

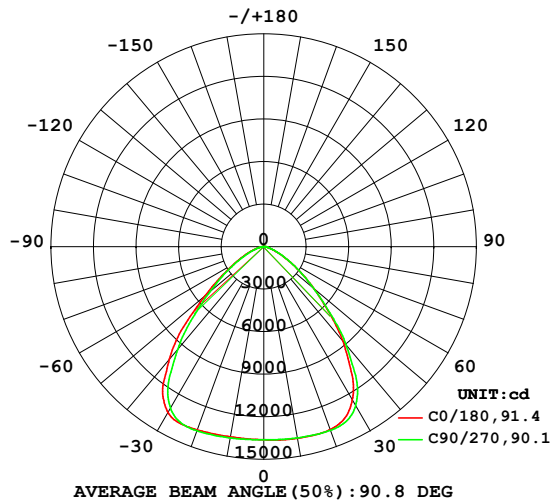
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

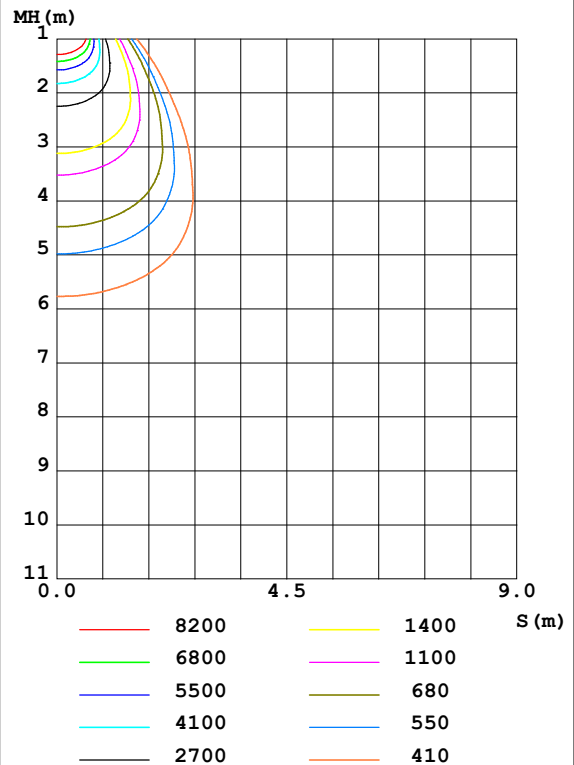
Test:U:229.7V I:0.8649A P:195.72W PF:0.9853 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:29033.2x1 lm		
NAME: HB44-200-5080-H00108	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 148.34 lm/W			
MODEL	/	I _{max} (cd)	13822	S/MH(C0/180)	1.34
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.29
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	29033	η UP,DN(C0-180)	0.0,49.3
NOMINAL FLUX(lm)	29033.2	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-11-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:1.900m [K=0.6091]
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	1372	1372	1370	1365	1361	1364	1369	1373	0- 10	1303	1303	4.49,4.49
20	1372	1373	1378	1379	1375	1377	1382	1380	10- 20	3894	5197	17.9,17.9
30	1250	1262	1295	1329	1351	1351	1316	1279	20- 30	6271	11469	39.5,39.5
40	867.0	890.5	903.9	961.2	1036	1018	943.5	898.1	30- 40	7142	18610	64.1,64.1
50	464.7	460.7	459.5	490.7	543.2	532.7	497.6	446.4	40- 50	5428	24039	82.8,82.8
60	208.0	206.0	212.7	221.9	237.6	240.8	224.1	192.0	50- 60	3012	27050	93.2,93.2
70	72.75	72.11	77.66	84.20	90.96	90.79	82.19	69.70	60- 70	1385	28435	97.9,97.9
80	21.10	20.75	22.52	24.72	26.18	25.81	24.14	21.26	70- 80	492.7	28928	99.6,99.6
90	0.0493	0.0492	0.0484	0.0527	0.0946	0.0554	0.0484	0.0480	80- 90	105.4	29033	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): 21664 lm

%lum = 74.6%

%lamp = 74.6%

Conical surface Flux(120deg): 27050 lm

%lum = 93.2%

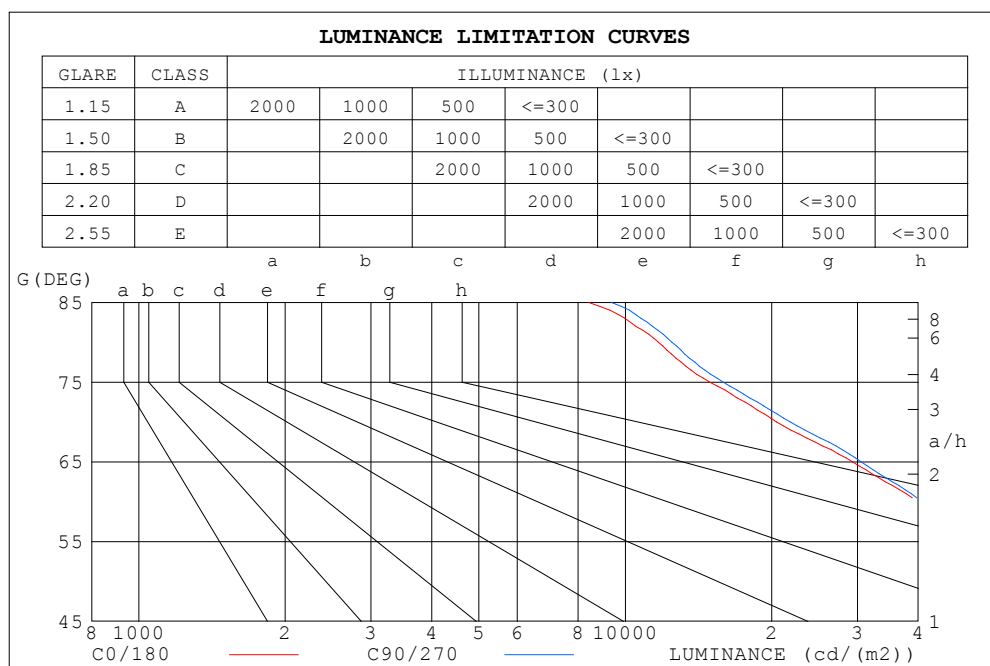
%lamp = 93.2%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-11-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:1.900m [K=0.6091]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES



LUMINANCE $\text{cd}/(\text{m}^2)$		
G (DEG)	C0/180	C90/270
85	8416	9374
80	11691	12470
75	14918	15916
70	20470	21830
65	29334	30579
60	40040	40905
55	53607	53680
50	69569	68724
45	88058	89476

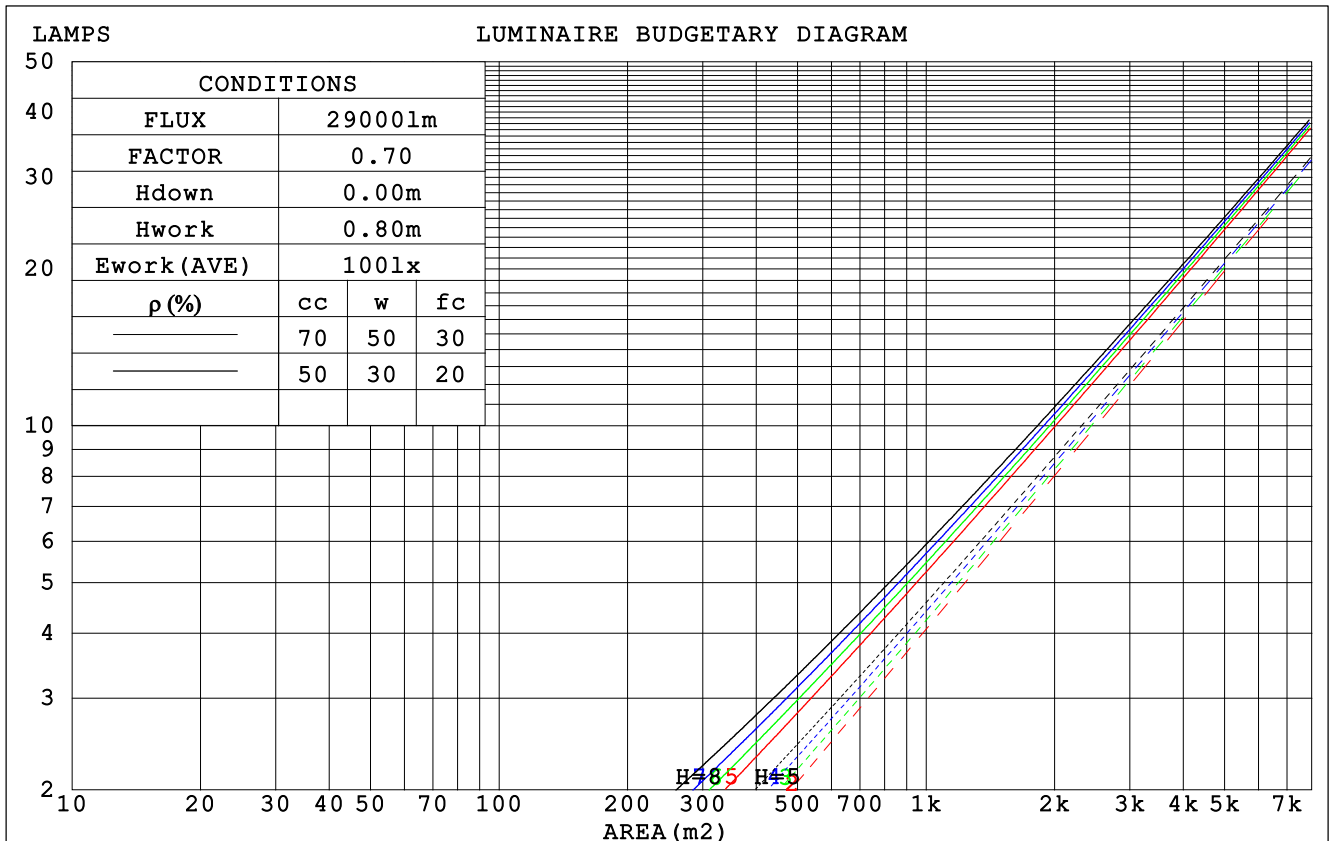
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2021-11-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 1.900m [K=0.6091]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

pcc	80%			70%			50%			30%			10%			0
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p _{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	1.04	1.01	1.05	1.02	.00	1.01	.99	.97	.98	.96	.94	.94	.92	.91	.89
2.0	.97	.91	.87	.95	.90	.86	.92	.87	.84	.89	.85	.82	.86	.83	.80	.78
3.0	.87	.81	.75	.86	.80	.75	.83	.78	.73	.80	.76	.72	.78	.74	.71	.69
4.0	.79	.72	.66	.78	.71	.65	.75	.69	.65	.73	.68	.64	.71	.67	.63	.61
5.0	.72	.64	.58	.71	.63	.58	.69	.62	.57	.67	.61	.57	.65	.60	.56	.54
6.0	.65	.58	.52	.64	.57	.52	.63	.56	.51	.61	.55	.51	.60	.55	.51	.49
7.0	.60	.52	.47	.59	.52	.47	.58	.51	.46	.56	.50	.46	.55	.50	.46	.44
8.0	.55	.47	.42	.54	.47	.42	.53	.47	.42	.52	.46	.42	.51	.45	.41	.40
9.0	.51	.43	.38	.50	.43	.38	.49	.43	.38	.48	.42	.38	.47	.42	.38	.36
10.0	.47	.40	.35	.47	.40	.35	.46	.39	.35	.45	.39	.35	.44	.38	.35	.33



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-11-17

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity: 65.0%
Test Distance: 1.900m [K=0.6091]
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	.237	.135	.043	.230	.131	.042	.217	.125	.040	.205	.118	.038	.194	.113	.036															
2.0	.230	.126	.039	.224	.124	.038	.213	.119	.037	.203	.114	.036	.194	.109	.035															
3.0	.219	.117	.035	.214	.115	.035	.204	.111	.034	.195	.107	.033	.187	.104	.032															
4.0	.208	.108	.032	.203	.106	.031	.194	.103	.031	.186	.100	.030	.179	.097	.030															
5.0	.196	.100	.029	.192	.099	.029	.184	.096	.028	.177	.094	.028	.171	.091	.027															
6.0	.185	.093	.027	.181	.092	.026	.175	.090	.026	.168	.088	.026	.162	.086	.025															
7.0	.175	.086	.025	.172	.086	.024	.166	.084	.024	.160	.082	.024	.155	.080	.024															
8.0	.166	.081	.023	.163	.080	.023	.157	.079	.022	.152	.077	.022	.147	.076	.022															
9.0	.157	.076	.021	.154	.075	.021	.149	.074	.021	.145	.073	.021	.140	.071	.021															
10.0	.149	.071	.020	.147	.071	.020	.142	.070	.020	.138	.069	.019	.134	.067	.019															

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	.175	.157	.140	.150	.135	.121	.103	.093	.083	.059	.054	.049	.019	.017	.016		
2.0	.164	.132	.105	.141	.114	.091	.096	.079	.064	.056	.046	.037	.018	.015	.012		
3.0	.155	.114	.081	.133	.098	.071	.091	.068	.050	.053	.040	.029	.017	.013	.010		
4.0	.147	.100	.065	.126	.086	.056	.087	.060	.039	.050	.035	.023	.016	.011	.008		
5.0	.139	.089	.052	.120	.077	.045	.082	.054	.032	.048	.032	.019	.015	.010	.006		
6.0	.133	.081	.043	.114	.070	.038	.079	.049	.027	.046	.029	.016	.015	.009	.005		
7.0	.126	.074	.036	.109	.064	.032	.075	.045	.023	.044	.026	.013	.014	.009	.004		
8.0	.121	.068	.031	.104	.059	.027	.072	.041	.019	.042	.024	.012	.014	.008	.004		
9.0	.115	.063	.027	.099	.054	.024	.069	.038	.017	.040	.023	.010	.013	.007	.003		
10.0	.110	.058	.024	.095	.051	.021	.066	.036	.015	.038	.021	.009	.012	.007	.003		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYJ
 Test Date:2021-11-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity:65.0%
 Test Distance:1.900m [K=0.6091]
 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	23.6	24.9	23.9	25.3	25.6	23.2	24.6	23.6	24.9	25.2
3H	24.1	25.3	24.5	25.6	26.0	23.9	25.1	24.3	25.4	25.8
4H	24.2	25.3	24.6	25.7	26.1	24.1	25.2	24.5	25.5	25.9
6H	24.2	25.3	24.7	25.6	26.0	24.1	25.2	24.5	25.5	25.9
8H	24.2	25.2	24.7	25.6	26.0	24.1	25.1	24.6	25.5	25.9
12H	24.2	25.2	24.7	25.5	26.0	24.1	25.1	24.6	25.5	25.9
4H 2H	23.8	24.9	24.2	25.2	25.6	23.6	24.7	24.0	25.0	25.4
3H	24.4	25.3	24.8	25.7	26.1	24.4	25.3	24.8	25.7	26.1
4H	24.5	25.4	25.0	25.8	26.2	24.6	25.4	25.0	25.8	26.3
6H	24.6	25.4	25.1	25.8	26.3	24.7	25.4	25.2	25.9	26.3
8H	24.7	25.3	25.1	25.8	26.2	24.7	25.4	25.2	25.8	26.3
12H	24.7	25.2	25.1	25.7	26.2	24.7	25.3	25.2	25.8	26.3
8H 4H	24.5	25.2	25.0	25.7	26.1	24.6	25.3	25.1	25.7	26.2
6H	24.7	25.2	25.2	25.7	26.2	24.8	25.3	25.3	25.8	26.3
8H	24.7	25.2	25.2	25.7	26.2	24.8	25.3	25.4	25.8	26.3
12H	24.7	25.2	25.2	25.7	26.2	24.9	25.3	25.4	25.8	26.4
12H 4H	24.5	25.1	25.0	25.6	26.1	24.6	25.2	25.1	25.7	26.2
6H	24.7	25.1	25.2	25.6	26.2	24.8	25.3	25.3	25.7	26.3
8H	24.7	25.1	25.2	25.6	26.2	24.9	25.3	25.4	25.8	26.4
CIE190: 2010										

CIE190: 2010
Area: 0.104 m2

C Range: 0 - 360DEG
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γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity: 65.0%
Test Distance: 1.900m [K=0.6091]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

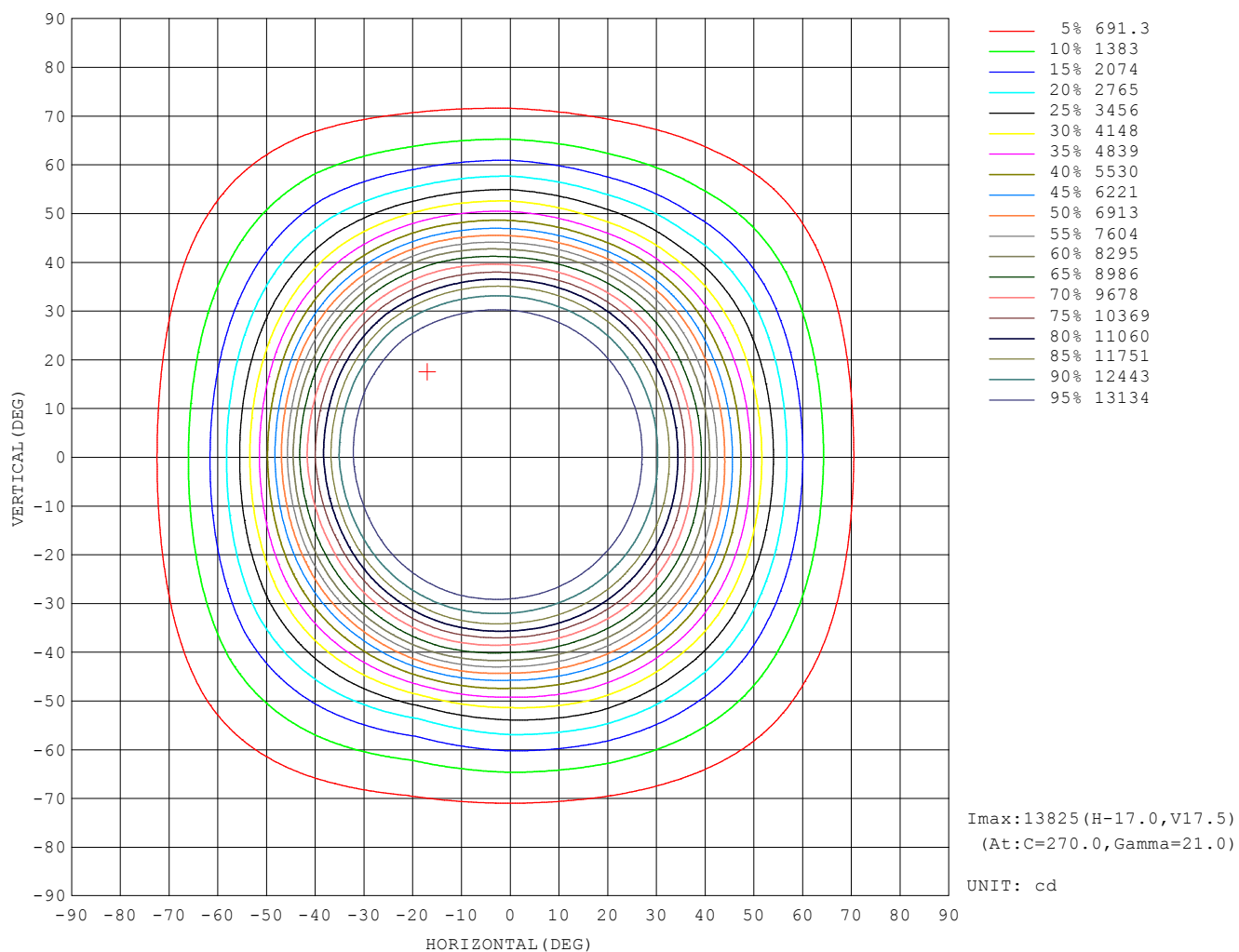
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	69	59	53	68	59	53	67	58	53	48
0.80	79	69	63	78	69	63	76	68	63	57
1.00	86	78	72	85	77	72	83	78	71	66
1.25	93	85	79	91	84	79	89	83	78	72
1.50	97	89	84	95	89	84	93	87	83	77
2.00	102	96	91	100	95	90	97	92	89	82
2.50	105	99	95	103	98	94	99	95	92	85
3.00	107	102	98	105	101	97	102	98	95	87
4.00	110	106	102	108	104	101	104	101	98	90
5.00	112	108	105	109	106	104	105	103	101	92
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
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 Operators: LYJ
 Test Date: 2021-11-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
 Humidity: 65.0%
 Test Distance: 1.900m [K=0.6091]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

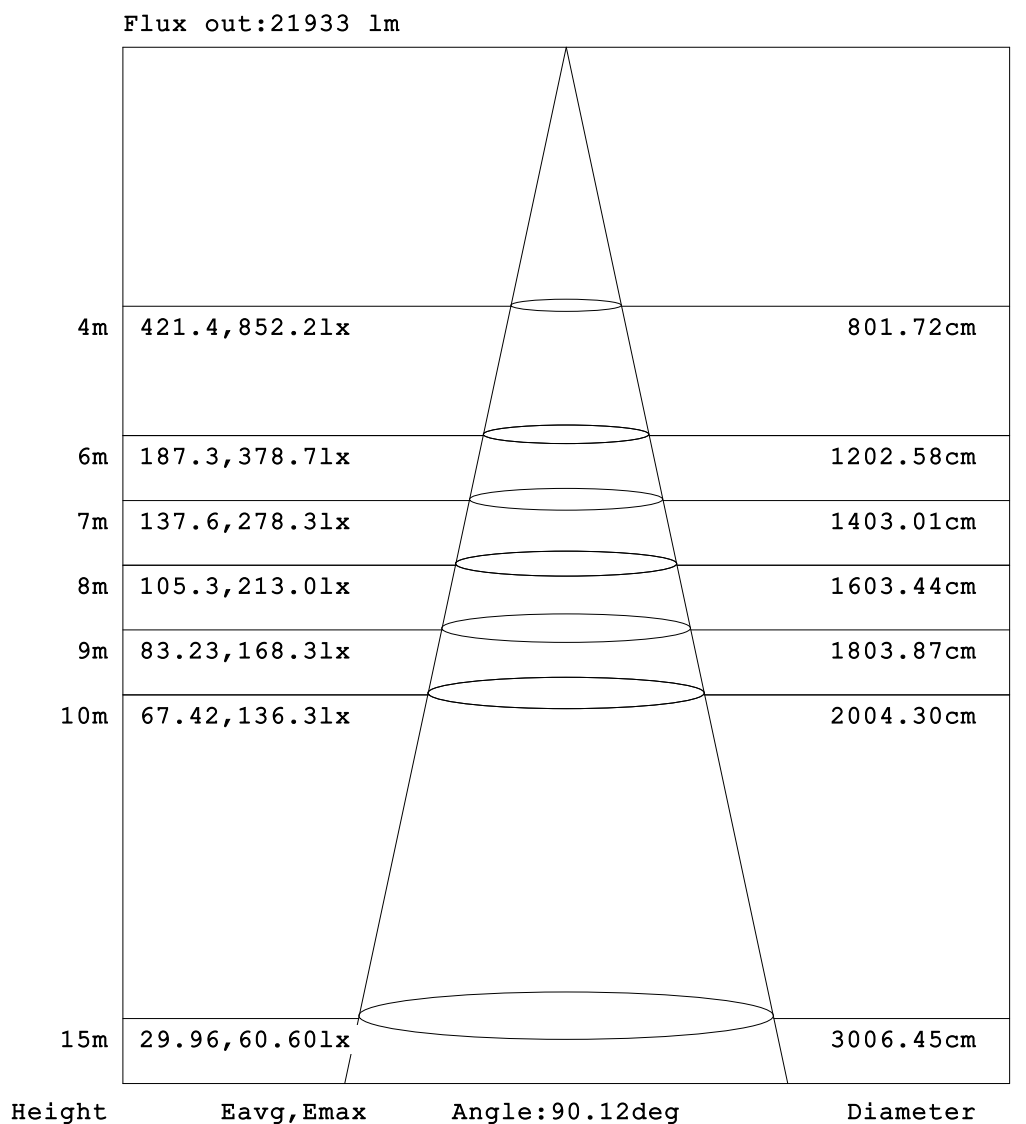
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-11-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:1.900m [K=0.6091]
Remarks:

AAI Figure



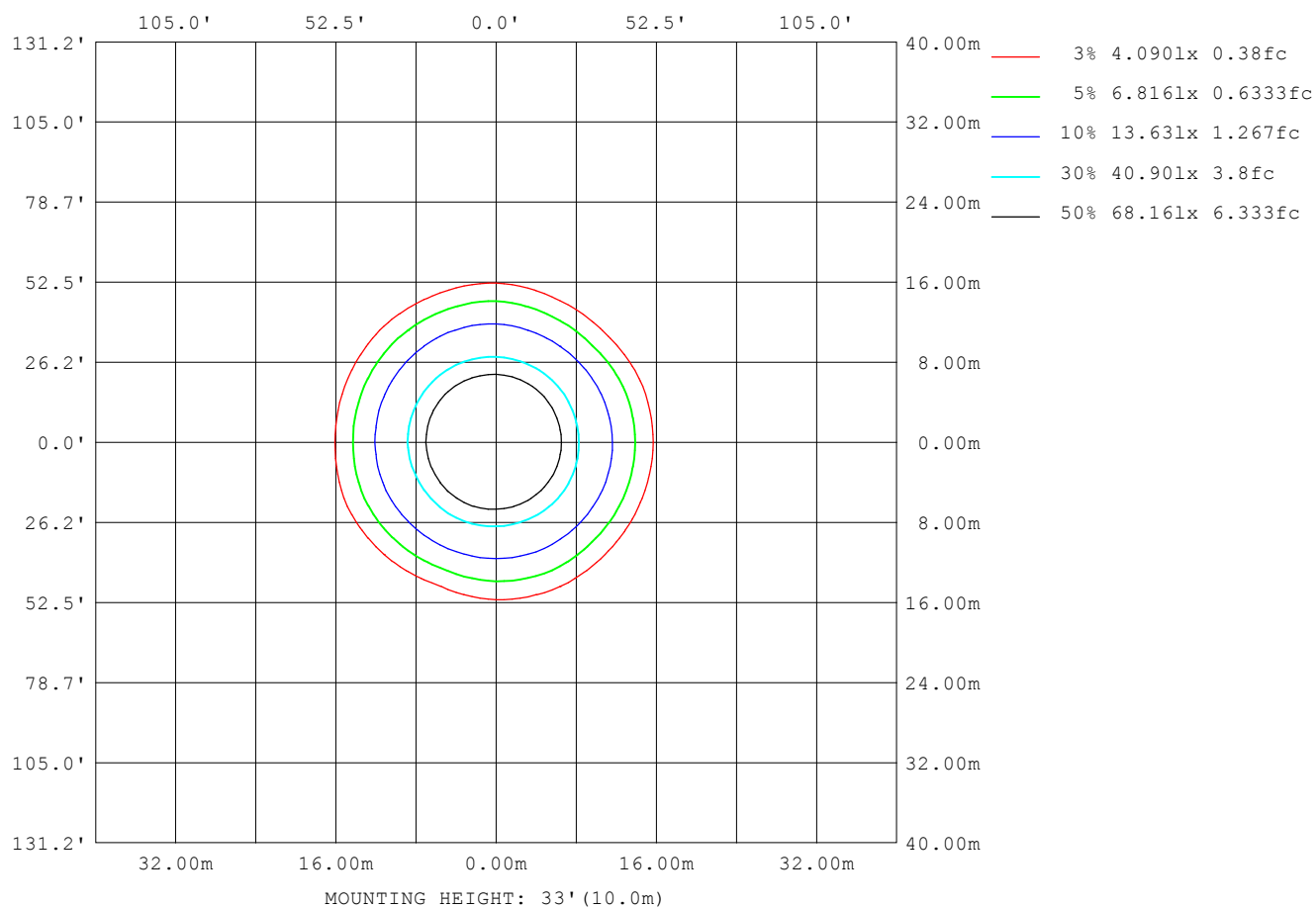
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-11-17

γ Range: 0 - 90DEG
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Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
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Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

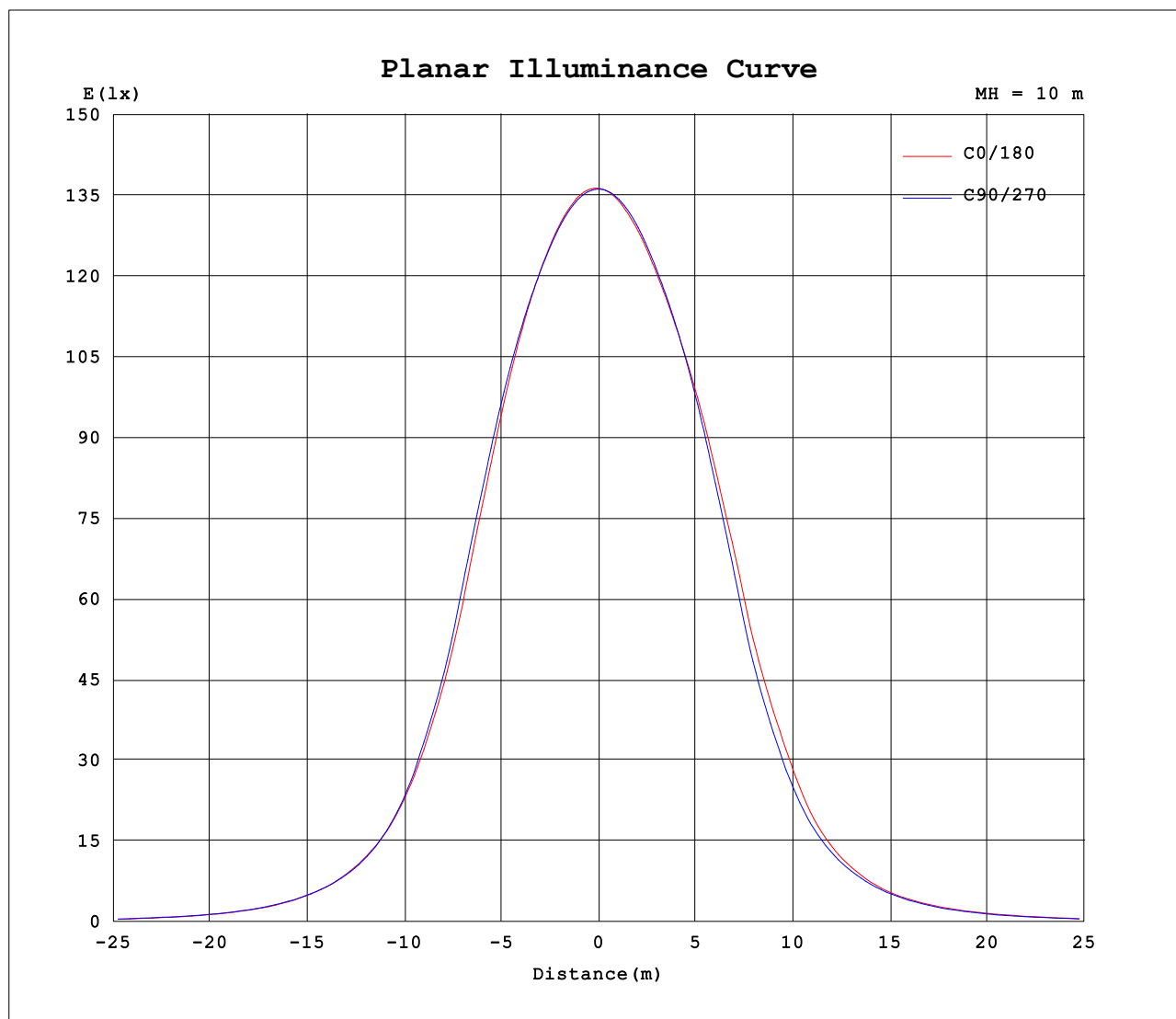
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-11-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity: 65.0%
Test Distance: 1.900m [K=0.6091]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-11-17

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity: 65.0%
Test Distance: 1.900m [K=0.6091]
Remarks: