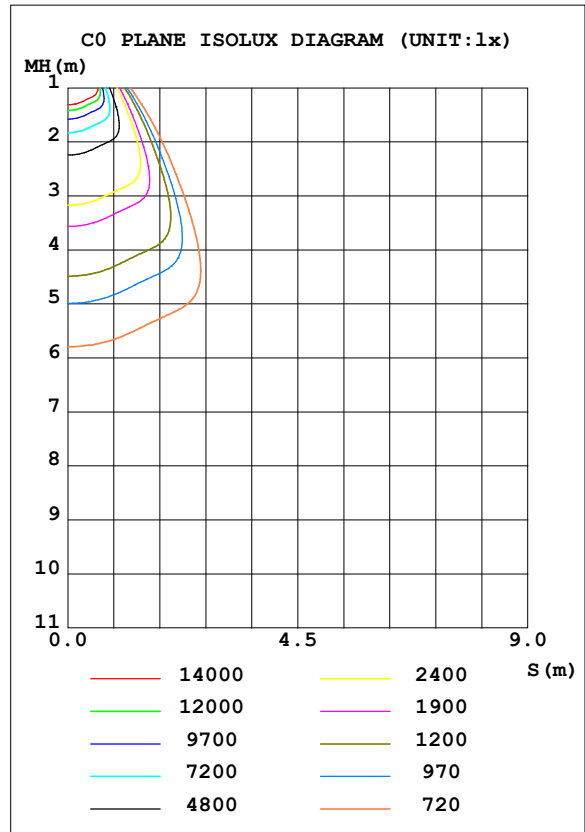
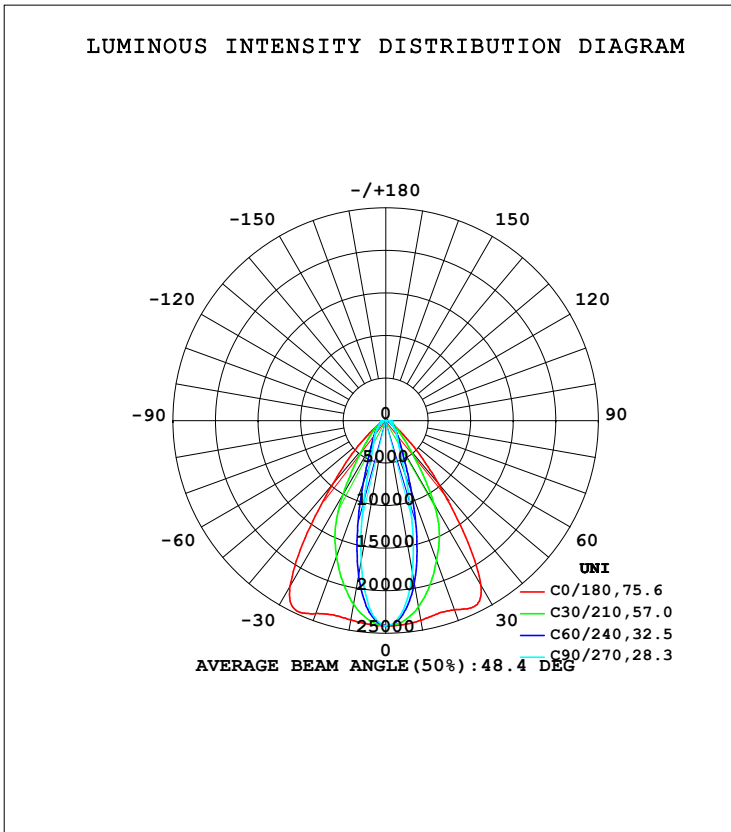


EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:229.8V I:0.6670A P:150.2W PF:0.9802 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:20440.2x1 lm		
NAME: LHB-150W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 136.05 lm/W			
MODEL	/	I _{max} (cd)	24701	S/MH (C0/180)	1.10
NOMINAL POWER (W)	/	LOR (%)	100.0	S/MH (C90/270)	0.46
RATED VOLTAGE (V)	/	TOTAL FLUX (lm)	20440	η UP, DN (C0-180)	0.0, 51.6
NOMINAL FLUX (lm)	20440.2	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 48.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	230	η down (%)	100.0	CIBSE SHR MAX	0.55



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-08-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity: 65.0%
Test Distance: 26.000m [K=0.4494]
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	2380	2085	1810	2101	2377	2005	1676	1984	0- 10	2125	2125	10.4,10.4
20	2366	1259	661.9	1310	2416	1122	568.8	1051	10- 20	4683	6809	33.3,33.3
30	2238	563.4	297.5	589.4	2256	488.1	286.0	458.7	20- 30	5138	11946	58.4,58.4
40	953.4	264.7	195.8	279.1	969.0	246.7	190.7	240.5	30- 40	3981	15928	77.9,77.9
50	310.1	151.8	130.6	159.1	323.1	148.4	127.6	144.7	40- 50	2178	18106	88.6,88.6
60	100.2	90.78	75.72	93.42	98.90	90.91	75.26	90.17	50- 60	1187	19292	94.4,94.4
70	45.09	43.13	51.51	44.14	45.23	44.10	53.16	44.05	60- 70	653.5	19946	97.6,97.6
80	21.24	15.56	75.84	16.72	21.95	16.48	54.76	15.89	70- 80	374.3	20320	99.4,99.4
90	1.673	0.9190	0.0867	0.0323	0.4696	0.0353	0.0578	0.7874	80- 90	120.0	20440	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): 17179 lm

%lum = 84.0%

%lamp = 84.0%

Conical surface Flux(120deg): 19292 lm

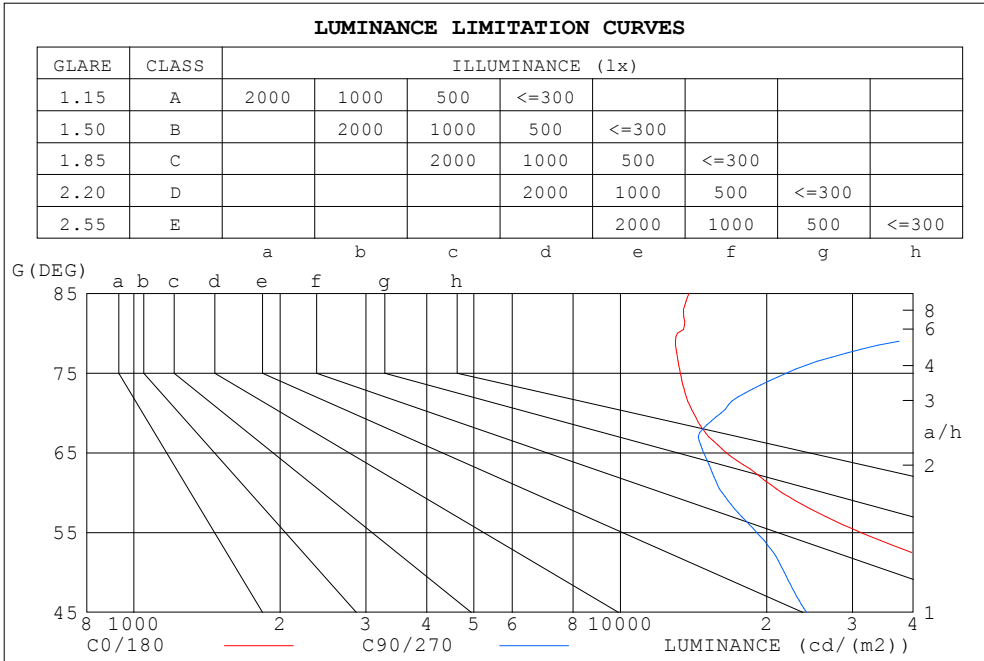
%lum = 94.4%

%lamp = 94.4%

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYJ
 Test Date:2021-08-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:26.000m [K=0.4494]
 Remarks:

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	13848	28858
80	13109	46737
75	13281	21939
70	14129	16116
65	16530	14843
60	21476	16204
55	31287	19081
50	51702	21743
45	86061	24121

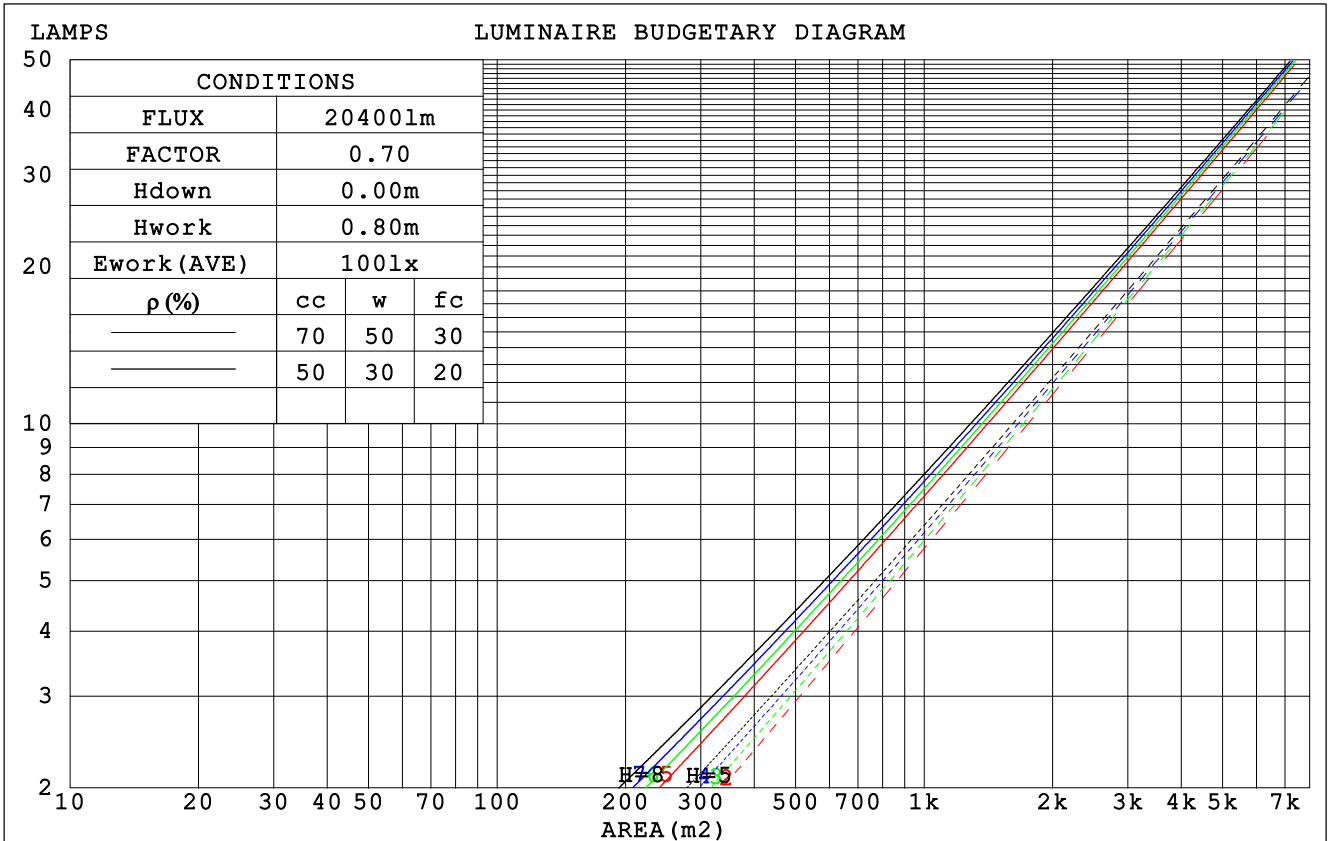
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2021-08-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4494]
 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	.00
1.0	1.09	1.06	1.03	1.07	1.04	1.02	1.03	1.01	.99	.99	.97	.96	.95	.94	.93	.91
2.0	.00	.95	.91	.98	.94	.90	.95	.91	.88	.92	.89	.86	.89	.86	.84	.82
3.0	.92	.86	.81	.90	.85	.81	.88	.83	.79	.85	.81	.78	.83	.80	.77	.75
4.0	.85	.78	.73	.83	.78	.73	.81	.76	.72	.79	.75	.71	.77	.73	.70	.69
5.0	.79	.72	.67	.78	.71	.67	.76	.70	.66	.74	.69	.65	.72	.68	.65	.63
6.0	.73	.66	.61	.72	.66	.61	.71	.65	.61	.69	.64	.60	.68	.63	.60	.58
7.0	.68	.62	.57	.68	.61	.57	.66	.60	.56	.65	.60	.56	.64	.59	.56	.54
8.0	.64	.57	.53	.63	.57	.53	.62	.56	.52	.61	.56	.52	.60	.55	.52	.50
9.0	.60	.54	.49	.60	.53	.49	.59	.53	.49	.58	.53	.49	.57	.52	.49	.47
10.0	.57	.50	.46	.56	.50	.46	.55	.50	.46	.55	.49	.46	.54	.49	.46	.44



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2021-08-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4494]
 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	.212	.121	.038	.206	.117	.037	.193	.111	.035	.181	.104	.034	.170	.099	.032	
2.0	.202	.111	.034	.196	.108	.033	.186	.103	.032	.176	.098	.031	.166	.094	.030	
3.0	.191	.102	.030	.186	.100	.030	.176	.096	.029	.168	.092	.028	.160	.088	.027	
4.0	.180	.093	.027	.175	.092	.027	.167	.089	.026	.160	.086	.026	.153	.083	.025	
5.0	.170	.086	.025	.166	.085	.025	.159	.083	.024	.152	.080	.024	.146	.078	.023	
6.0	.160	.080	.023	.157	.079	.023	.150	.077	.022	.145	.075	.022	.139	.073	.022	
7.0	.152	.075	.021	.149	.074	.021	.143	.072	.021	.138	.071	.021	.133	.069	.020	
8.0	.144	.070	.020	.141	.070	.020	.136	.068	.019	.131	.067	.019	.127	.065	.019	
9.0	.137	.066	.018	.134	.065	.018	.130	.064	.018	.126	.063	.018	.122	.062	.018	
10.0	.130	.062	.017	.128	.062	.017	.124	.061	.017	.120	.060	.017	.117	.059	.017	

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	.174	.157	.142	.149	.135	.122	.102	.093	.085	.058	.054	.049	.019	.017	.016	
2.0	.160	.132	.109	.137	.114	.094	.094	.079	.066	.054	.046	.038	.017	.015	.013	
3.0	.149	.114	.085	.128	.098	.074	.088	.068	.052	.051	.040	.031	.016	.013	.010	
4.0	.140	.099	.069	.120	.086	.060	.082	.060	.042	.048	.035	.025	.015	.011	.008	
5.0	.131	.088	.056	.113	.076	.049	.078	.053	.035	.045	.031	.020	.015	.010	.007	
6.0	.124	.079	.047	.107	.069	.041	.074	.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	.096	.057	.030	.067	.040	.021	.039	.024	.013	.013	.008	.004	
9.0	.106	.061	.030	.092	.053	.026	.063	.037	.018	.037	.022	.011	.012	.007	.004	
10.0	.101	.056	.026	.087	.049	.023	.061	.034	.016	.035	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2021-08-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4494]
 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	20.7	21.9	21.1	22.2	22.6	18.1	19.3	18.5	19.6	19.9
3H	21.5	22.5	21.9	22.9	23.2	19.6	20.7	20.0	21.0	21.4
4H	21.8	22.8	22.2	23.2	23.5	20.7	21.7	21.1	22.1	22.5
6H	22.1	23.0	22.5	23.4	23.8	22.8	23.7	23.2	24.1	24.5
8H	22.2	23.1	22.6	23.5	23.9	24.5	25.3	24.9	25.7	26.1
12H	22.3	23.1	22.7	23.5	23.9	25.3	26.1	25.7	26.5	26.9
4H 2H	20.9	21.8	21.3	22.2	22.6	18.7	19.6	19.1	20.0	20.4
3H	21.8	22.7	22.3	23.1	23.5	20.3	21.1	20.7	21.5	21.9
4H	22.3	23.0	22.7	23.4	23.9	21.4	22.2	21.9	22.6	23.0
6H	22.7	23.3	23.2	23.8	24.3	23.5	24.1	23.9	24.5	25.0
8H	22.9	23.5	23.3	23.9	24.4	25.1	25.7	25.6	26.2	26.6
12H	23.0	23.5	23.5	24.0	24.5	26.0	26.5	26.5	27.0	27.5
8H 4H	22.4	22.9	22.8	23.4	23.9	21.6	22.2	22.1	22.6	23.1
6H	22.9	23.3	23.4	23.8	24.3	23.6	24.0	24.1	24.5	25.0
8H	23.1	23.5	23.6	24.0	24.5	25.2	25.6	25.7	26.2	26.6
12H	23.3	23.7	23.8	24.2	24.8	26.1	26.5	26.6	27.0	27.5
12H 4H	22.3	22.8	22.8	23.3	23.8	21.6	22.1	22.1	22.6	23.1
6H	22.9	23.3	23.4	23.7	24.3	23.6	24.0	24.1	24.4	25.0
8H	23.1	23.5	23.6	24.0	24.5	25.2	25.6	25.7	26.1	26.6
CIE190: 2010										

CIE190: 2010
Area: 0.09346 m2

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-08-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.4494]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

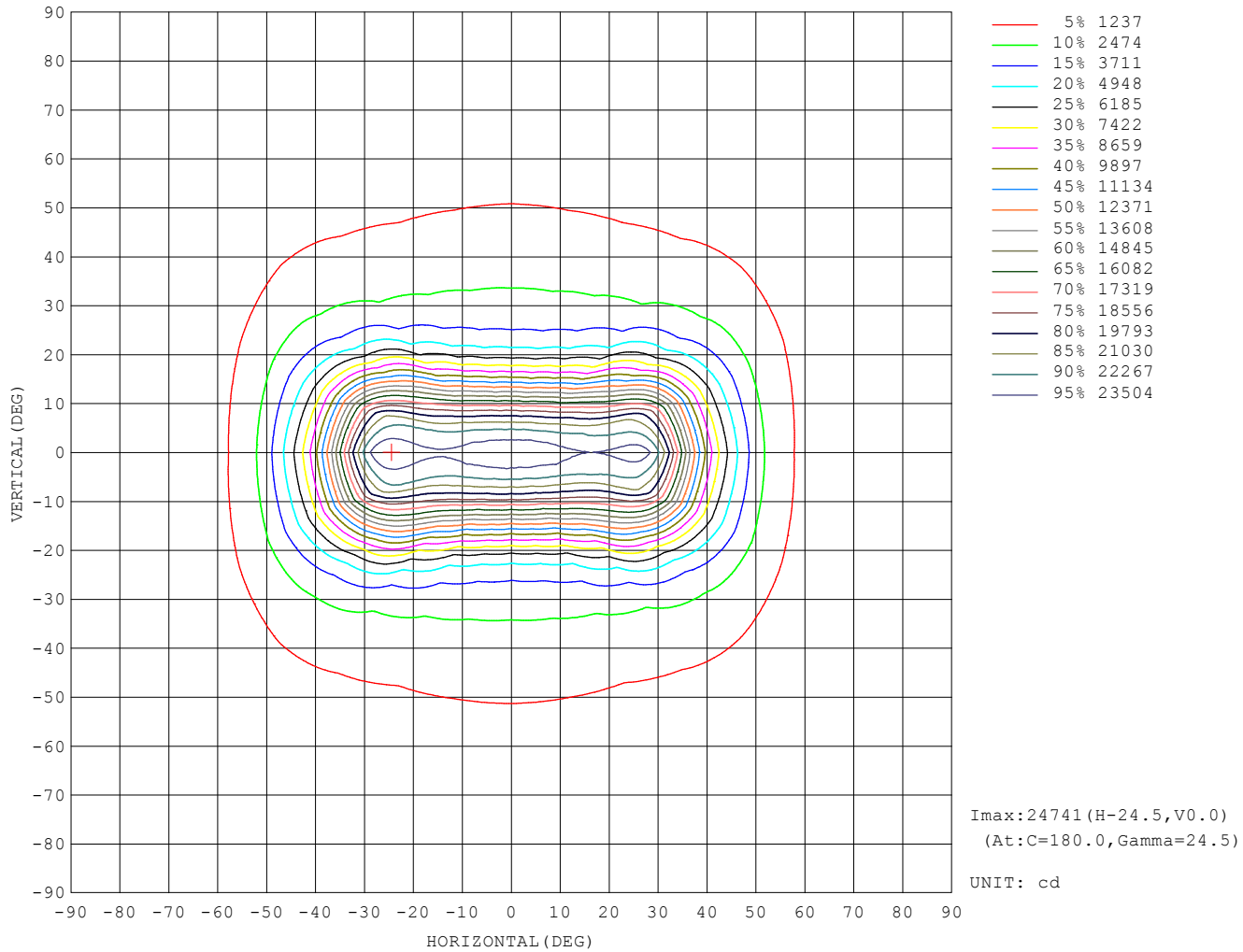
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	78	70	65	77	70	65	76	69	65	60
0.80	86	79	74	85	78	74	84	78	73	69
1.00	92	85	80	91	84	80	89	85	79	75
1.25	97	91	86	96	90	86	94	89	85	80
1.50	101	94	90	99	94	90	97	92	88	83
2.00	105	99	95	103	98	94	100	96	93	87
2.50	107	102	98	105	101	97	102	98	95	89
3.00	109	105	101	107	103	100	104	100	98	91
4.00	112	108	105	109	106	104	106	103	101	93
5.00	113	110	108	111	108	106	107	105	103	95
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: LYJ
 Test Date: 2021-08-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4494]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

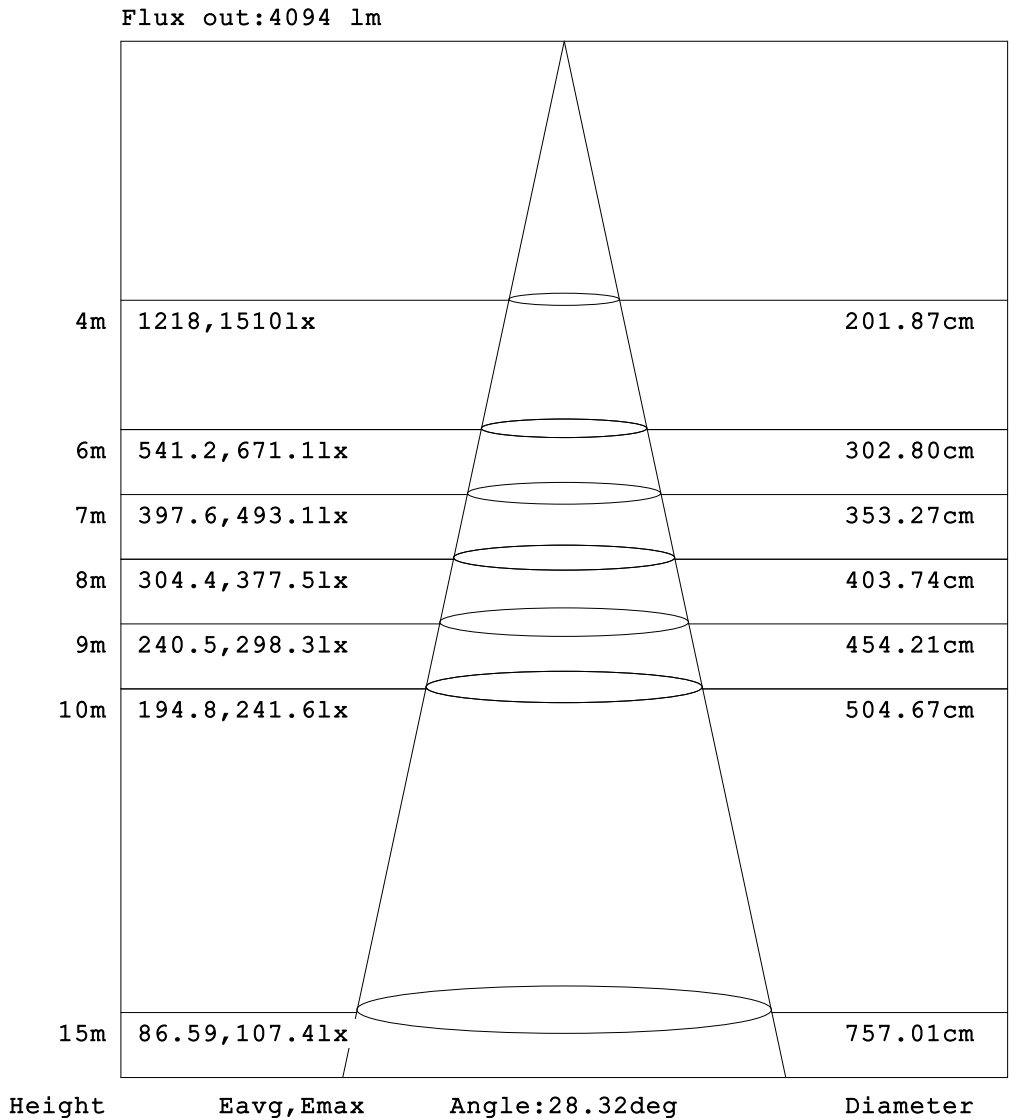
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYJ
 Test Date:2021-08-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:26.000m [K=0.4494]
 Remarks:

AAI Figure



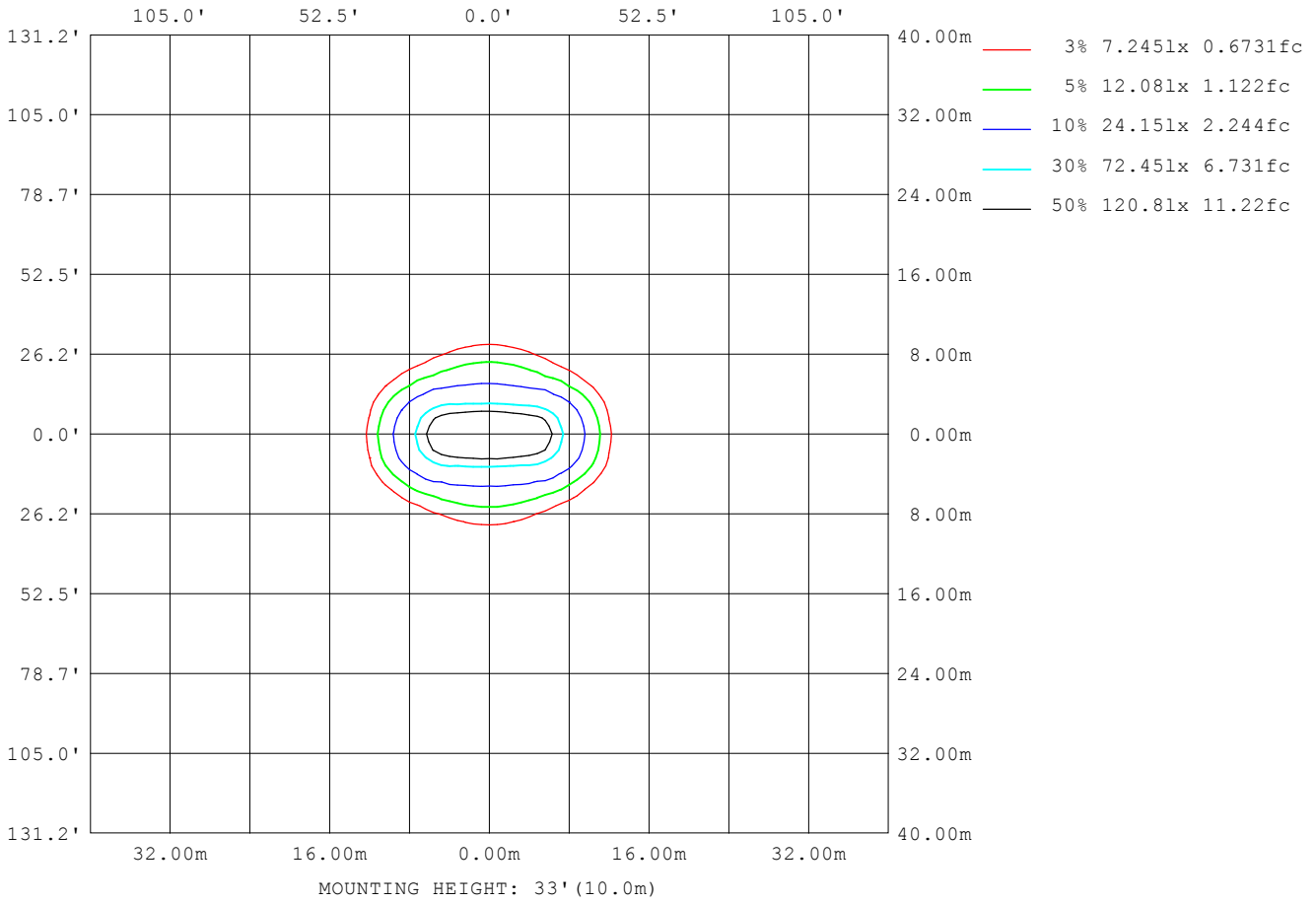
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYJ
 Test Date:2021-08-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:26.000m [K=0.4494]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

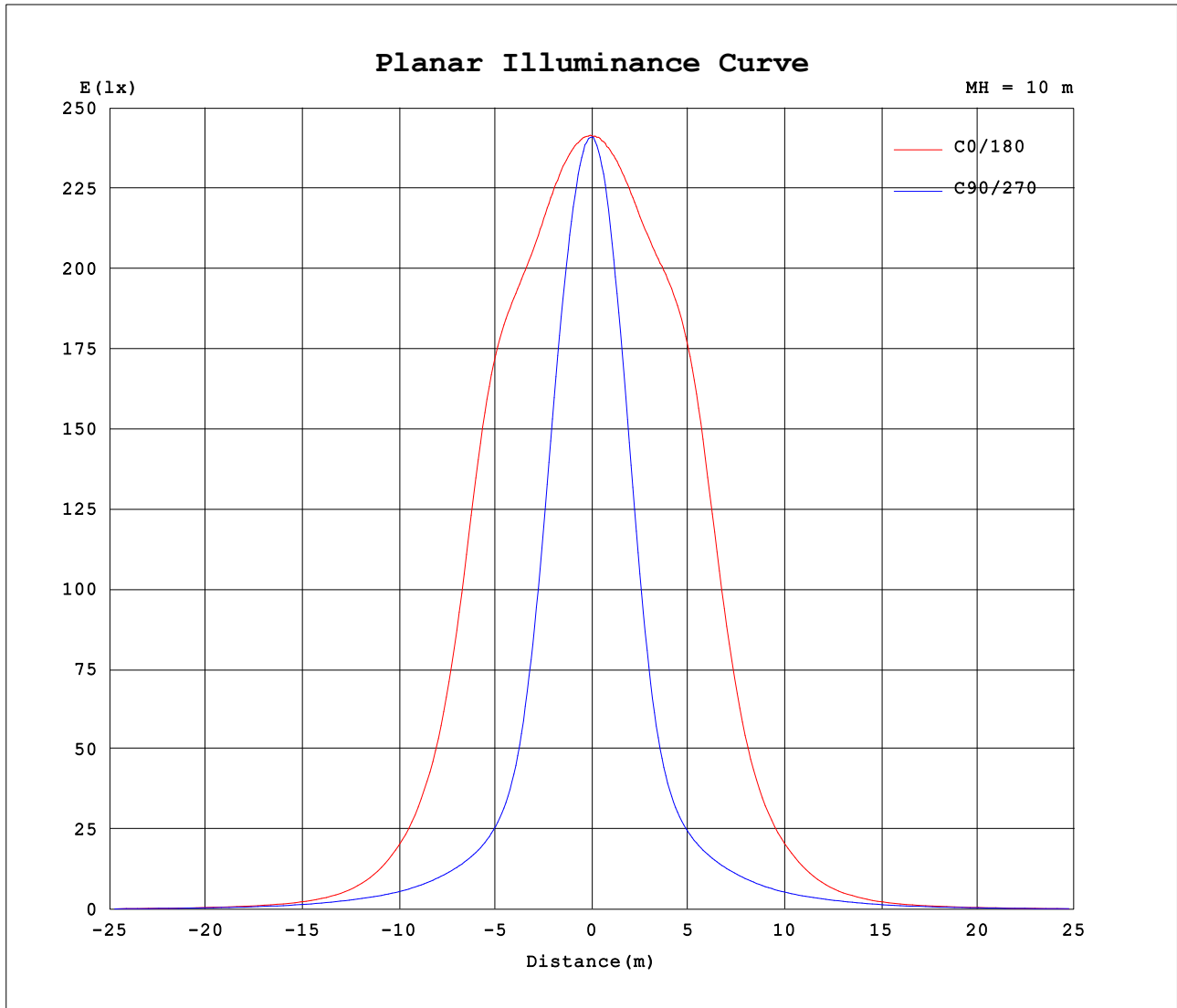
ISOLUX DIAGRAM



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2021-08-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4494]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-08-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.4494]
Remarks: