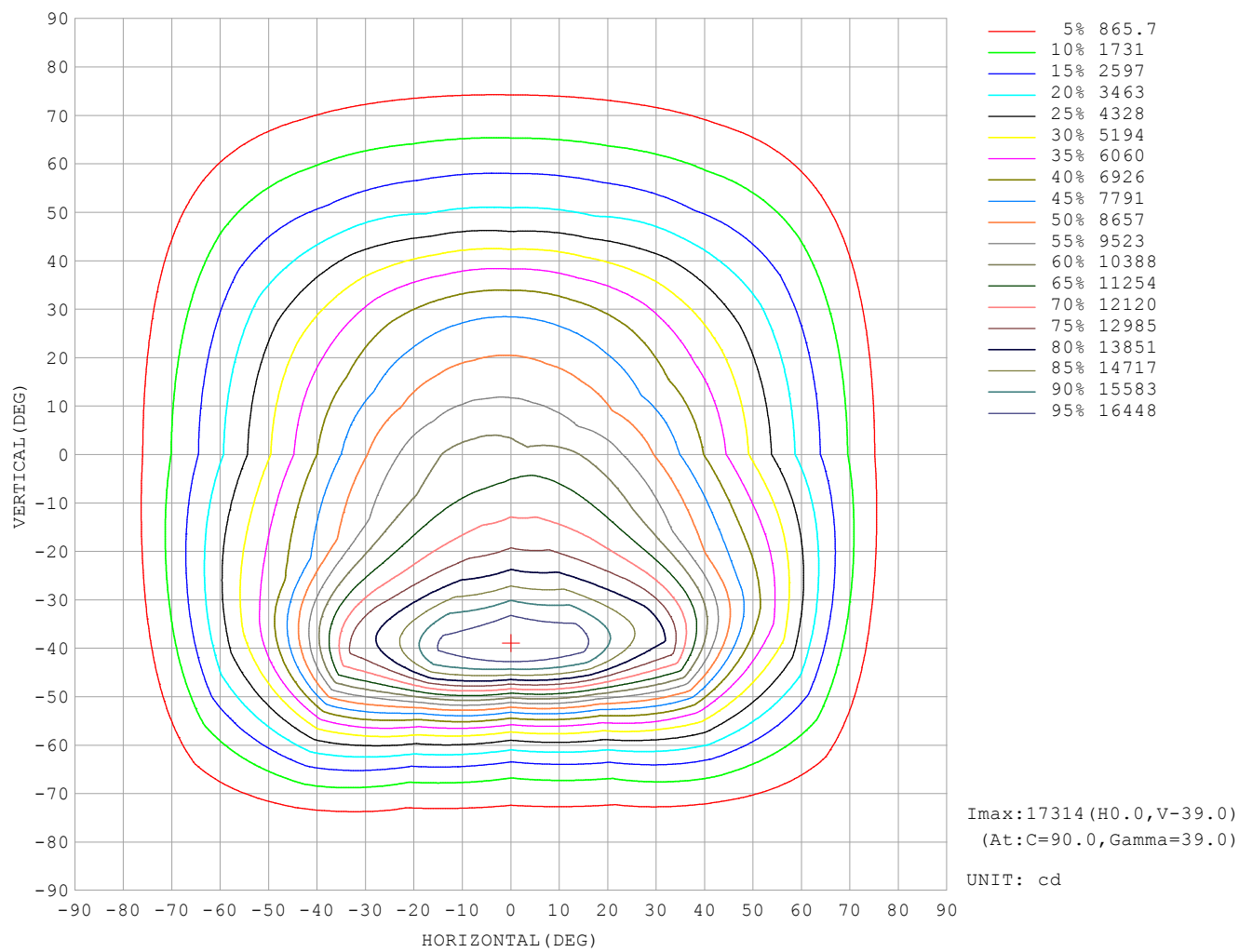
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	59	48	41	58	47	41	57	47	41	34
0.80	70	59	52	69	58	51	67	57	51	44
1.00	79	68	61	78	68	61	75	69	61	54
1.25	86	76	70	85	76	69	82	74	69	62
1.50	91	82	76	89	81	75	86	79	74	67
2.00	98	90	84	96	89	83	93	87	82	75
2.50	101	94	89	99	93	88	96	90	86	78
3.00	104	98	93	102	97	92	98	94	90	82
4.00	108	103	99	106	101	97	101	98	95	86
5.00	110	106	102	108	104	100	103	100	97	89
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: HXL
Test Date: 2024-11-11

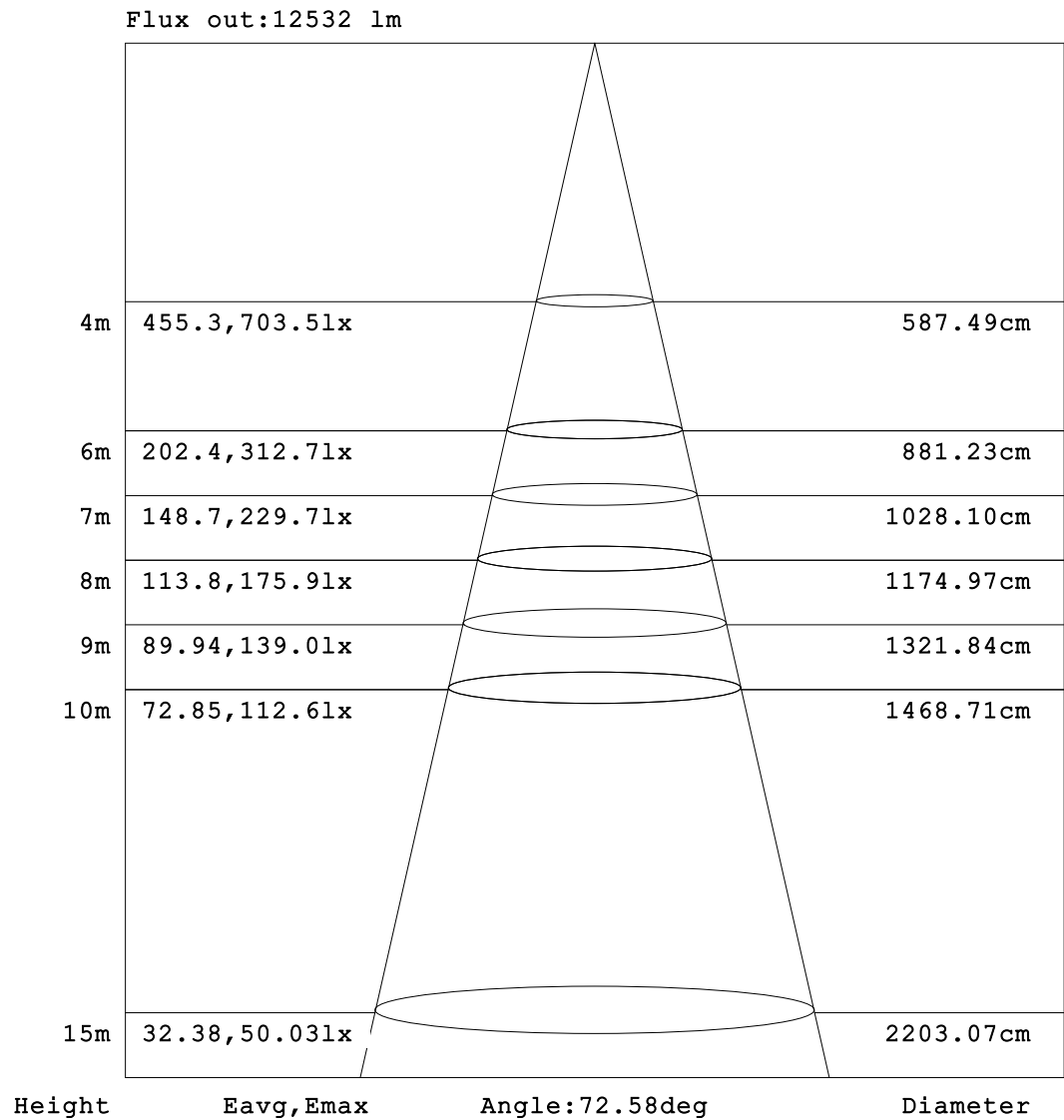
γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 γ Test System: EVERFINE GO-2000A_V1 SYSTEM V2.00.487
Humidity: 65.0%
Test Distance: 9.990m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM



C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 22.5DEG	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:2024-11-11	Remarks:

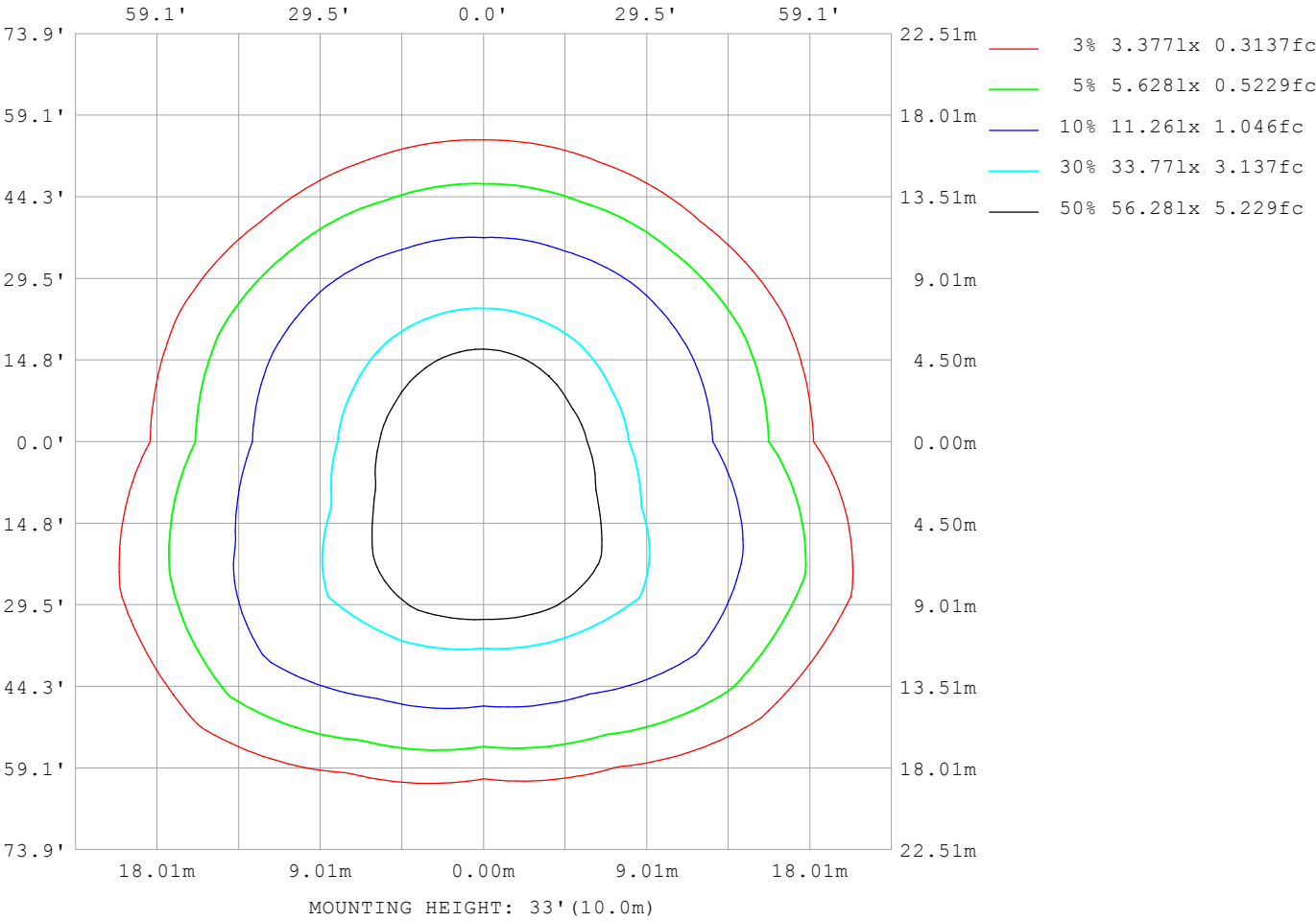
AAI Figure



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

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

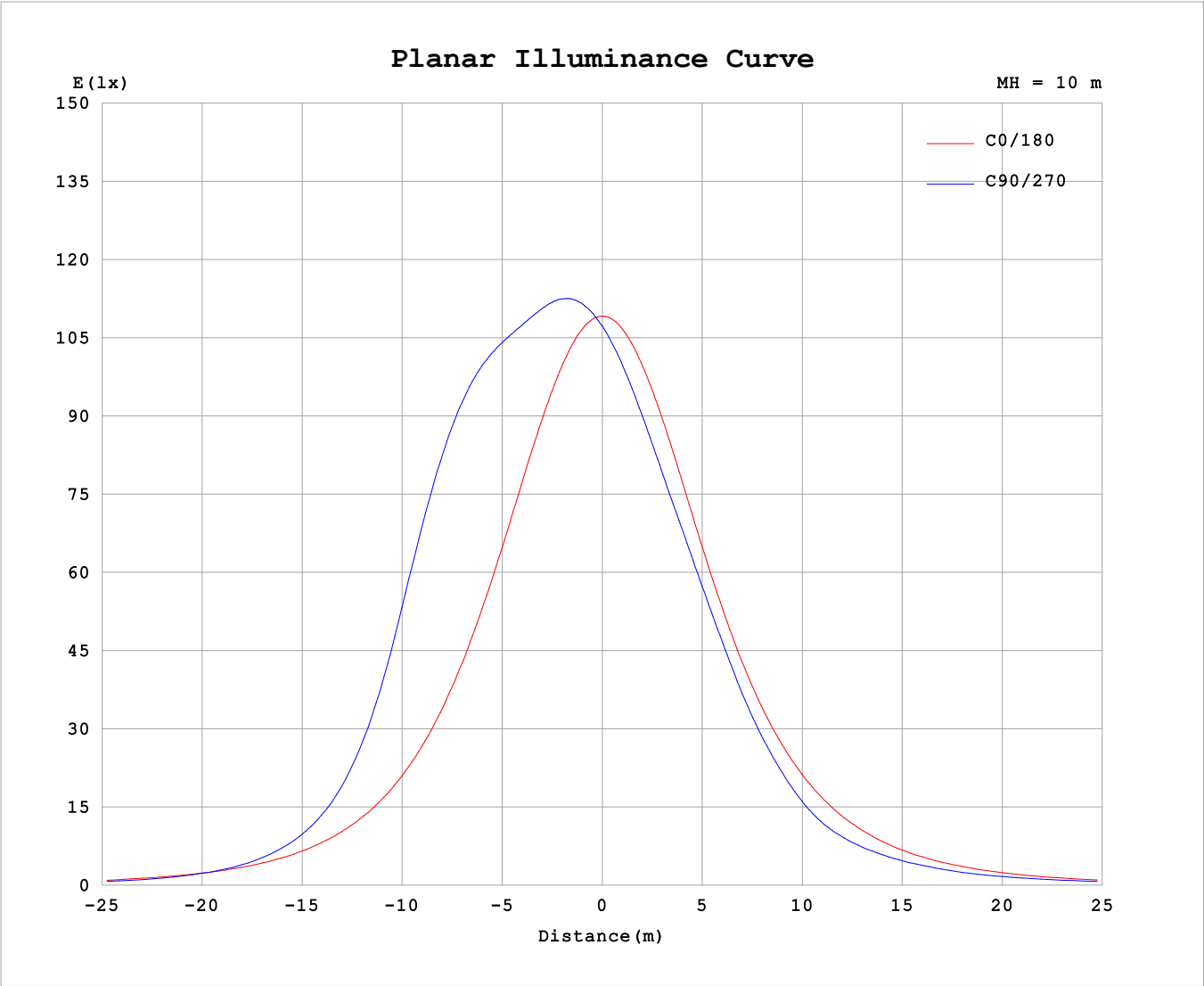
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: HXL
Test Date: 2024-11-11

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: 22.5DEG	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:2024-11-11	Remarks: