

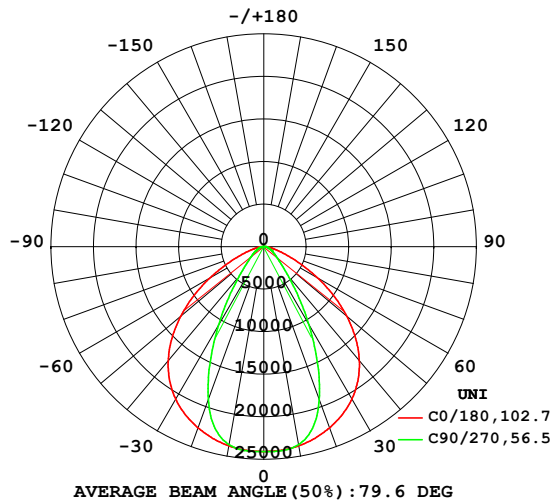
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

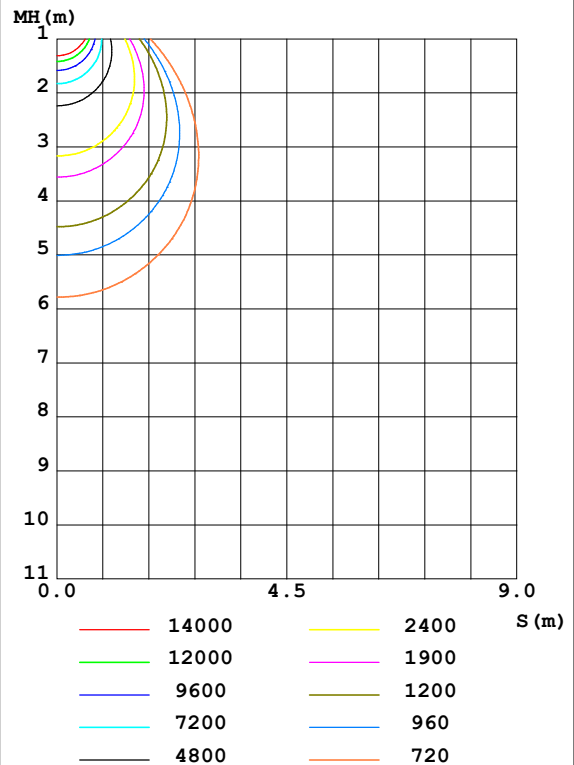
Test:U:229.6V I:1.061A P:240.1W PF:0.9856 Freq:50.00Hz UTHDi:0% ITHDi:0% Lamp Flux:37463.5x1 lm		
NAME: LHB09-240-5070-L00402	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 156.07 lm/W			
MODEL	/	I _{max} (cd)	24110	S/MH(C0/180)	1.27
NOMINAL POWER(W)	240	LOR(%)	100.0	S/MH(C90/270)	0.86
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	37463	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	37463.5	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	2376	2377	2362	2377	2376	2377	2362	2377	0- 10	2285	2285	6.1,6.1
20	2265	2137	1911	2137	2265	2137	1911	2137	10- 20	6399	8685	23.2,23.2
30	2071	1523	1061	1523	2071	1523	1061	1523	20- 30	8475	17160	45.8,45.8
40	1748	849.1	446.2	849.1	1748	849.1	446.2	849.1	30- 40	7763	24922	66.5,66.5
50	1275	475.1	207.2	475.1	1275	475.1	207.2	475.1	40- 50	5693	30615	81.7,81.7
60	724.7	252.0	121.4	252.0	724.7	252.0	121.4	252.0	50- 60	3619	34234	91.4,91.4
70	274.2	129.1	69.93	129.1	274.2	129.1	69.93	129.1	60- 70	2023	36257	96.8,96.8
80	80.42	49.98	30.64	49.98	80.42	49.98	30.64	49.98	70- 80	956.7	37214	99.3,99.3
90	0.2752	0.1971	0.1739	0.1971	0.2752	0.1971	0.1739	0.1971	80- 90	249.4	37463	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): 28048 lm

%lum = 74.9%

%lamp = 74.9%

Conical surface Flux(120deg): 34234 lm

%lum = 91.4%

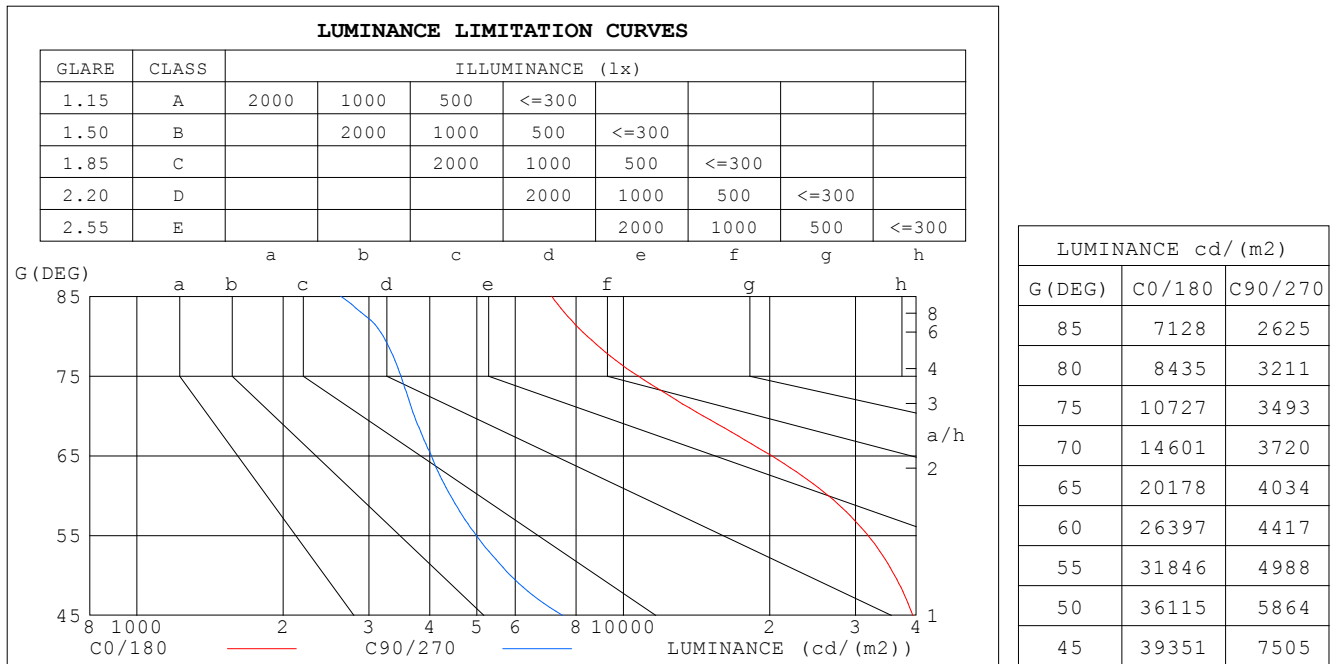
%lamp = 91.4%

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%
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EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES



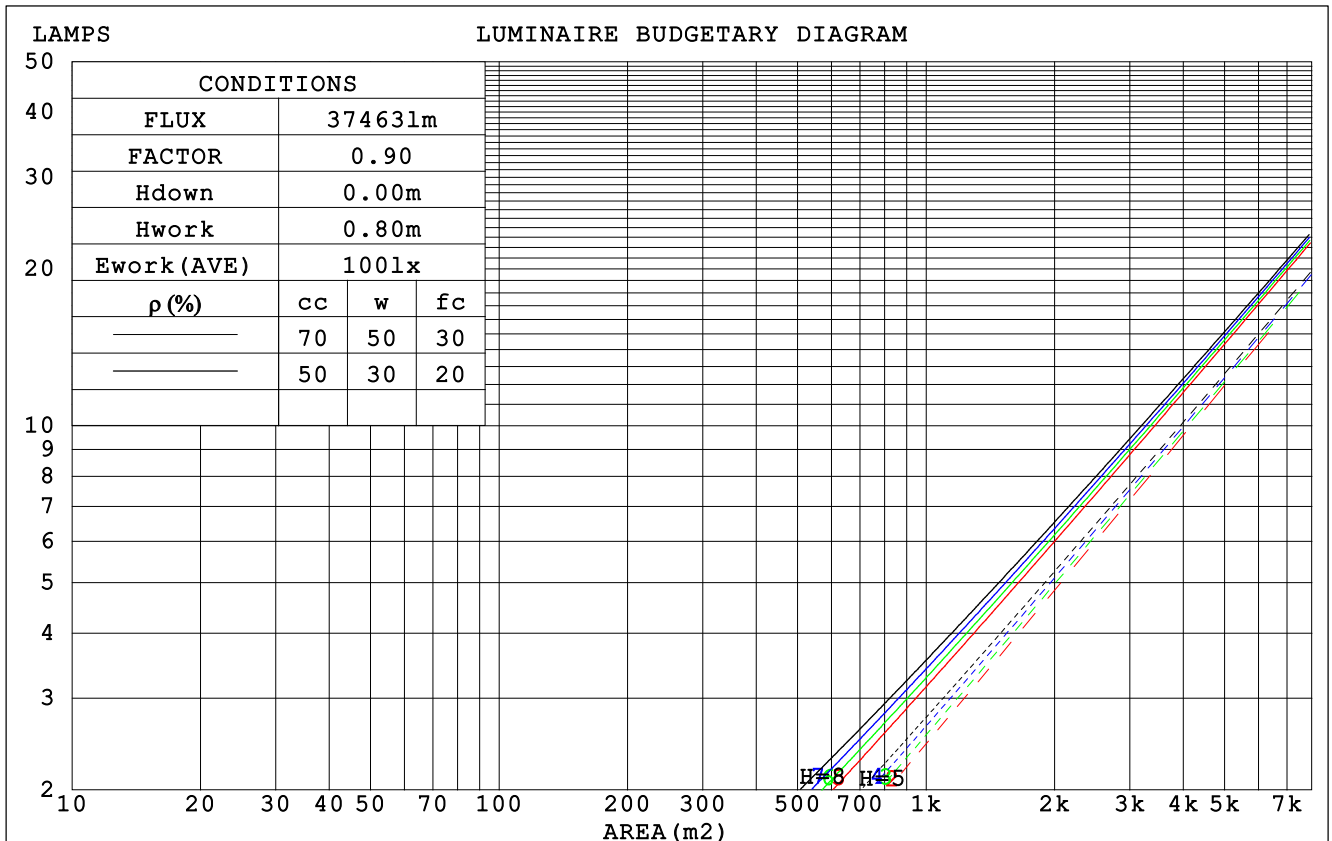
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2020-06-18

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
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	.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
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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=0.4589]
 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	21.1	22.4	21.4	22.7	23.1	13.3	14.7	13.7	15.0	15.3
3H	22.3	23.5	22.7	23.9	24.2	14.6	15.8	15.0	16.2	16.5
4H	22.7	23.9	23.1	24.2	24.6	15.2	16.3	15.6	16.6	17.0
6H	23.0	24.0	23.4	24.4	24.8	15.6	16.6	16.0	17.0	17.4
8H	23.1	24.1	23.5	24.5	24.9	15.7	16.7	16.1	17.1	17.5
12H	23.1	24.1	23.6	24.5	24.9	15.8	16.7	16.2	17.1	17.5
4H 2H	21.1	22.2	21.5	22.6	23.0	15.0	16.1	15.4	16.4	16.8
3H	22.6	23.5	23.0	23.9	24.3	16.3	17.2	16.7	17.6	18.0
4H	23.1	23.9	23.5	24.4	24.8	16.8	17.6	17.2	18.0	18.5
6H	23.5	24.2	24.0	24.6	25.1	17.2	17.9	17.7	18.4	18.8
8H	23.6	24.3	24.1	24.7	25.2	17.3	18.0	17.8	18.5	18.9
12H	23.7	24.3	24.2	24.8	25.3	17.4	18.0	17.9	18.5	19.0
8H 4H	23.1	23.8	23.6	24.2	24.7	17.5	18.2	18.0	18.6	19.1
6H	23.6	24.1	24.1	24.6	25.1	18.0	18.5	18.5	19.0	19.5
8H	23.8	24.2	24.3	24.8	25.3	18.2	18.7	18.7	19.2	19.7
12H	23.9	24.3	24.4	24.8	25.4	18.3	18.7	18.8	19.2	19.8
12H 4H	23.1	23.7	23.6	24.1	24.6	17.6	18.2	18.1	18.7	19.2
6H	23.6	24.0	24.1	24.5	25.1	18.2	18.7	18.7	19.1	19.7
8H	23.8	24.2	24.3	24.7	25.3	18.4	18.8	18.9	19.3	19.9
CIE190: 2010										

CIE190: 2010
Area: 0.221 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=0.4589]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

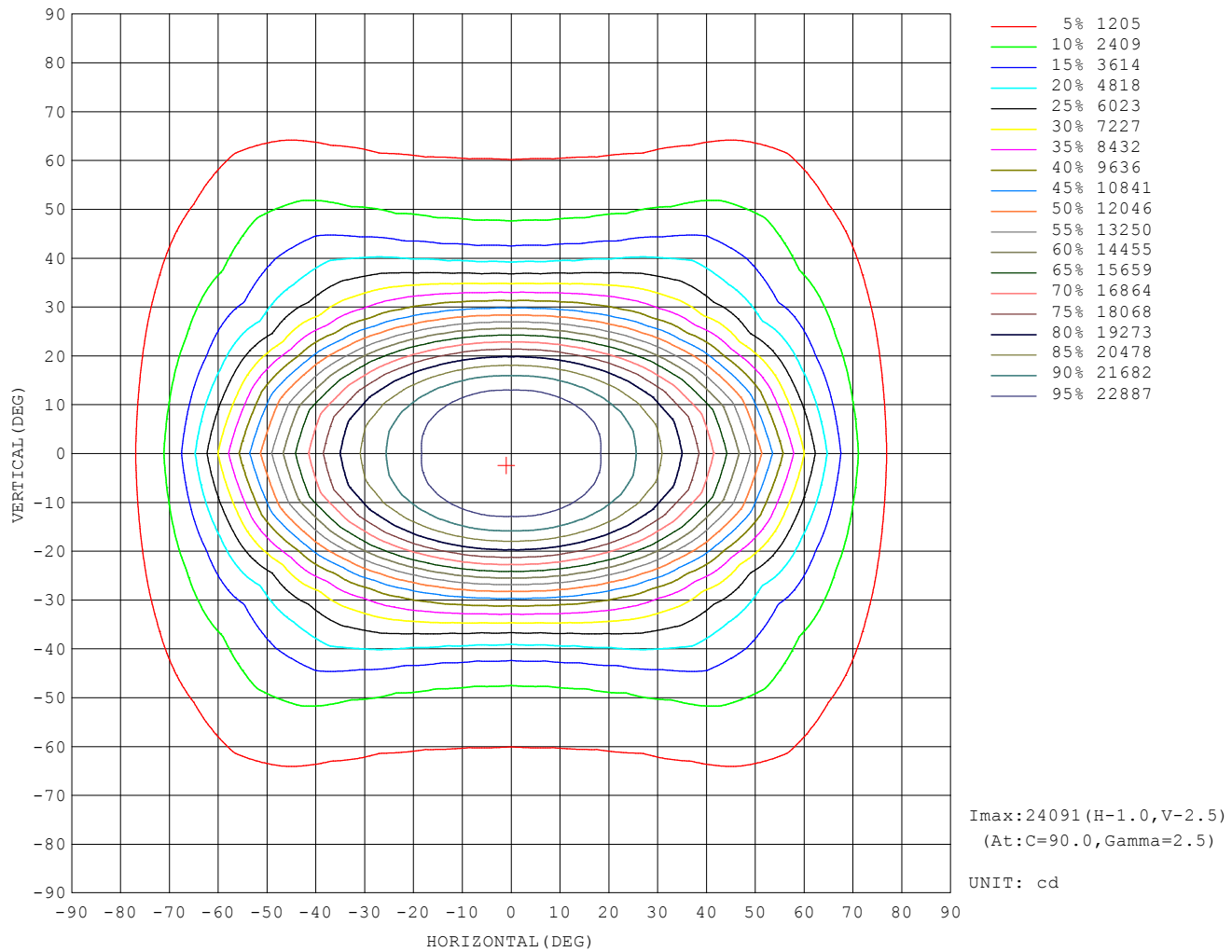
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	71	61	56	70	61	56	69	61	55	50
0.80	80	71	65	79	71	65	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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 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

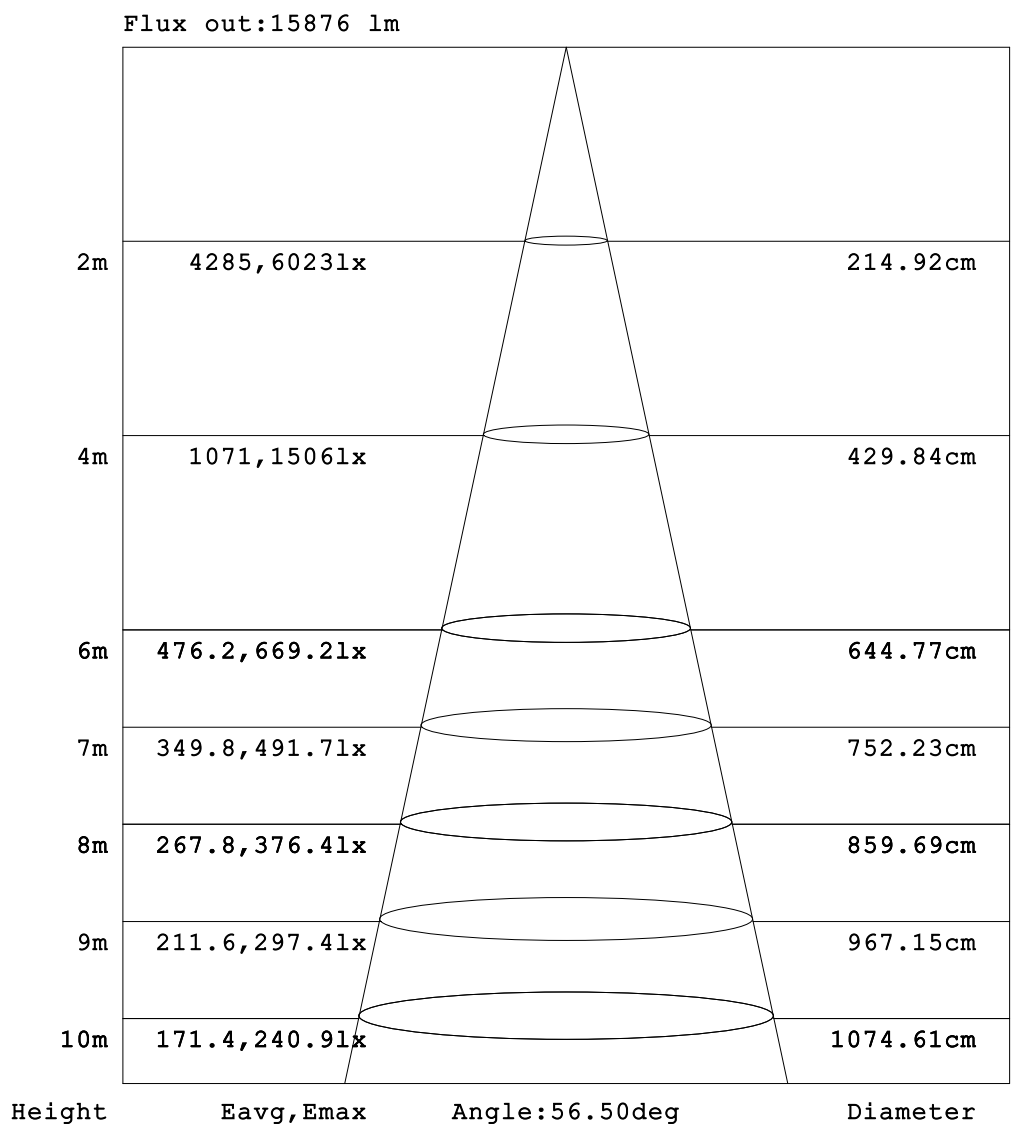
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
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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:

AAI Figure



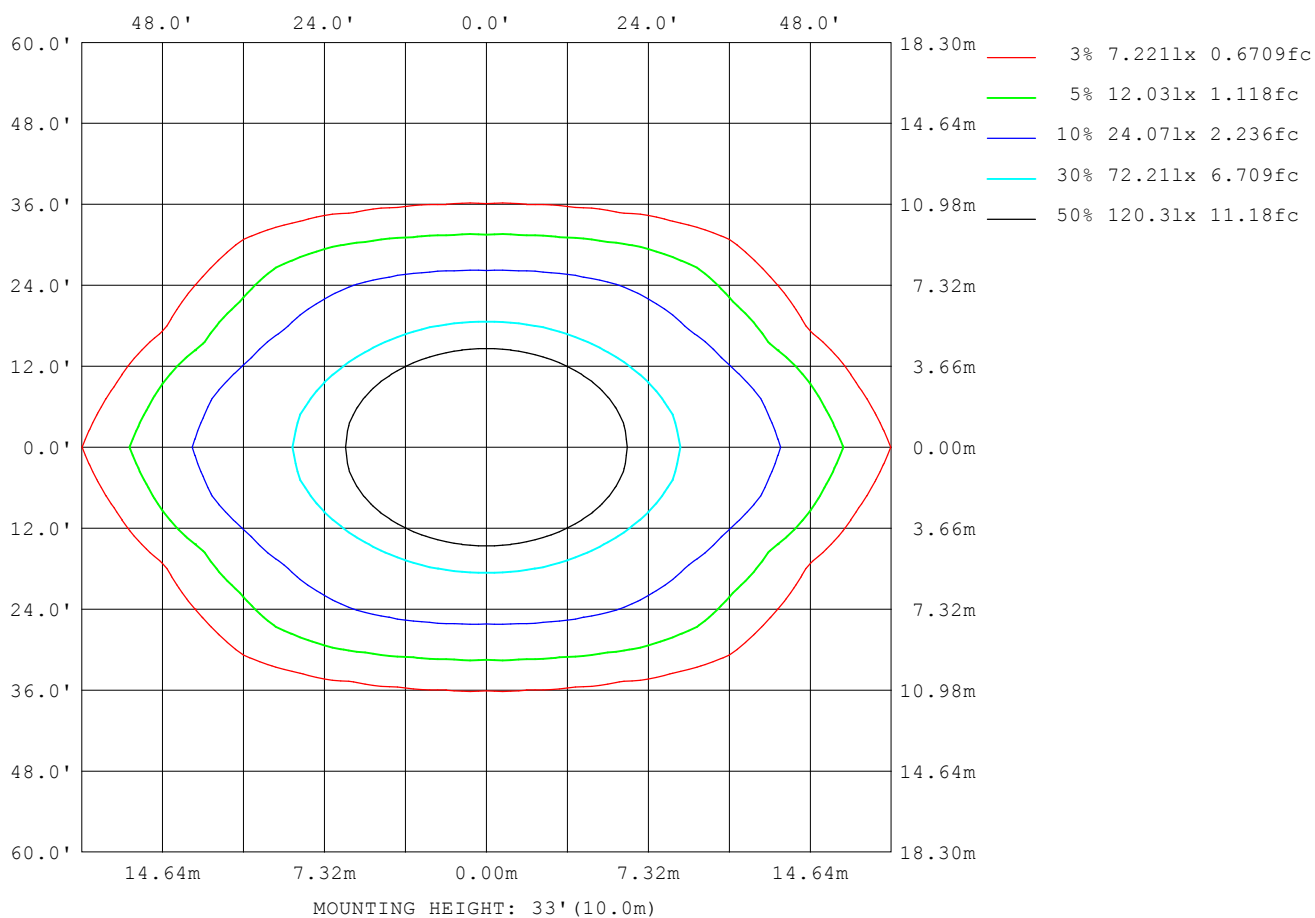
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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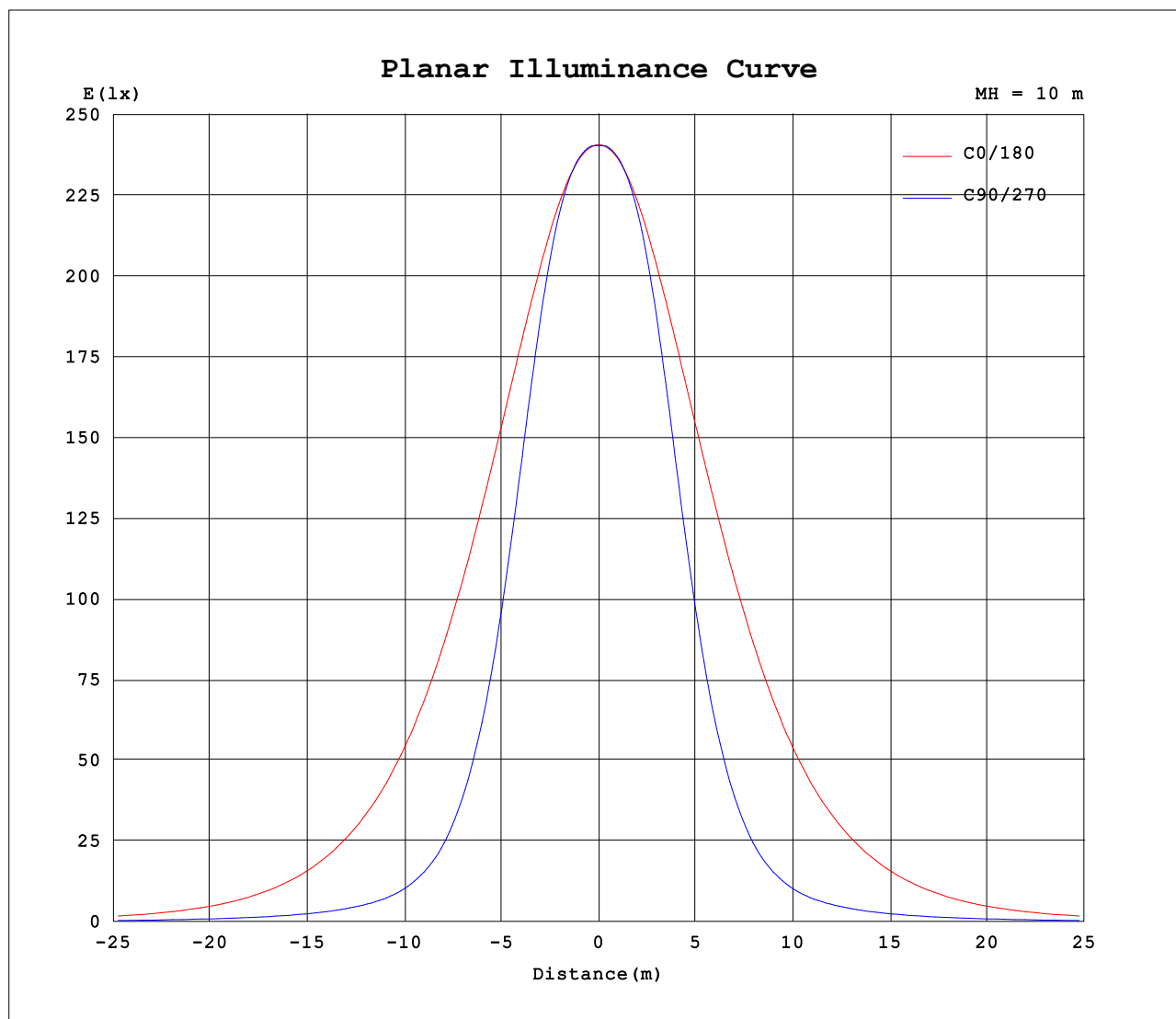
ISOLUX DIAGRAM



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

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
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Humidity: 65.0%
Test Distance: 26.000m [K=0.4589]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
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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: