

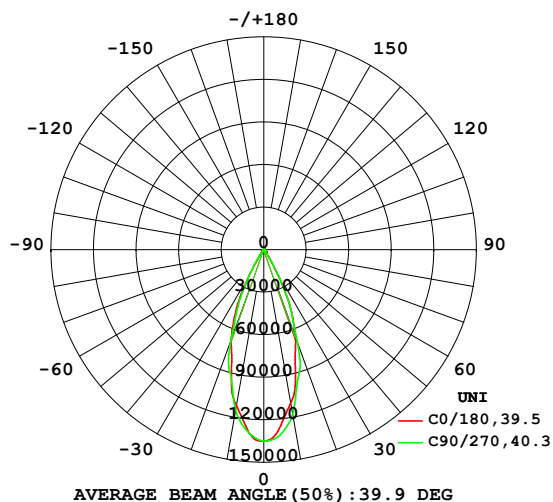
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

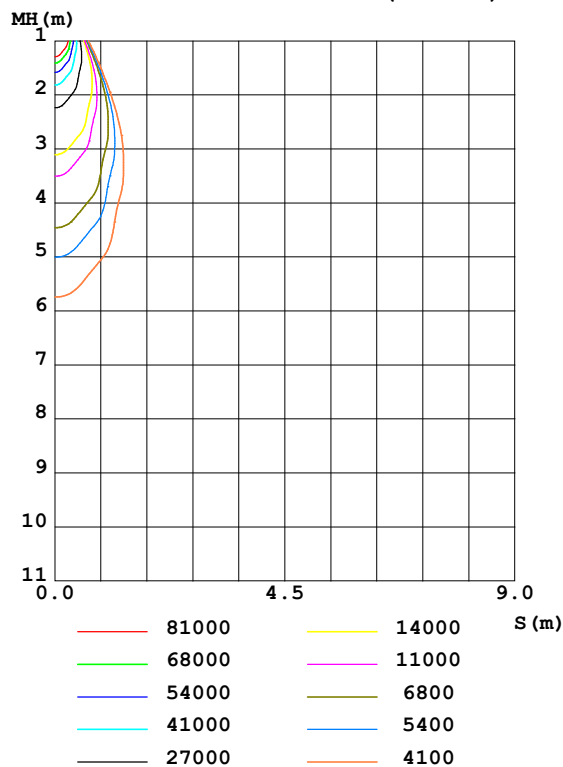
Test:U:230.00V I:2.0918A P:478.80W PF:0.9952 Freq:50.00Hz UTHDi:0% ITHDi:0% Lamp Flux:59175.8x1 lm		
NAME: LHB09-480-5070-L03901+GRID	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 123.59 lm/W
MODEL	/	I _{max} (cd)	135110	S/MH (C0/180)	0.62	
NOMINAL POWER(W)	/	LOR(%)	100.0	S/MH (C90/270)	0.64	
RATED VOLTAGE(V)	/	TOTAL FLUX (lm)	59176	η UP,DN (C0-180)	0.0,50.5	
NOMINAL FLUX(lm)	59175.8	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,49.5	
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50	
TEST VOLTAGE (V)	230	η down (%)	100.0	CIBSE SHR MAX	0.65	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-04-05

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=0.4557]
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	1099	1130	1181	1142	1117	1112	1149	1102	0- 10	11791	11791	19.9,19.9
20	657.9	610.3	697.2	611.8	674.3	591.3	676.2	573.6	10- 20	24644	36434	61.6,61.6
30	182.6	148.2	188.7	149.4	191.4	146.6	187.1	139.3	20- 30	17473	53907	91.1,91.1
40	22.11	17.36	14.10	16.28	22.09	17.94	14.02	16.28	30- 40	3873	57781	97.6,97.6
50	12.96	5.085	5.117	5.026	12.81	5.142	5.569	5.140	40- 50	753.7	58534	98.9,98.9
60	7.102	2.198	1.778	2.224	6.957	2.335	2.109	2.443	50- 60	399.9	58934	99.6,99.6
70	2.120	0.7010	0.6934	0.7099	2.027	0.7861	0.8791	0.8474	60- 70	181.7	59116	99.9,99.9
80	0.3416	0.1470	0.1102	0.1500	0.3341	0.1698	0.1244	0.1769	70- 80	53.96	59170	100,100
90	0.0016	0.0005	0.0011	0.0005	0.0011	0	0	0.0005	80- 90	6.241	59176	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:×100cd									UNIT:lm		

Conical surface Flux(90deg): 58225 lm

%lum = 98.4%

%lamp = 98.4%

Conical surface Flux(120deg): 58934 lm

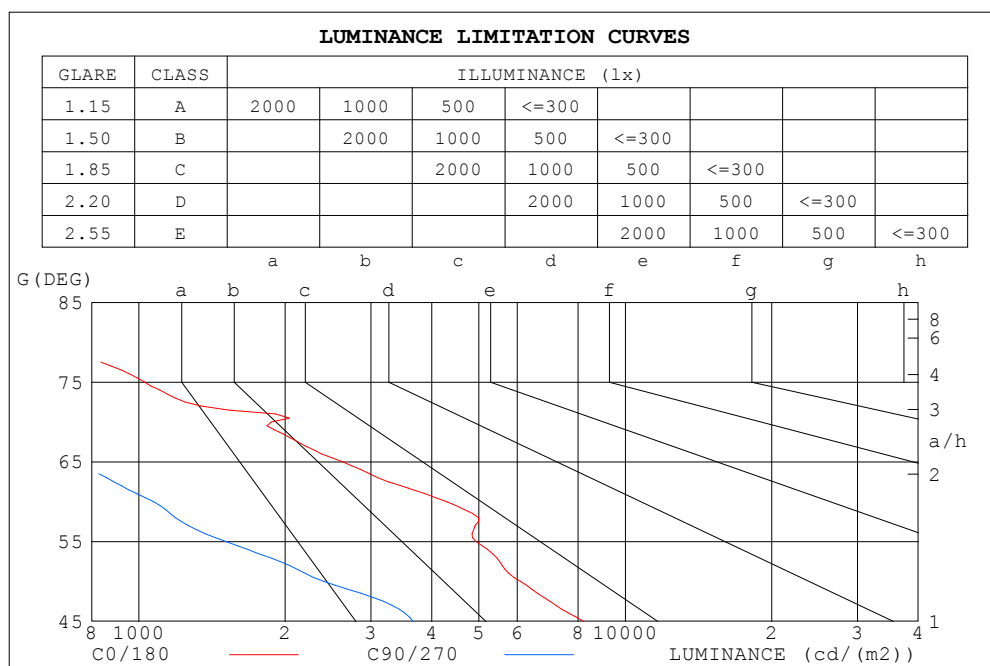
%lum = 99.6%

%lamp = 99.6%

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-04-05

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=0.4557]
Remarks:

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	300	108
80	594	191
75	1026	412
70	1873	611
65	2624	736
60	4292	1072
55	4935	1508
50	6092	2400
45	8210	3659

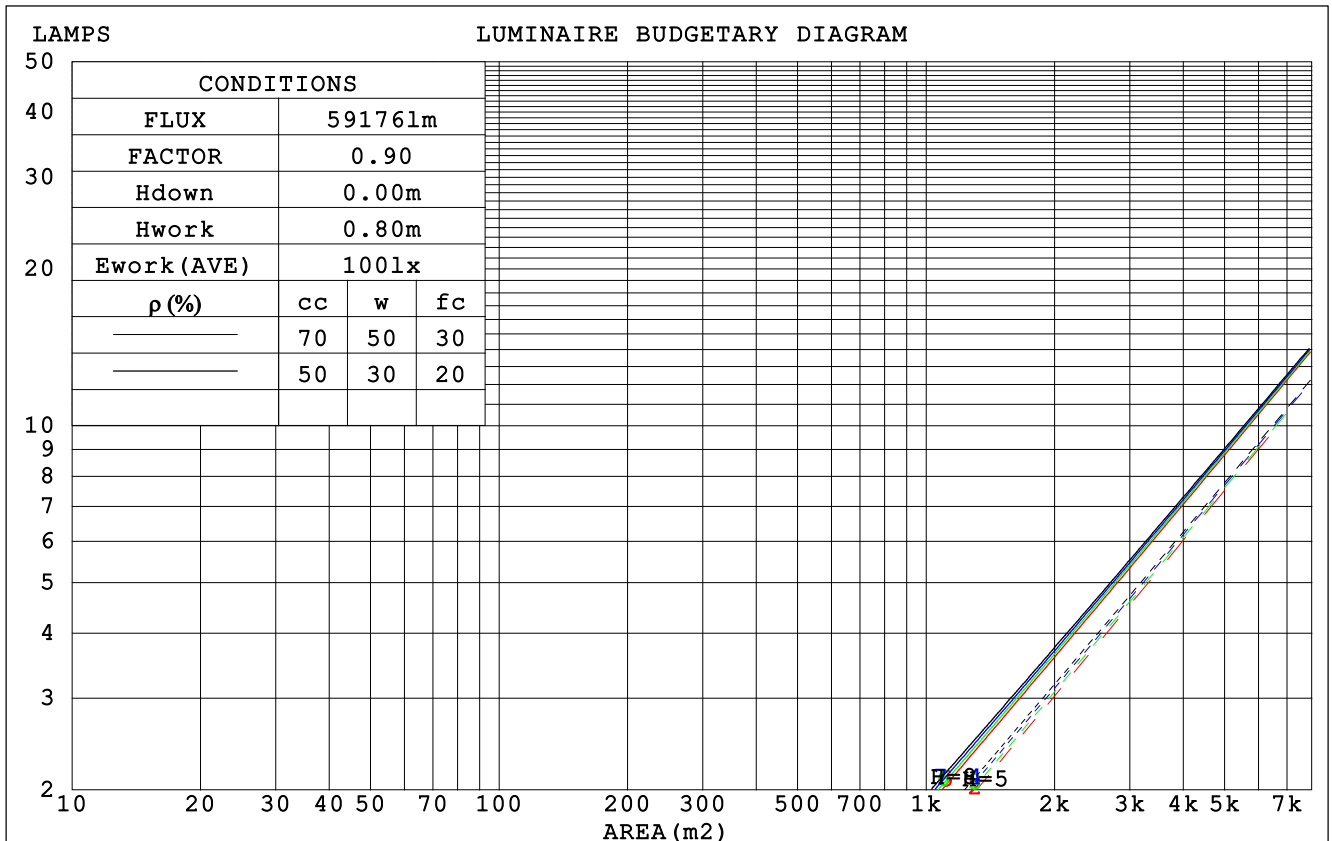
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C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-04-05

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=0.4557]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

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	1.00
1.0	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97	.95
2.0	1.06	1.02	.99	1.04	1.01	.98	1.01	.98	.96	.98	.96	.94	.95	.94	.92	.91
3.0	1.00	.96	.93	.99	.95	.92	.96	.93	.90	.94	.91	.89	.92	.90	.88	.86
4.0	.95	.91	.87	.94	.90	.87	.92	.88	.86	.90	.87	.85	.88	.86	.84	.82
5.0	.91	.86	.82	.90	.85	.82	.88	.84	.81	.86	.83	.81	.85	.82	.80	.79
6.0	.87	.82	.78	.86	.81	.78	.84	.80	.77	.83	.80	.77	.82	.79	.76	.75
7.0	.83	.78	.74	.82	.77	.74	.81	.77	.74	.80	.76	.73	.79	.76	.73	.72
8.0	.79	.74	.71	.79	.74	.71	.78	.74	.71	.77	.73	.70	.76	.73	.70	.69
9.0	.76	.71	.68	.76	.71	.68	.75	.71	.68	.74	.70	.67	.73	.70	.67	.66
10.0	.73	.68	.65	.73	.68	.65	.72	.68	.65	.71	.67	.65	.71	.67	.65	.63



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2021-04-05

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=0.4557]
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	.154	.088	.028	.148	.084	.027	.135	.078	.025	.124	.071	.023	.113	.066	.021															
2.0	.145	.080	.024	.140	.077	.024	.129	.072	.022	.120	.067	.021	.111	.063	.020															
3.0	.137	.073	.022	.132	.071	.021	.123	.067	.020	.115	.063	.019	.108	.060	.018															
4.0	.129	.067	.020	.125	.066	.019	.118	.063	.019	.111	.060	.018	.105	.057	.017															
5.0	.123	.063	.018	.119	.061	.018	.113	.059	.017	.107	.056	.017	.101	.054	.016															
6.0	.117	.059	.017	.114	.058	.017	.108	.056	.016	.103	.054	.016	.098	.052	.015															
7.0	.112	.055	.016	.109	.054	.015	.104	.053	.015	.100	.051	.015	.095	.049	.015															
8.0	.107	.052	.015	.105	.051	.015	.100	.050	.014	.096	.049	.014	.092	.047	.014															
9.0	.102	.050	.014	.100	.049	.014	.097	.048	.014	.093	.047	.013	.089	.045	.013															
10.0	.098	.047	.013	.097	.047	.013	.093	.046	.013	.090	.045	.013	.087	.044	.013															

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	.170	.158	.147	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016		
2.0	.153	.133	.116	.131	.114	.100	.090	.079	.070	.052	.046	.041	.017	.015	.013		
3.0	.139	.113	.093	.119	.098	.081	.082	.068	.057	.047	.040	.033	.015	.013	.011		
4.0	.127	.098	.076	.109	.085	.066	.075	.059	.047	.043	.035	.028	.014	.011	.009		
5.0	.118	.086	.063	.101	.075	.055	.070	.052	.039	.040	.031	.023	.013	.010	.008		
6.0	.109	.077	.053	.094	.066	.046	.065	.046	.033	.038	.027	.019	.012	.009	.006		
7.0	.102	.069	.045	.088	.060	.039	.061	.042	.028	.035	.025	.017	.011	.008	.005		
8.0	.096	.062	.039	.083	.054	.034	.057	.038	.024	.033	.022	.014	.011	.007	.005		
9.0	.091	.057	.034	.079	.049	.029	.054	.035	.021	.032	.020	.012	.010	.007	.004		
10.0	.086	.052	.029	.075	.045	.026	.052	.032	.018	.030	.019	.011	.010	.006	.004		

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYJ
 Test Date:2021-04-05

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=0.4557]
 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	2H	5.8	6.7	6.1	7.0	7.3	0.0	0.9	0.3	1.2	1.5
	3H	6.5	7.3	6.9	7.6	8.0	0.5	1.3	0.9	1.6	2.0
	4H	6.6	7.3	7.0	7.7	8.1	0.6	1.4	1.0	1.7	2.1
	6H	6.6	7.3	7.0	7.6	8.0	0.6	1.3	1.0	1.6	2.0
	8H	6.5	7.2	7.0	7.6	8.0	0.5	1.2	1.0	1.6	2.0
	12H	6.5	7.1	6.9	7.5	7.9	0.5	1.1	0.9	1.5	1.9
4H	2H	5.6	6.3	6.0	6.7	7.1	0.3	1.0	0.7	1.4	1.8
	3H	6.4	7.0	6.8	7.4	7.8	0.9	1.5	1.3	1.9	2.3
	4H	6.5	7.0	6.9	7.4	7.9	1.0	1.6	1.5	2.0	2.4
	6H	6.5	7.0	7.0	7.4	7.9	1.0	1.5	1.5	1.9	2.4
	8H	6.5	6.9	6.9	7.3	7.8	1.0	1.4	1.4	1.8	2.3
	12H	6.4	6.8	6.9	7.3	7.7	0.9	1.3	1.4	1.7	2.2
8H	4H	6.3	6.7	6.8	7.2	7.7	1.0	1.5	1.5	1.9	2.4
	6H	6.4	6.7	6.9	7.2	7.7	1.0	1.4	1.5	1.9	2.3
	8H	6.3	6.6	6.8	7.1	7.6	1.0	1.3	1.5	1.8	2.3
	12H	6.3	6.5	6.8	7.0	7.6	0.9	1.2	1.4	1.7	2.3
12H	4H	6.3	6.6	6.7	7.1	7.6	1.0	1.4	1.5	1.8	2.3
	6H	6.3	6.6	6.8	7.0	7.6	1.0	1.3	1.5	1.7	2.3
	8H	6.3	6.5	6.8	7.0	7.6	0.9	1.2	1.5	1.7	2.3
CIE190: 2010											

CIE190: 2010
Area: 0.3315 m2

C Range: 0 - 360DEG
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Operators:LYJ
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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=0.4557]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

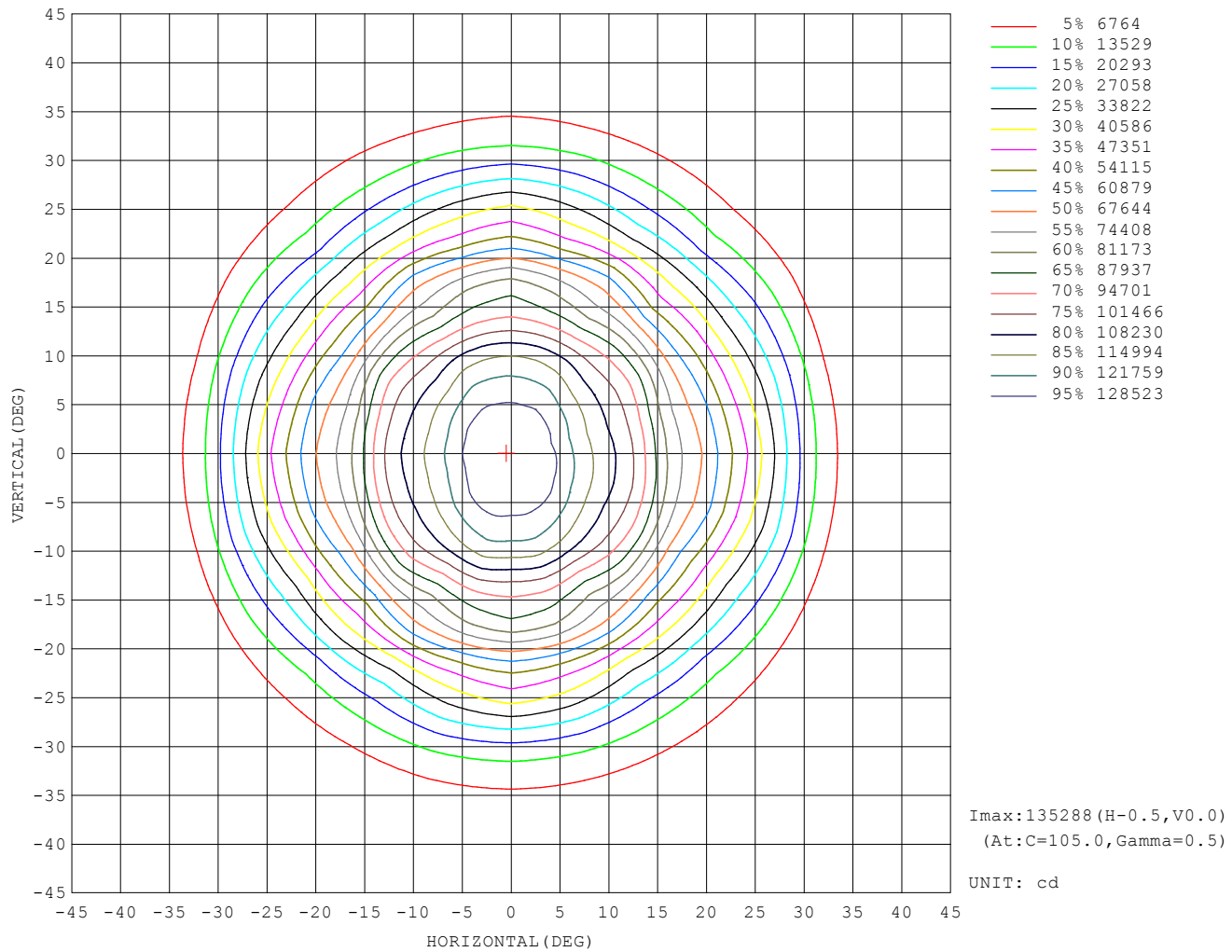
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	90	84	81	90	84	81	89	84	81	77
0.80	97	92	88	97	91	88	95	91	88	84
1.00	101	96	93	100	95	92	99	95	92	88
1.25	105	100	97	104	99	96	102	98	96	92
1.50	107	103	100	106	102	99	104	101	98	94
2.00	109	106	103	108	105	102	105	103	100	95
2.50	111	108	105	109	106	104	106	104	102	96
3.00	112	109	107	111	108	106	107	105	103	97
4.00	114	112	110	112	110	108	109	107	106	99
5.00	116	113	112	113	112	110	110	108	107	100
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4557]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

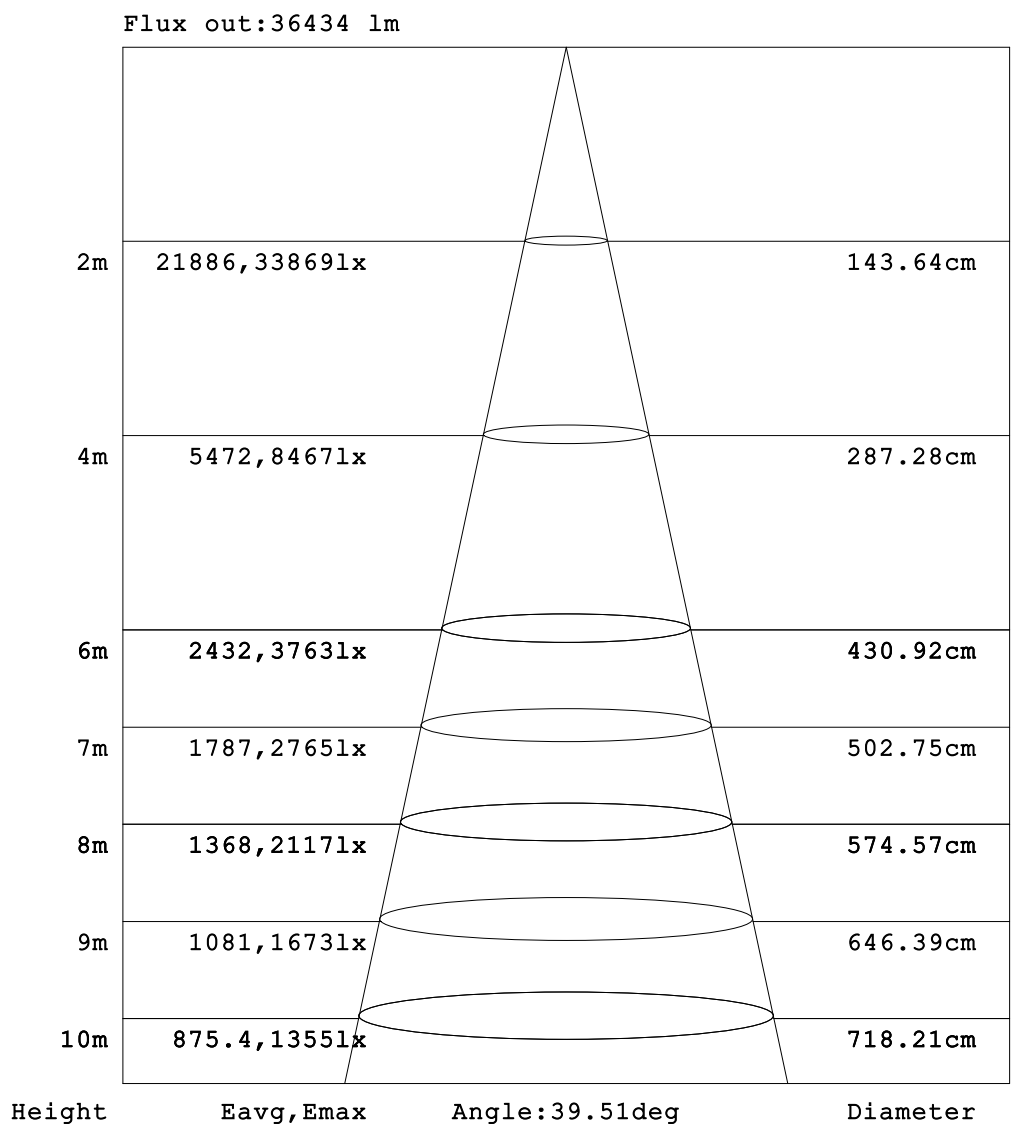
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
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Test Speed: HIGH
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Test Date:2021-04-05

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Humidity:65.0%
Test Distance:26.000m [K=0.4557]
Remarks:

AAI Figure



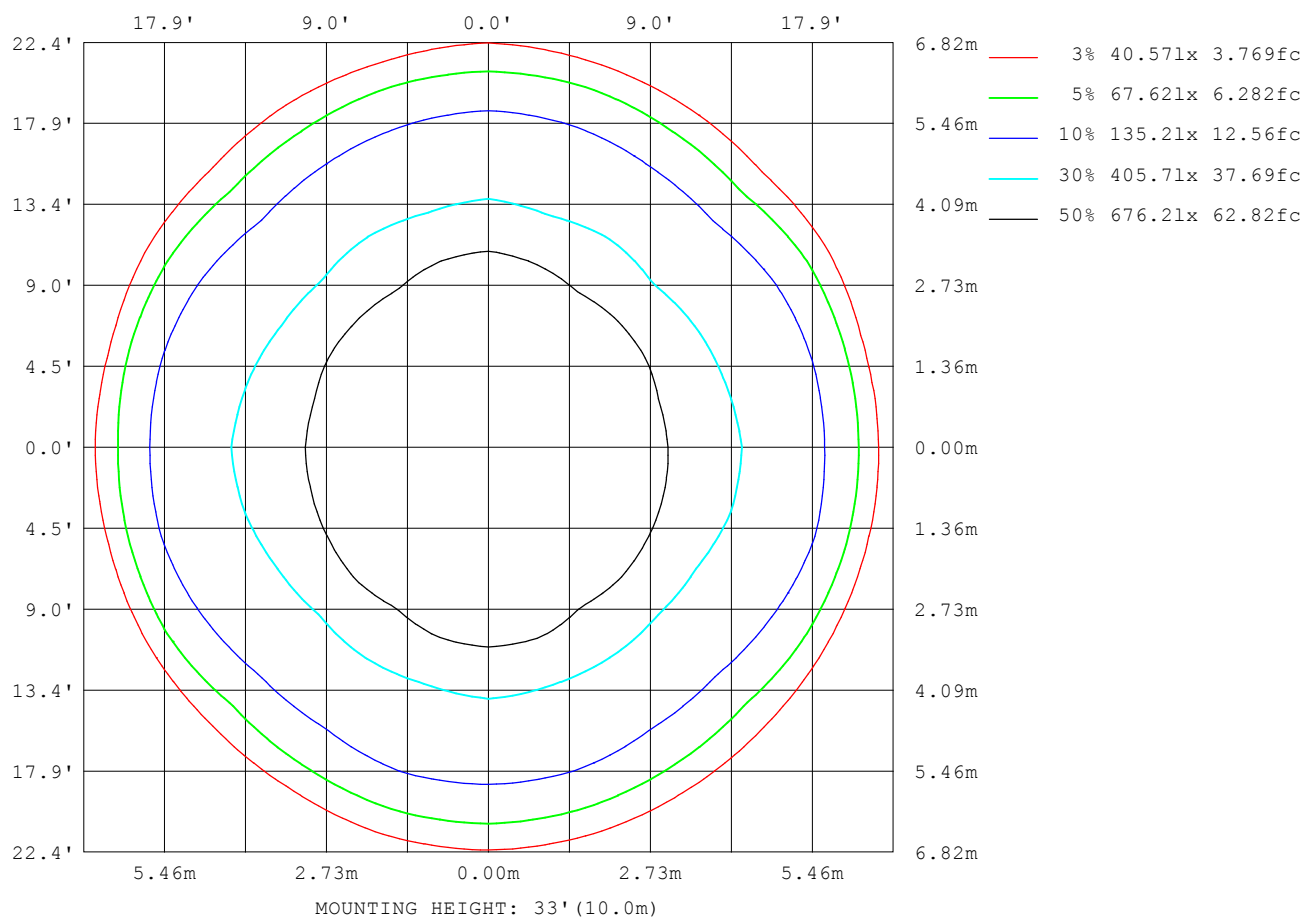
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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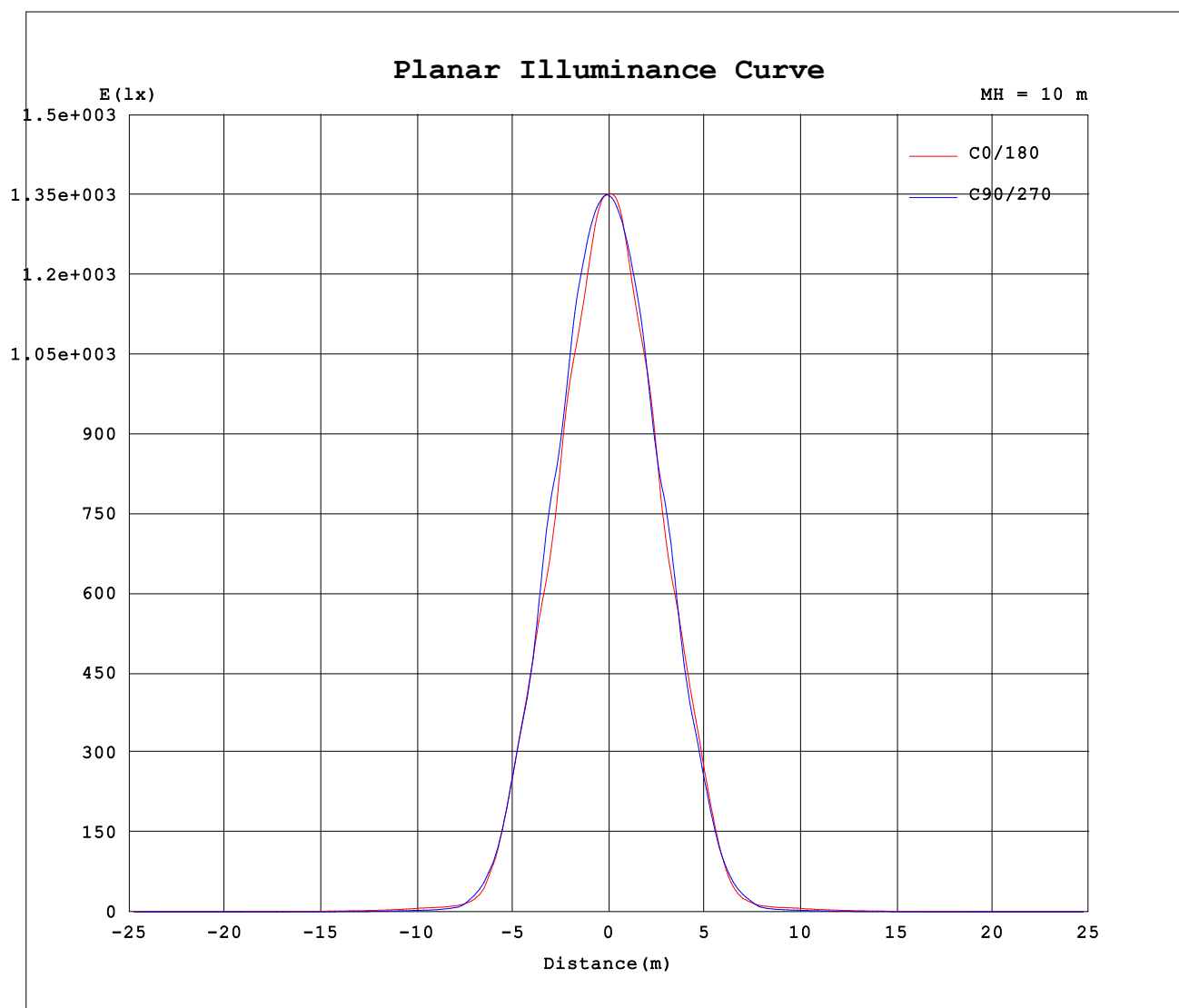
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-04-05

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=0.4557]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2021-04-05

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=0.4557]
Remarks: