

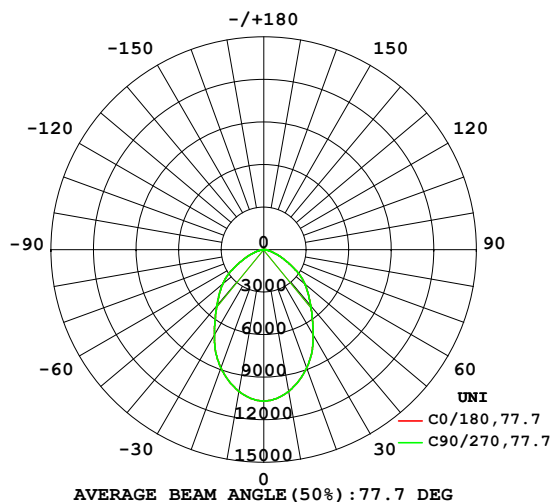
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

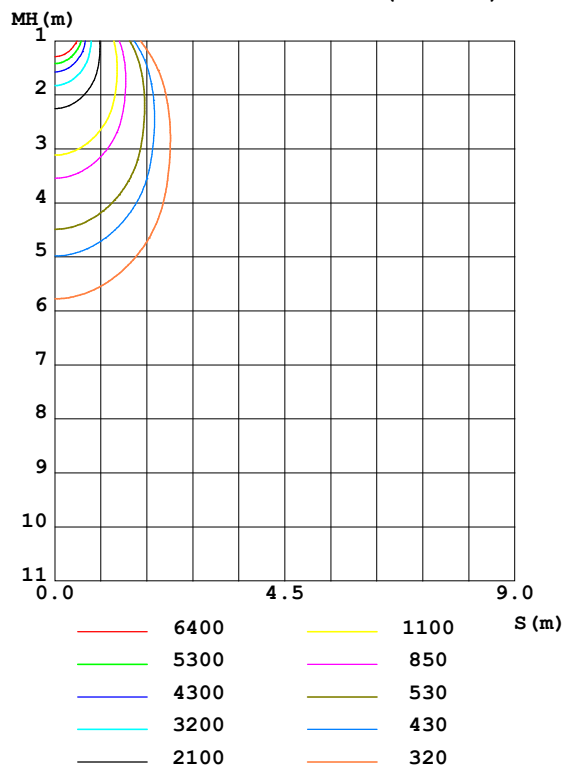
Test:U:229.9V I:0.5380A P:120.7W PF:0.9754 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:19468.1x1 lm		
NAME: HB38-120-5080-H00138M	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 161.35 lm/W			
MODEL	/	I _{max} (cd)	10672	S/MH(C0/180)	1.03
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH(C90/270)	1.03
RATED VOLTAGE(V)	/	TOTAL FLUX(lm)	19468	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	19468.1	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.15

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:2021-06-28

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=0.4551]
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	1015	1015	1015	1015	1015	1015	1015	1015	0- 10	993.0	993.0	5.1,5.1
20	887.0	887.0	887.0	887.0	887.0	887.0	887.0	887.0	10- 20	2689	3682	18.9,18.9
30	698.6	698.6	698.6	698.6	698.6	698.6	698.6	698.6	20- 30	3668	7350	37.8,37.8
40	516.2	516.2	516.2	516.2	516.2	516.2	516.2	516.2	30- 40	3758	11108	57.1,57.1
50	378.4	378.4	378.4	378.4	378.4	378.4	378.4	378.4	40- 50	3433	14540	74.7,74.7
60	221.8	221.8	221.8	221.8	221.8	221.8	221.8	221.8	50- 60	2712	17253	88.6,88.6
70	94.26	94.26	94.26	94.26	94.26	94.26	94.26	94.26	60- 70	1502	18755	96.3,96.3
80	30.34	30.34	30.34	30.34	30.34	30.34	30.34	30.34	70- 80	582.9	19338	99.3,99.3
90	1.267	1.267	1.267	1.267	1.267	1.267	1.267	1.267	80- 90	130.1	19468	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): 12881 lm

%lum = 66.2%

%lamp = 66.2%

Conical surface Flux(120deg): 17253 lm

%lum = 88.6%

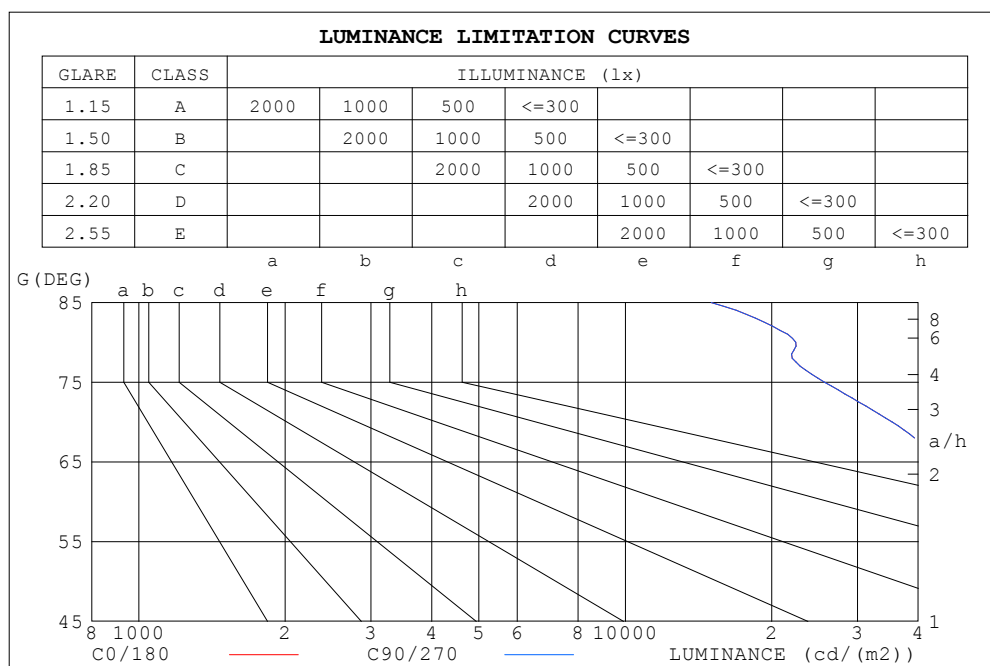
%lamp = 88.6%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-06-28

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=0.4551]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES



LUMINANCE $\text{cd}/(\text{m}^2)$		
G (DEG)	C0/180	C90/270
85	15011	15011
80	22397	22397
75	25676	25676
70	35333	35333
65	45204	45204
60	56875	56875
55	68493	68493
50	75475	75475
45	80510	80510

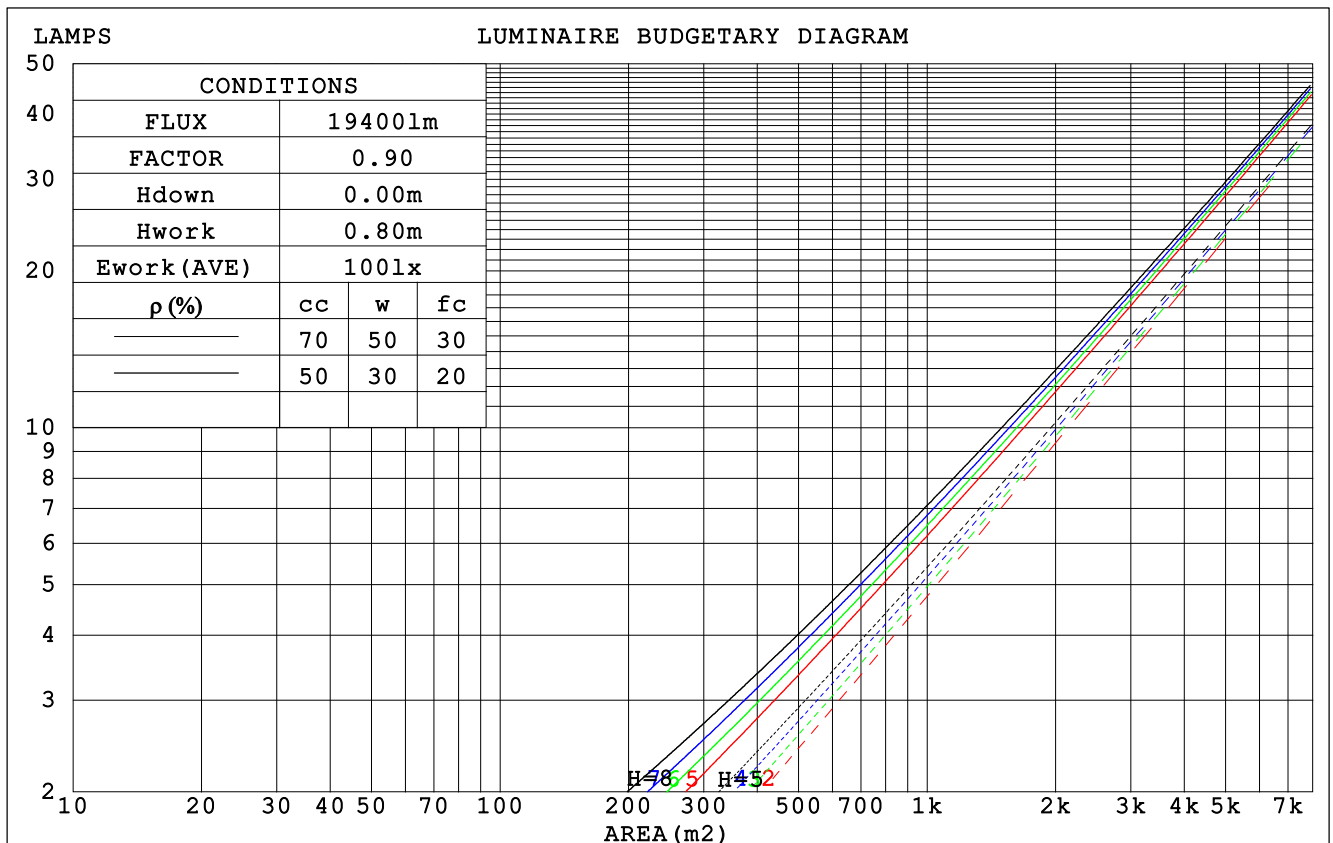
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2021-06-28

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=0.4551]
 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	1.07	1.03	.00	1.04	1.01	.98	1.00	.98	.95	.96	.94	.92	.93	.91	.90	.88
2.0	.95	.89	.84	.93	.88	.83	.90	.85	.81	.87	.83	.80	.84	.81	.78	.76
3.0	.85	.78	.72	.83	.77	.72	.81	.75	.70	.78	.73	.69	.75	.71	.68	.66
4.0	.76	.69	.63	.75	.68	.62	.73	.66	.61	.71	.65	.61	.68	.64	.60	.58
5.0	.69	.61	.55	.68	.61	.55	.66	.59	.54	.64	.58	.54	.62	.57	.53	.51
6.0	.63	.55	.49	.62	.54	.49	.60	.54	.48	.59	.53	.48	.57	.52	.48	.46
7.0	.58	.50	.44	.57	.49	.44	.55	.49	.44	.54	.48	.43	.53	.47	.43	.41
8.0	.53	.45	.40	.52	.45	.40	.51	.44	.39	.50	.44	.39	.49	.43	.39	.37
9.0	.49	.41	.36	.48	.41	.36	.47	.41	.36	.46	.40	.36	.45	.40	.36	.34
10.0	.46	.38	.33	.45	.38	.33	.44	.38	.33	.43	.37	.33	.42	.37	.33	.31



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-06-28

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=0.4551]
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	.257	.146	.046	.250	.142	.045	.237	.136	.043	.225	.130	.042	.214	.124	.040															
2.0	.248	.136	.042	.242	.133	.041	.230	.128	.040	.220	.123	.039	.210	.119	.038															
3.0	.234	.124	.037	.229	.122	.037	.219	.118	.036	.209	.115	.035	.201	.111	.034															
4.0	.219	.114	.034	.215	.112	.033	.206	.109	.033	.198	.106	.032	.190	.103	.031															
5.0	.205	.105	.030	.201	.103	.030	.194	.101	.030	.186	.098	.029	.180	.096	.029															
6.0	.193	.097	.028	.189	.095	.027	.182	.093	.027	.176	.091	.027	.170	.089	.027															
7.0	.181	.089	.025	.178	.089	.025	.172	.087	.025	.166	.085	.025	.160	.083	.024															
8.0	.170	.083	.023	.167	.082	.023	.162	.081	.023	.157	.079	.023	.152	.078	.023															
9.0	.161	.078	.022	.158	.077	.022	.153	.076	.021	.148	.074	.021	.144	.073	.021															
10.0	.152	.073	.020	.150	.072	.020	.145	.071	.020	.141	.070	.020	.137	.069	.020															

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	.177	.157	.139	.151	.134	.119	.103	.092	.082	.060	.054	.048	.019	.017	.016		
2.0	.166	.132	.103	.142	.114	.089	.098	.079	.062	.056	.046	.037	.018	.015	.012		
3.0	.158	.114	.079	.135	.098	.069	.093	.068	.048	.054	.040	.028	.017	.013	.009		
4.0	.149	.100	.063	.128	.087	.055	.088	.060	.038	.051	.035	.023	.016	.012	.007		
5.0	.142	.090	.051	.122	.078	.044	.084	.054	.031	.049	.032	.019	.016	.010	.006		
6.0	.135	.081	.042	.116	.070	.037	.080	.049	.026	.046	.029	.015	.015	.009	.005		
7.0	.129	.074	.036	.111	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004		
8.0	.123	.068	.031	.106	.059	.027	.073	.041	.019	.042	.024	.011	.014	.008	.004		
9.0	.117	.063	.027	.101	.055	.023	.070	.039	.017	.041	.023	.010	.013	.007	.003		
10.0	.112	.059	.024	.096	.051	.021	.067	.036	.015	.039	.021	.009	.013	.007	.003		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYJ
 Test Date:2021-06-28

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=0.4551]
 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	26.1	27.5	26.4	27.8	28.2	26.1	27.5	26.4	27.8	28.2
3H	26.9	28.2	27.3	28.6	28.9	26.9	28.2	27.3	28.6	28.9
4H	27.1	28.4	27.5	28.7	29.1	27.1	28.4	27.5	28.7	29.1
6H	27.2	28.4	27.7	28.7	29.1	27.2	28.4	27.7	28.7	29.1
8H	27.3	28.4	27.7	28.7	29.1	27.3	28.4	27.7	28.7	29.1
12H	27.3	28.3	27.7	28.7	29.1	27.3	28.3	27.7	28.7	29.1
4H 2H	26.4	27.6	26.8	28.0	28.3	26.4	27.6	26.8	28.0	28.3
3H	27.4	28.4	27.8	28.8	29.2	27.4	28.4	27.8	28.8	29.2
4H	27.7	28.6	28.1	29.0	29.4	27.7	28.6	28.1	29.0	29.4
6H	27.9	28.6	28.3	29.1	29.5	27.9	28.6	28.3	29.1	29.5
8H	27.9	28.6	28.4	29.1	29.6	27.9	28.6	28.4	29.1	29.6
12H	27.9	28.6	28.4	29.1	29.5	27.9	28.6	28.4	29.1	29.5
8H 4H	27.7	28.5	28.2	28.9	29.4	27.7	28.5	28.2	28.9	29.4
6H	28.0	28.6	28.5	29.1	29.6	28.0	28.6	28.5	29.1	29.6
8H	28.1	28.6	28.6	29.1	29.6	28.1	28.6	28.6	29.1	29.6
12H	28.1	28.6	28.6	29.1	29.7	28.1	28.6	28.6	29.1	29.7
12H 4H	27.7	28.4	28.2	28.8	29.3	27.7	28.4	28.2	28.8	29.3
6H	28.0	28.5	28.5	29.0	29.5	28.0	28.5	28.5	29.0	29.5
8H	28.1	28.6	28.6	29.1	29.6	28.1	28.6	28.6	29.1	29.6
CIE190: 2010										

CIE190: 2010
Area: 0.078 m2

C Range: 0 - 360DEG
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Test Date: 2021-06-28

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=0.4551]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

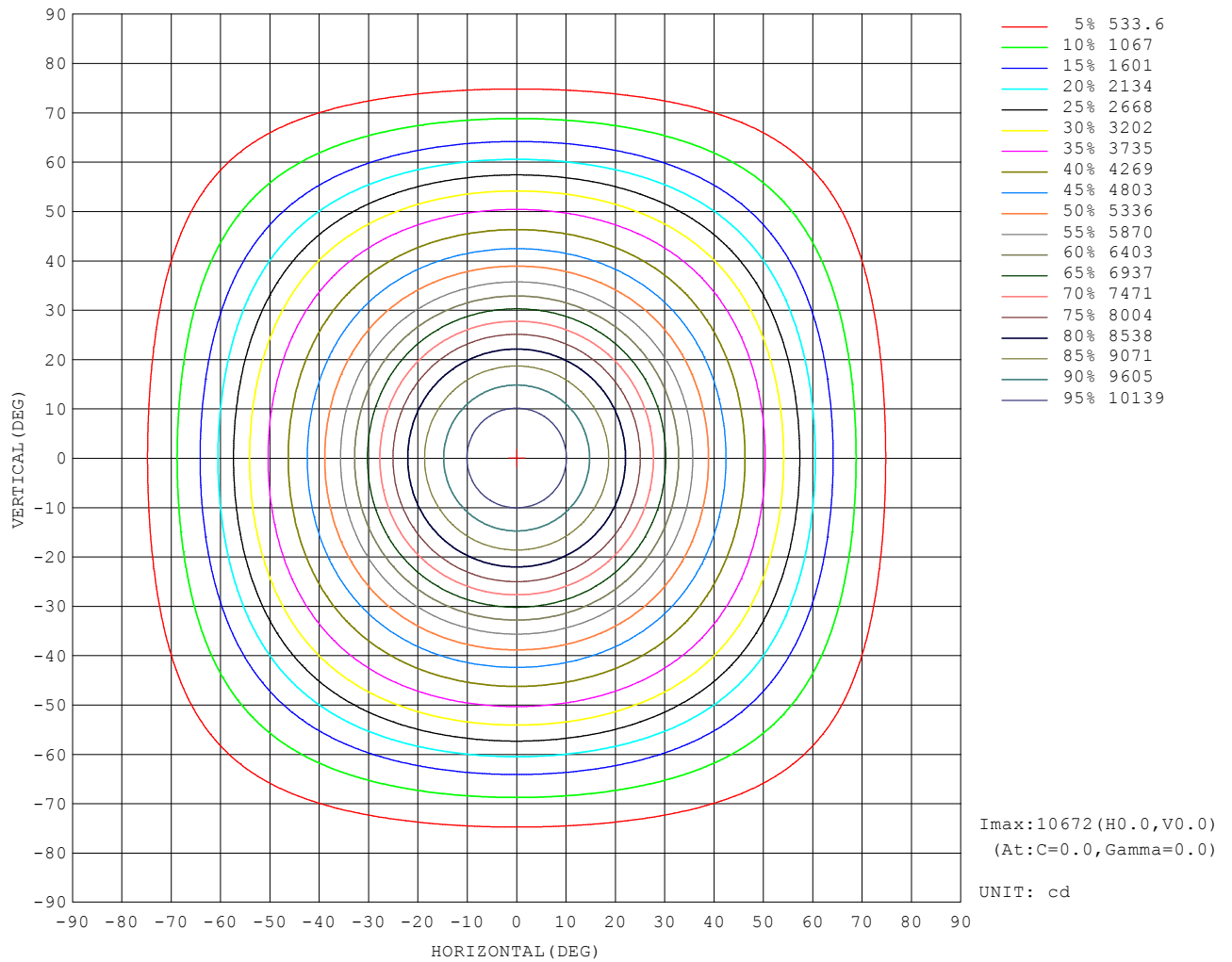
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	65	54	48	64	54	48	63	53	48	42
0.80	75	64	58	74	64	58	72	63	57	51
1.00	83	73	67	82	73	67	79	74	66	60
1.25	89	80	74	88	80	74	85	78	73	67
1.50	94	85	80	92	85	79	89	83	78	72
2.00	100	93	87	98	91	86	95	89	85	78
2.50	103	96	91	101	95	90	97	92	89	81
3.00	106	100	95	104	98	94	100	96	92	84
4.00	109	104	100	107	102	99	103	99	96	88
5.00	111	107	104	108	105	102	104	101	99	90
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
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 Operators: LYJ
 Test Date: 2021-06-28

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=0.4551]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

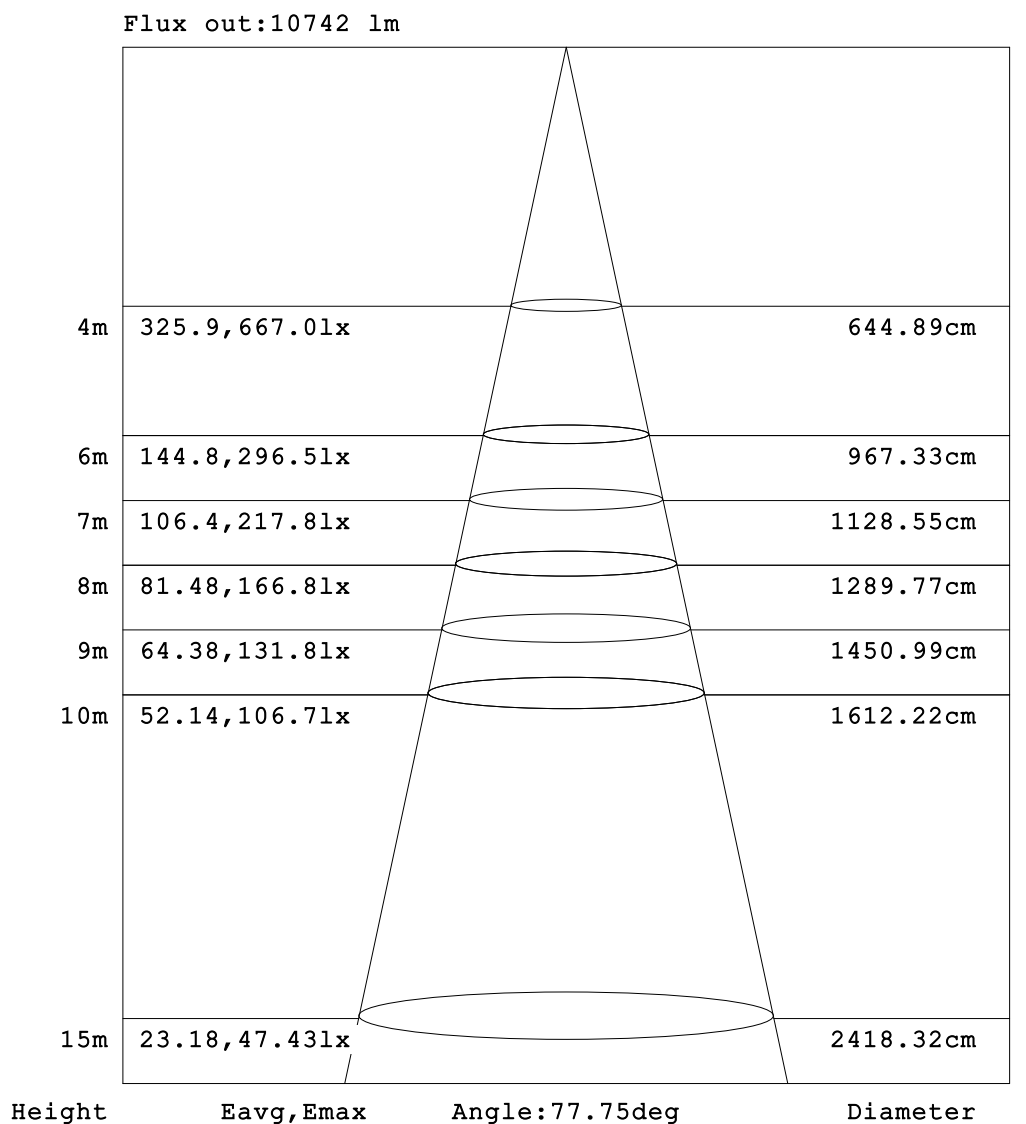
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-06-28

γ Range: 0 - 90DEG
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Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity:65.0%
Test Distance:26.000m [K=0.4551]
Remarks:

AAI Figure



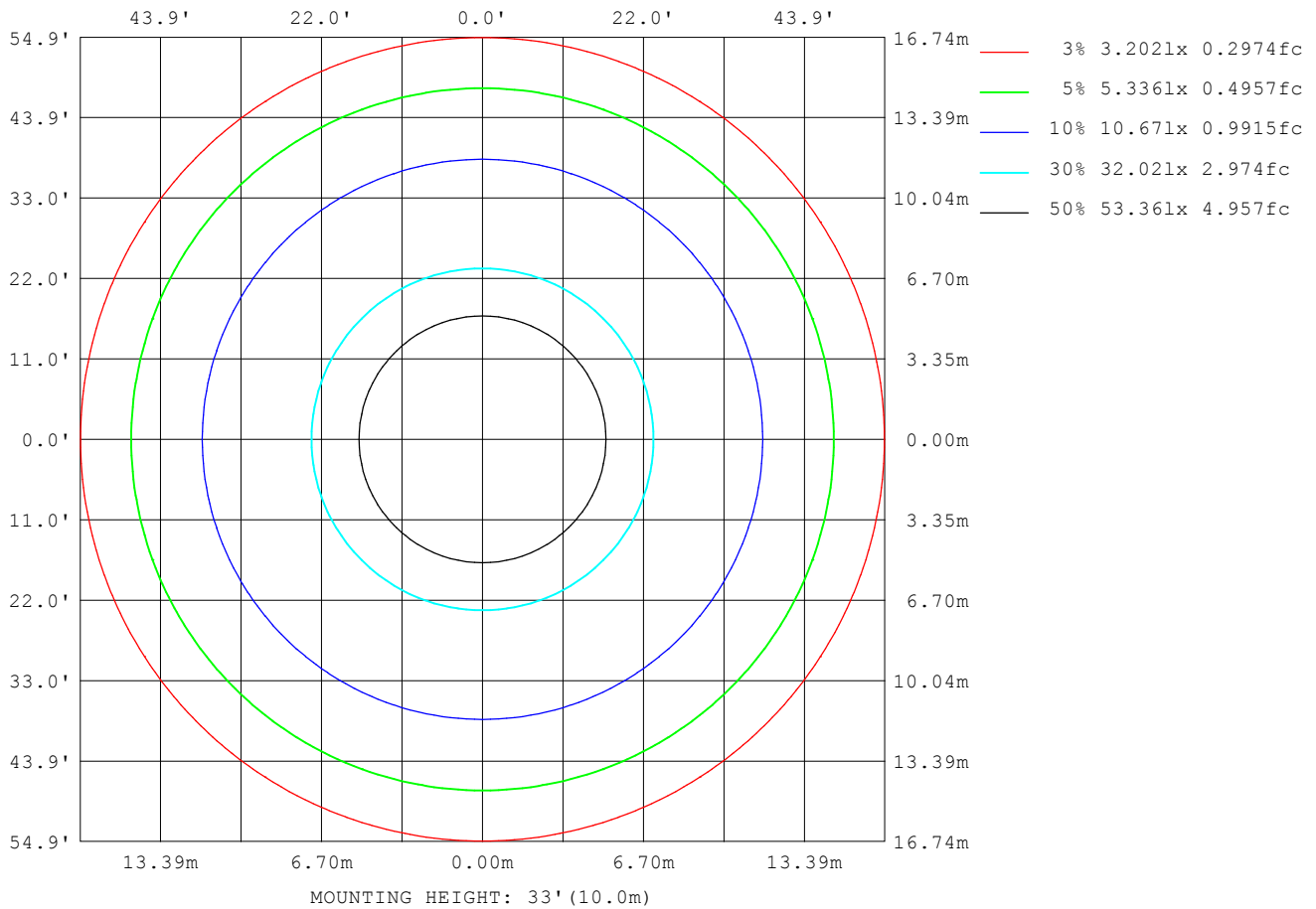
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-06-28

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.446
Humidity: 65.0%
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EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

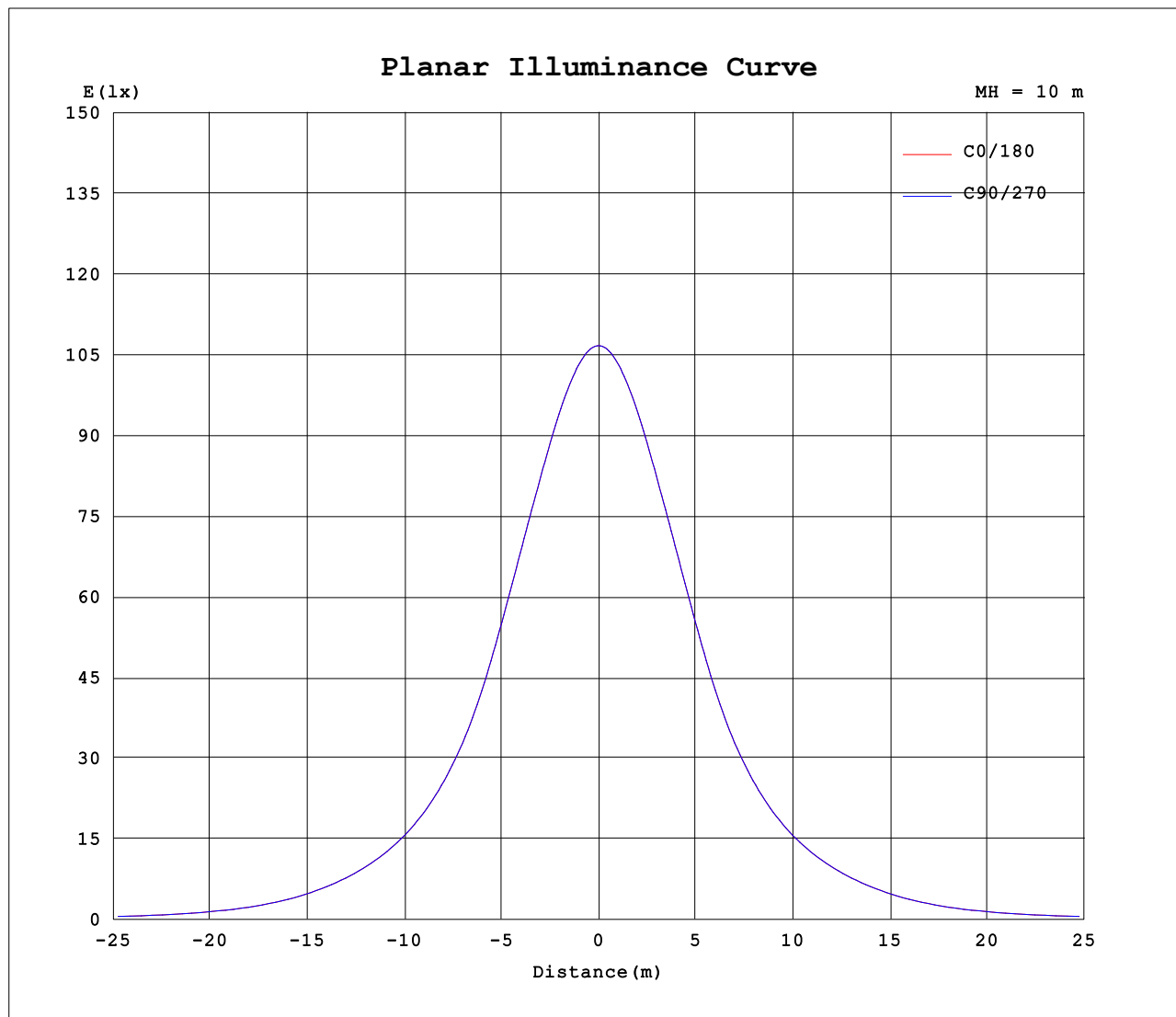
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-06-28

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=0.4551]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-06-28

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=0.4551]
Remarks: