

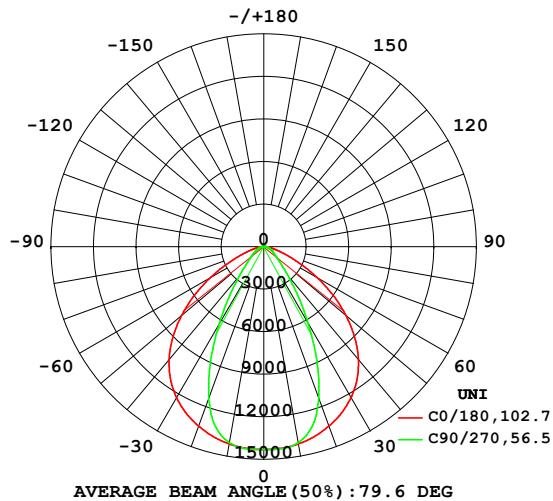
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

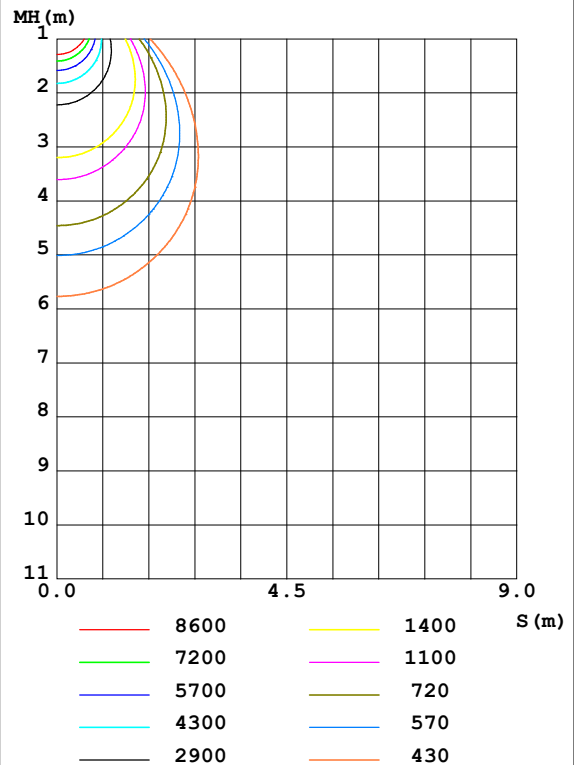
Test:U:229.7V I:0.6598A P:151.4W PF:0.9991 Freq:50.00Hz UTHDi:0% ITHDi:0% Lamp Flux:22265.2x1 lm		
NAME: LHB09-150-5070-L00402	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 147.04 lm/W			
MODEL	/	I _{max} (cd)	14329	S/MH (C0/180)	1.27
NOMINAL POWER(W)	150	LOR(%)	100.0	S/MH (C90/270)	0.86
RATED VOLTAGE(V)	230	TOTAL FLUX (lm)	22265	η UP,DN (C0-180)	0.0,50.0
NOMINAL FLUX(lm)	22265.2	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	1.00

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-06-18

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
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	1412	1413	1404	1413	1412	1413	1404	1413	0- 10	1358	1358	6.1,6.1
20	1346	1270	1135	1270	1346	1270	1135	1270	10- 20	3803	5161	23.2,23.2
30	1231	905.3	630.5	905.3	1231	905.3	630.5	905.3	20- 30	5037	10198	45.8,45.8
40	1039	504.6	265.2	504.6	1039	504.6	265.2	504.6	30- 40	4613	14812	66.5,66.5
50	757.5	282.4	123.1	282.4	757.5	282.4	123.1	282.4	40- 50	3384	18195	81.7,81.7
60	430.7	149.8	72.15	149.8	430.7	149.8	72.15	149.8	50- 60	2151	20346	91.4,91.4
70	163.0	76.74	41.56	76.74	163.0	76.74	41.56	76.74	60- 70	1202	21548	96.8,96.8
80	47.80	29.70	18.21	29.70	47.80	29.70	18.21	29.70	70- 80	568.6	22117	99.3,99.3
90	0.1636	0.1171	0.1034	0.1171	0.1636	0.1171	0.1034	0.1171	80- 90	148.2	22265	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:×10cd									UNIT:lm		

Conical surface Flux(90deg): 16669 lm

%lum = 74.9%

%lamp = 74.9%

Conical surface Flux(120deg): 20346 lm

%lum = 91.4%

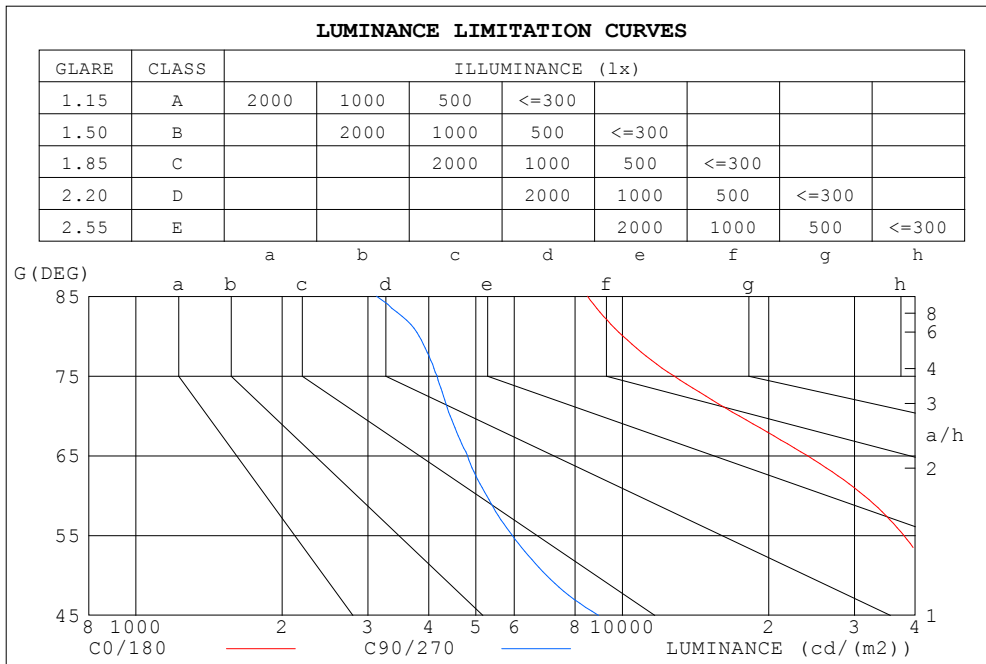
%lamp = 91.4%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	8488	3126
80	10045	3823
75	12774	4159
70	17387	4430
65	24028	4804
60	31433	5260
55	37922	5939
50	43006	6983
45	46859	8937

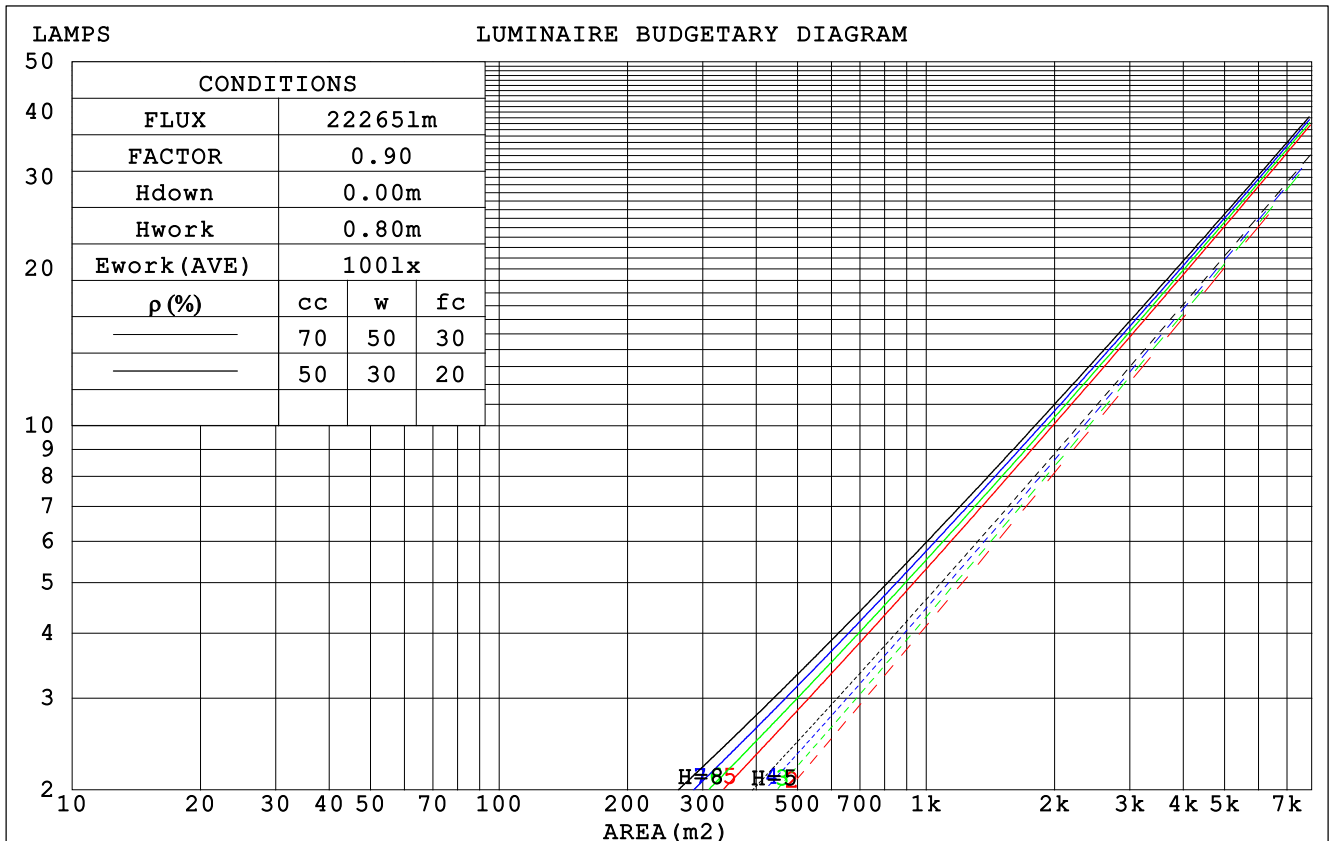
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2020-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4589]
 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	.00
1.0	1.08	1.04	1.01	1.05	1.02	.00	1.01	.99	.97	.97	.95	.94	.94	.92	.91	.89
2.0	.97	.92	.87	.95	.90	.86	.92	.88	.84	.89	.85	.82	.86	.83	.80	.79
3.0	.88	.81	.76	.86	.80	.75	.83	.78	.74	.81	.76	.73	.78	.75	.72	.70
4.0	.80	.73	.67	.79	.72	.67	.76	.70	.66	.74	.69	.65	.72	.68	.64	.62
5.0	.73	.65	.60	.72	.65	.60	.70	.64	.59	.68	.63	.58	.66	.62	.58	.56
6.0	.67	.59	.54	.66	.59	.54	.64	.58	.53	.63	.57	.53	.61	.56	.53	.51
7.0	.62	.54	.49	.61	.54	.49	.60	.53	.49	.58	.53	.48	.57	.52	.48	.46
8.0	.57	.50	.45	.57	.50	.45	.55	.49	.44	.54	.48	.44	.53	.48	.44	.42
9.0	.53	.46	.41	.53	.46	.41	.52	.45	.41	.51	.45	.41	.50	.44	.41	.39
10.0	.50	.43	.38	.49	.42	.38	.48	.42	.38	.47	.42	.38	.47	.41	.38	.36



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2020-06-18

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity: 65.0%
Test Distance: 26.000m [K=0.4589]
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	.239	.136	.043	.232	.132	.042	.219	.126	.040	.207	.119	.038	.196	.114	.037	
2.0	.229	.125	.038	.223	.123	.038	.212	.118	.037	.202	.113	.035	.192	.109	.034	
3.0	.216	.115	.034	.211	.113	.034	.201	.109	.033	.192	.105	.032	.184	.102	.032	
4.0	.203	.106	.031	.199	.104	.031	.190	.101	.030	.182	.098	.030	.175	.095	.029	
5.0	.191	.097	.028	.187	.096	.028	.180	.093	.028	.173	.091	.027	.166	.089	.027	
6.0	.180	.090	.026	.176	.089	.026	.170	.087	.025	.163	.085	.025	.158	.083	.025	
7.0	.170	.084	.024	.166	.083	.024	.160	.081	.023	.155	.079	.023	.150	.078	.023	
8.0	.160	.078	.022	.157	.078	.022	.152	.076	.022	.147	.075	.021	.142	.073	.021	
9.0	.152	.073	.020	.149	.073	.020	.144	.071	.020	.140	.070	.020	.136	.069	.020	
10.0	.144	.069	.019	.142	.068	.019	.137	.067	.019	.133	.066	.019	.129	.065	.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	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.164	.132	.106	.140	.114	.091	.096	.079	.064	.055	.046	.037	.018	.015	.012	
3.0	.154	.114	.082	.132	.098	.071	.091	.068	.050	.052	.040	.029	.017	.013	.010	
4.0	.146	.100	.065	.125	.086	.057	.086	.060	.040	.050	.035	.024	.016	.011	.008	
5.0	.138	.089	.053	.118	.077	.046	.082	.054	.033	.047	.032	.019	.015	.010	.006	
6.0	.131	.080	.044	.112	.070	.038	.078	.049	.027	.045	.029	.016	.015	.009	.005	
7.0	.124	.073	.037	.107	.063	.032	.074	.044	.023	.043	.026	.014	.014	.009	.005	
8.0	.118	.067	.032	.102	.058	.028	.071	.041	.020	.041	.024	.012	.013	.008	.004	
9.0	.113	.062	.028	.097	.054	.024	.067	.038	.017	.039	.022	.010	.013	.007	.003	
10.0	.108	.058	.025	.093	.050	.021	.065	.035	.015	.038	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYJ
 Test Date:2020-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
 Humidity:65.0%
 Test Distance:26.000m [K=0.4589]
 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	21.7	23.0	22.1	23.4	23.7	13.9	15.3	14.3	15.6	15.9
3H	22.9	24.1	23.3	24.5	24.8	15.2	16.4	15.6	16.8	17.1
4H	23.4	24.5	23.8	24.8	25.2	15.8	16.9	16.2	17.2	17.6
6H	23.6	24.7	24.0	25.0	25.4	16.2	17.2	16.6	17.6	18.0
8H	23.7	24.7	24.1	25.1	25.5	16.3	17.3	16.7	17.7	18.1
12H	23.8	24.7	24.2	25.1	25.5	16.4	17.3	16.8	17.7	18.1
4H 2H	21.7	22.8	22.1	23.2	23.6	15.6	16.7	16.0	17.0	17.4
3H	23.2	24.1	23.6	24.5	24.9	16.9	17.8	17.3	18.2	18.6
4H	23.7	24.5	24.1	25.0	25.4	17.4	18.2	17.8	18.6	19.1
6H	24.1	24.8	24.6	25.3	25.7	17.8	18.5	18.3	19.0	19.4
8H	24.2	24.9	24.7	25.3	25.8	17.9	18.6	18.4	19.1	19.5
12H	24.3	24.9	24.8	25.4	25.9	18.0	18.6	18.5	19.1	19.6
8H 4H	23.7	24.4	24.2	24.8	25.3	18.1	18.8	18.6	19.2	19.7
6H	24.2	24.7	24.7	25.2	25.7	18.6	19.2	19.1	19.6	20.1
8H	24.4	24.9	24.9	25.4	25.9	18.8	19.3	19.3	19.8	20.3
12H	24.5	24.9	25.0	25.4	26.0	18.9	19.3	19.4	19.8	20.4
12H 4H	23.7	24.3	24.2	24.8	25.2	18.2	18.8	18.7	19.3	19.8
6H	24.2	24.7	24.7	25.1	25.7	18.8	19.3	19.3	19.7	20.3
8H	24.4	24.8	24.9	25.3	25.9	19.0	19.4	19.5	19.9	20.5
CIE190: 2010										

CIE190: 2010
Area: 0.1105 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
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Operators:LYJ
Test Date:2020-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

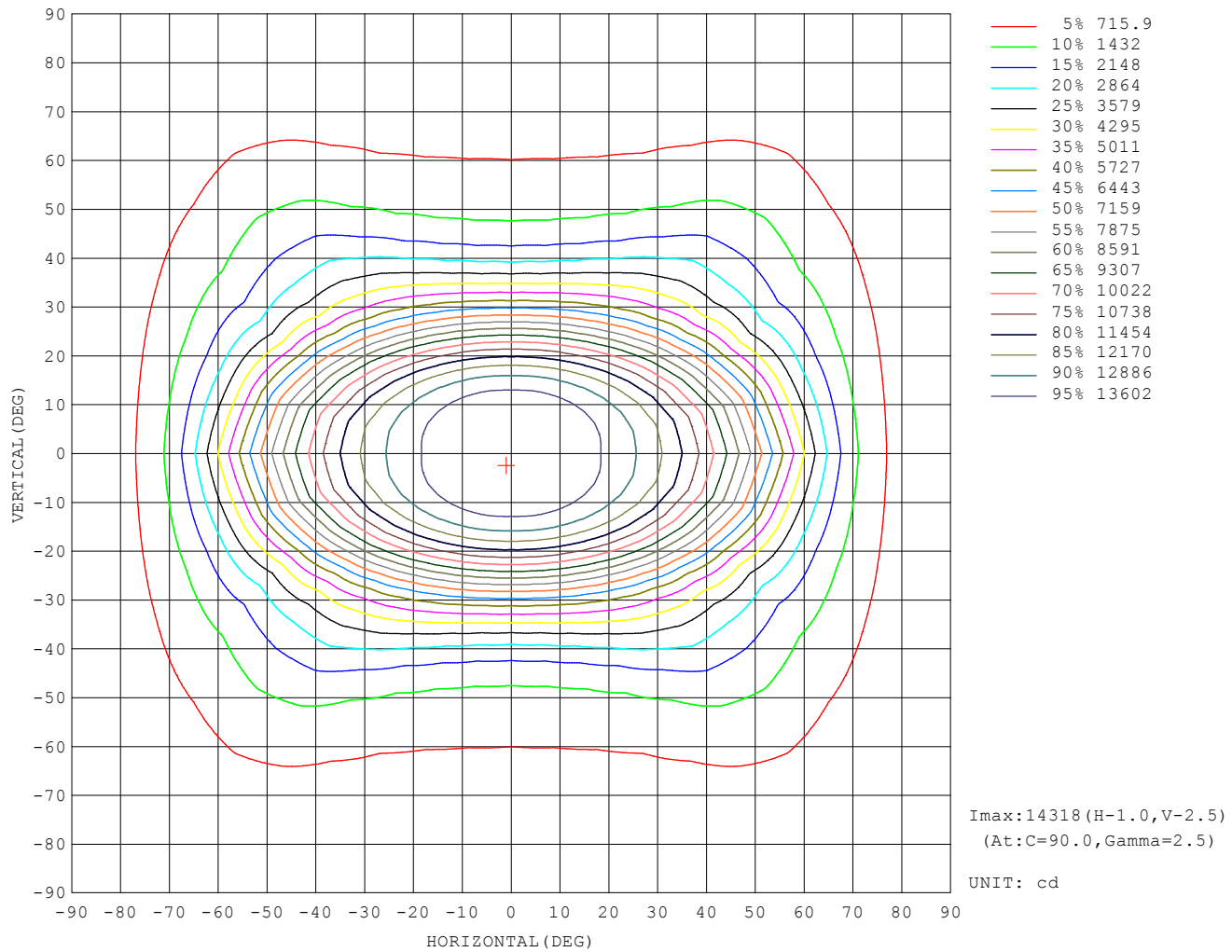
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	71	61	56	70	61	56	69	61	55	50
0.80	80	71	65	79	71	65	78	70	65	59
1.00	87	79	73	86	78	73	84	79	72	67
1.25	93	85	80	92	84	79	89	83	79	73
1.50	97	90	84	95	89	84	93	87	83	77
2.00	102	96	91	100	95	90	97	92	89	82
2.50	105	99	94	103	98	94	99	95	92	85
3.00	107	102	98	105	101	97	101	98	95	87
4.00	110	106	102	108	104	101	104	101	98	90
5.00	112	108	105	110	106	104	105	103	101	92
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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 Operators: LYJ
 Test Date: 2020-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4589]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

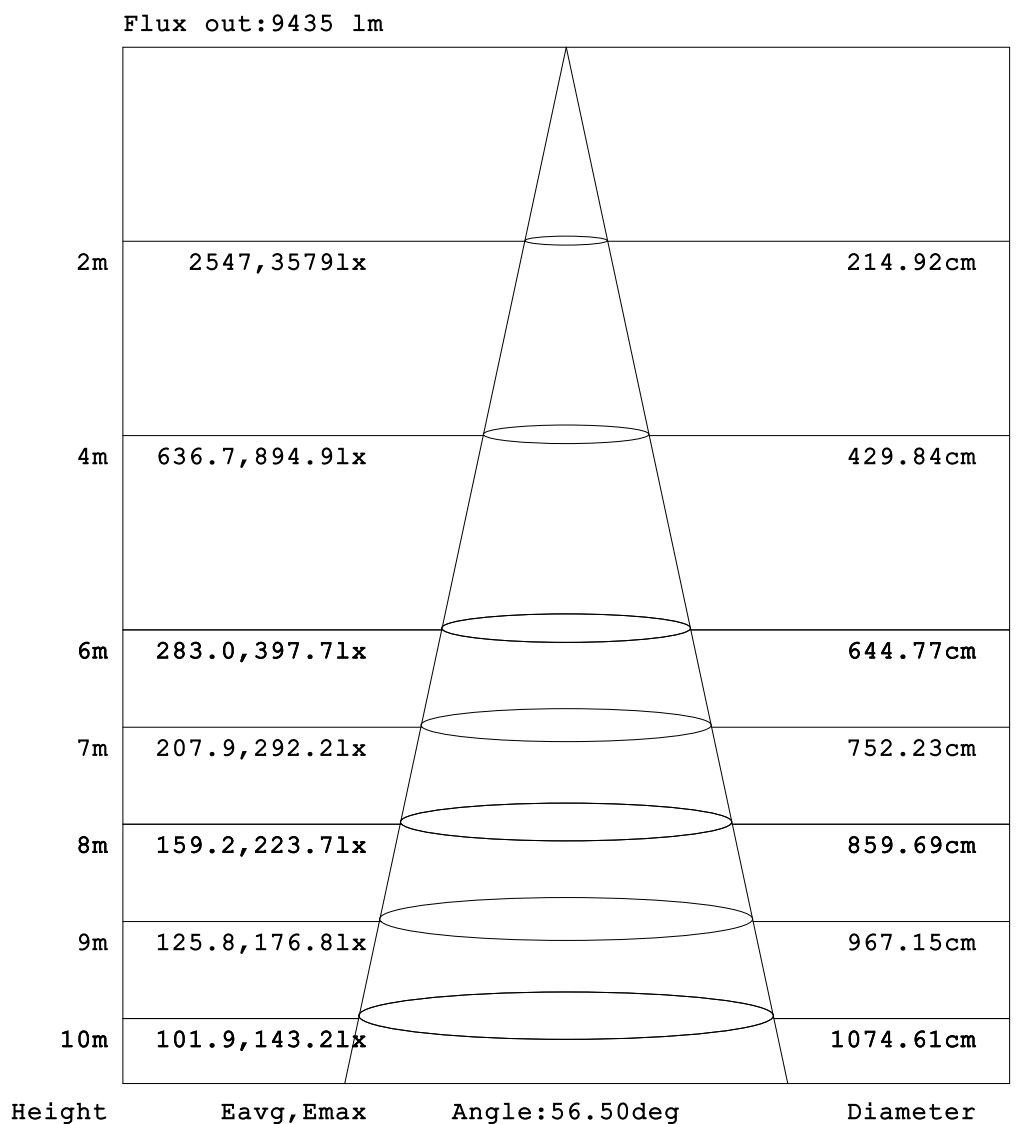
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-06-18

γ Range: 0 - 90DEG
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Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

AAI Figure



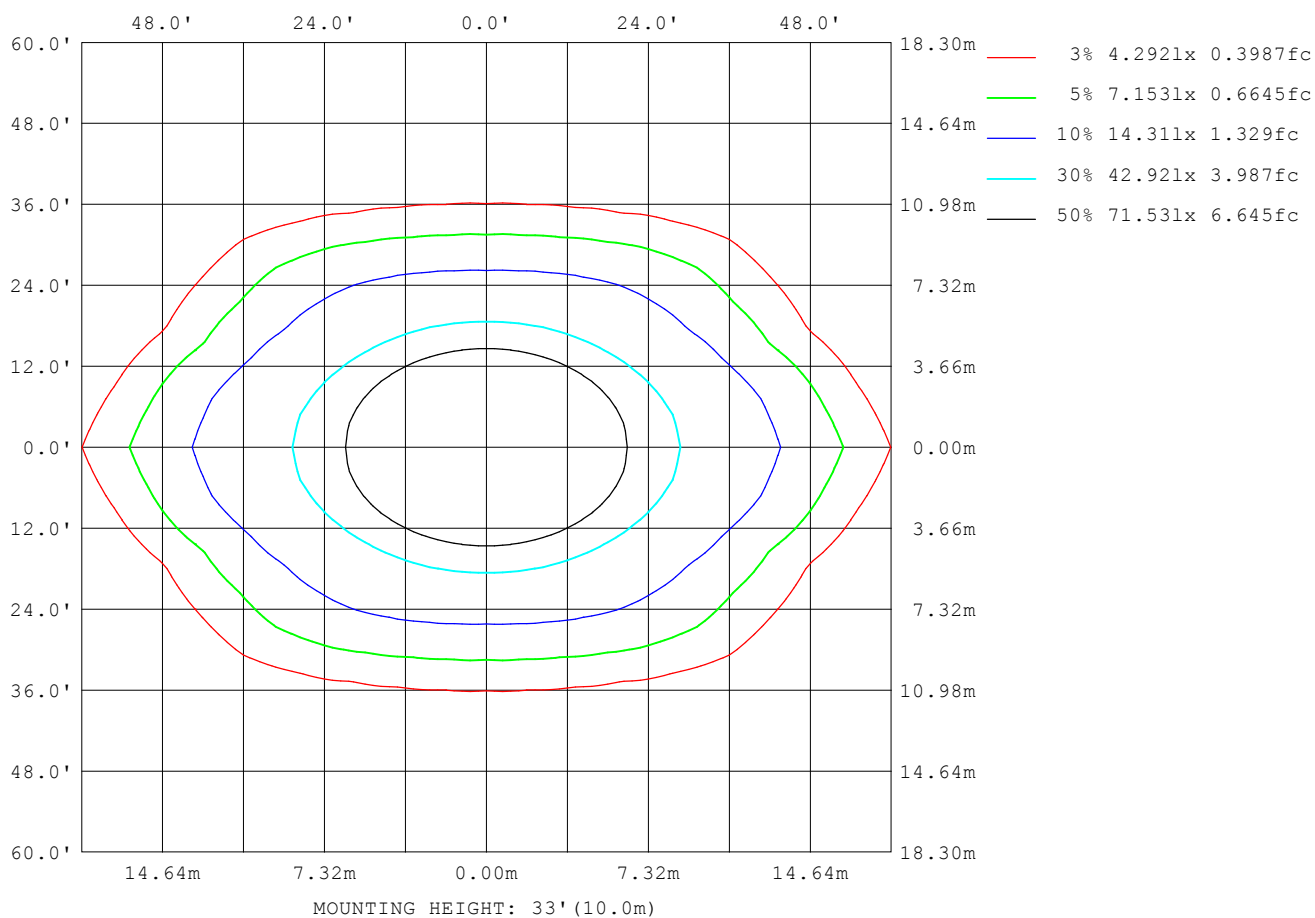
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360 DEG
C Interval: 10.0 DEG
Test Speed: HIGH
Temperature: 25.3 DEG
Operators: LYJ
Test Date: 2020-06-18

γ Range: 0 - 90 DEG
 γ Interval: 0.5 DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity: 65.0%
Test Distance: 26.000m [K=0.4589]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

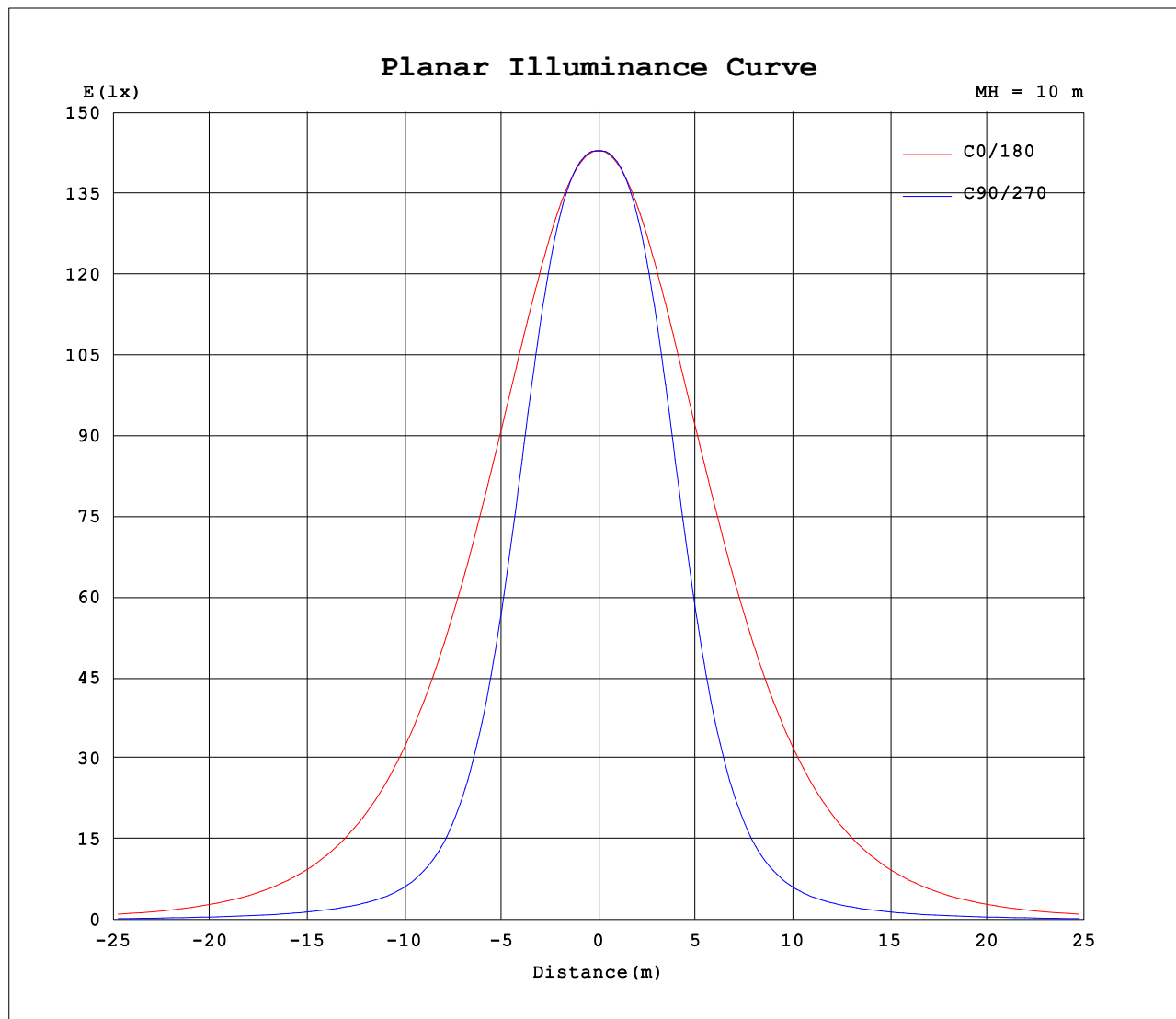
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2020-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity: 65.0%
Test Distance: 26.000m [K=0.4589]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2020-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity: 65.0%
Test Distance: 26.000m [K=0.4589]
Remarks: