

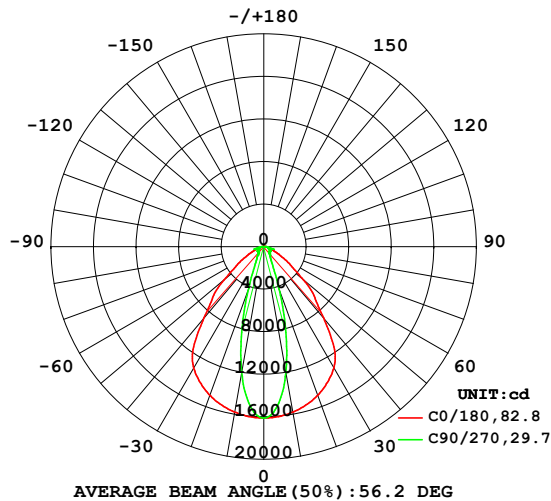
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

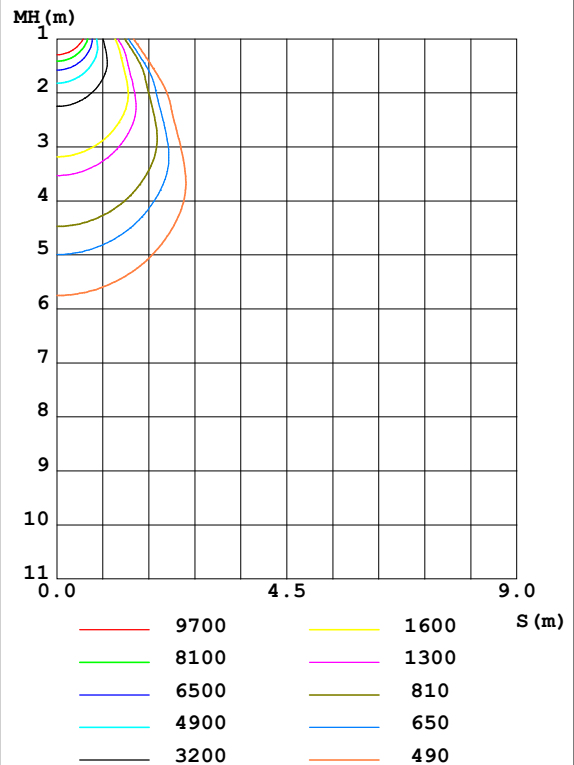
Test:U:230.0V I:0.4498A P:100.3W PF:0.9696 Freq:50.00Hz UTHDi:0% ITHDi:0% Lamp Flux:13751.1x1 lm		
NAME: HB38-100-5080-H08401	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 137.07 lm/W			
MODEL	/	Imax(cd)	16122	S/MH(C0/180)	1.18
NOMINAL POWER(W)	100	LOR(%)	100.0	S/MH(C90/270)	0.49
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	13751	η UP,DN(C0-180)	0.0,50.0
NOMINAL FLUX(lm)	13751.1	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	0.55

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:LI
Test Date:2020-06-12

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	1580	1377	1202	1377	1580	1377	1202	1377	0- 10	1427	1427	10.4,10.4
20	1487	799.8	421.9	799.8	1487	799.8	421.9	799.8	10- 20	3143	4570	33.2,33.2
30	1319	297.2	134.4	297.2	1319	297.2	134.4	297.2	20- 30	3042	7612	55.4,55.4
40	875.0	117.1	84.00	117.1	875.0	117.1	84.00	117.1	30- 40	2380	9992	72.7,72.7
50	490.0	73.86	72.33	73.86	490.0	73.86	72.33	73.86	40- 50	1539	11531	83.9,83.9
60	206.4	57.73	62.00	57.73	206.4	57.73	62.00	57.73	50- 60	990.7	12522	91.1,91.1
70	80.89	40.47	46.09	40.47	80.89	40.47	46.09	40.47	60- 70	624.1	13146	95.6,95.6
80	25.22	26.59	40.10	26.59	25.22	26.59	40.10	26.59	70- 80	443.8	13590	98.8,98.8
90	0.3202	0.4383	1.422	0.4383	0.3202	0.4383	1.422	0.4383	80- 90	161.0	13751	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): 10839 lm

%lum = 78.8%

%lamp = 78.8%

Conical surface Flux(120deg): 12522 lm

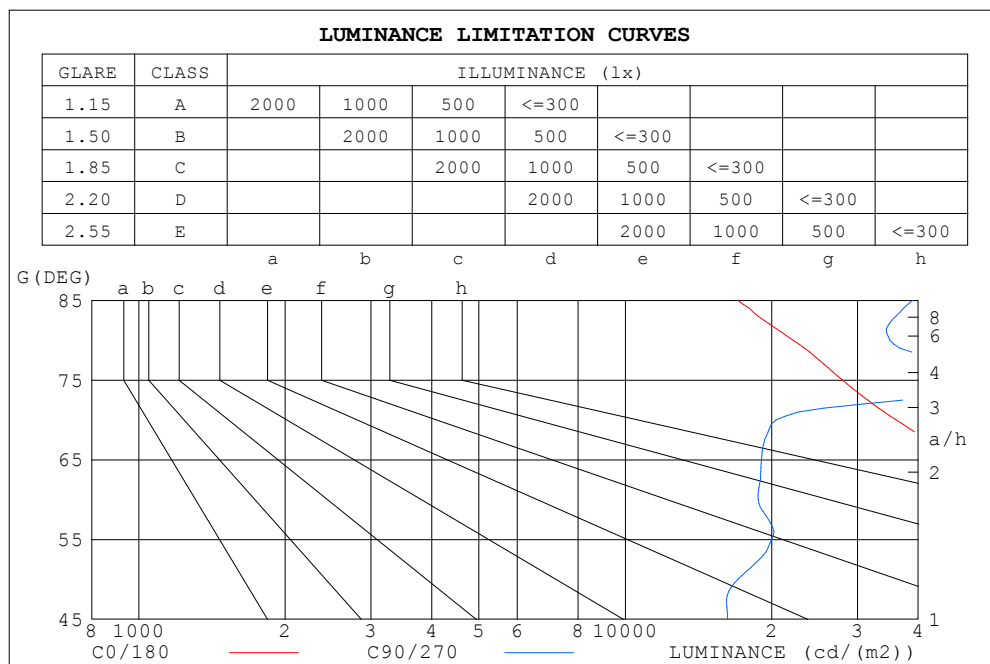
%lum = 91.1%

%lamp = 91.1%

C Range: 0 - 360DEG
C Interval: 10.0DEG
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Temperature:25.3DEG
Operators:LI
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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:

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	17034	38939
80	22128	34957
75	27934	53847
70	36040	20400
65	46859	19057
60	62889	18770
55	84148	19996
50	116152	17034
45	146766	16224

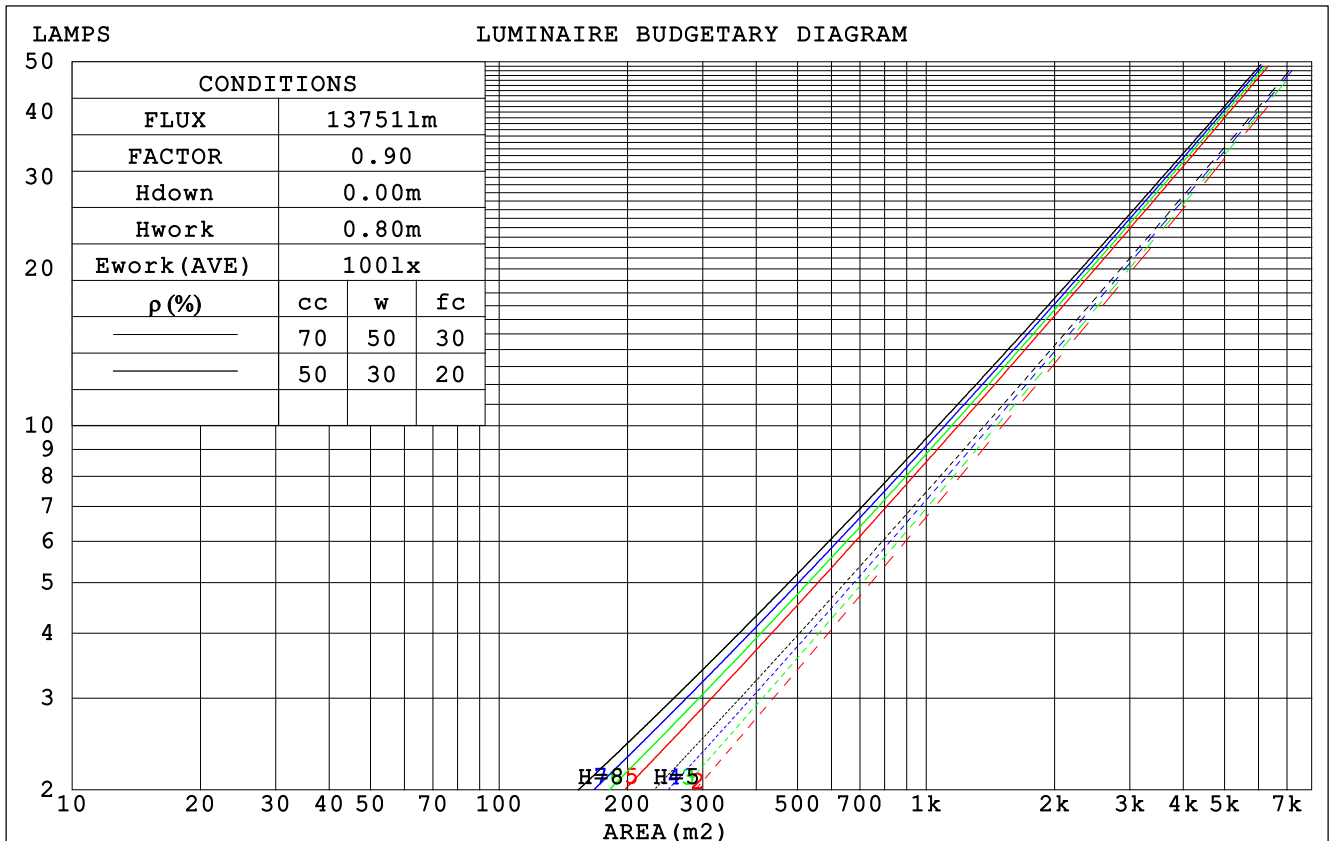
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C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LI
Test Date: 2020-06-12

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	1.05	1.02	1.06	1.03	1.00	1.02	.99	.97	.98	.96	.94	.94	.93	.91	.89
2.0	.98	.93	.89	.96	.92	.88	.93	.89	.86	.90	.87	.84	.87	.84	.82	.80
3.0	.90	.84	.79	.88	.83	.78	.86	.81	.77	.83	.79	.76	.81	.77	.74	.73
4.0	.83	.76	.71	.81	.75	.70	.79	.74	.69	.77	.72	.69	.75	.71	.68	.66
5.0	.76	.69	.64	.75	.69	.64	.74	.68	.63	.72	.67	.63	.70	.66	.62	.61
6.0	.71	.64	.59	.70	.64	.59	.69	.63	.58	.67	.62	.58	.66	.61	.57	.56
7.0	.66	.59	.54	.66	.59	.54	.64	.58	.54	.63	.58	.54	.62	.57	.53	.52
8.0	.62	.55	.51	.62	.55	.50	.60	.54	.50	.59	.54	.50	.58	.53	.50	.48
9.0	.58	.52	.47	.58	.52	.47	.57	.51	.47	.56	.51	.47	.55	.50	.47	.45
10.0	.55	.49	.44	.55	.48	.44	.54	.48	.44	.53	.48	.44	.52	.47	.44	.42



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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

ρ_{cc}	80%			70%			50%			30%			10%			0	
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρ_{fc}	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)										
0.0																	
1.0	.232	.132	.042	.225	.128	.041	.212	.122	.039	.200	.115	.037	.189	.110	.035		
2.0	.217	.119	.037	.212	.117	.036	.200	.111	.035	.190	.107	.033	.181	.102	.032		
3.0	.203	.108	.032	.198	.106	.032	.188	.102	.031	.179	.098	.030	.171	.095	.029		
4.0	.189	.098	.029	.185	.097	.029	.177	.094	.028	.169	.091	.027	.162	.088	.027		
5.0	.177	.090	.026	.174	.089	.026	.166	.087	.025	.159	.084	.025	.153	.082	.025		
6.0	.167	.084	.024	.163	.082	.024	.157	.080	.023	.151	.078	.023	.145	.076	.023		
7.0	.157	.078	.022	.154	.077	.022	.148	.075	.022	.143	.073	.021	.138	.072	.021		
8.0	.148	.072	.020	.146	.072	.020	.141	.070	.020	.136	.069	.020	.131	.067	.020		
9.0	.140	.068	.019	.138	.067	.019	.133	.066	.019	.129	.065	.019	.125	.064	.018		
10.0	.133	.064	.018	.131	.063	.018	.127	.062	.018	.123	.061	.017	.120	.060	.017		

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	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	.141	.150	.135	.121	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.162	.132	.107	.139	.114	.093	.095	.079	.065	.055	.046	.038	.018	.015	.012	
3.0	.152	.114	.084	.130	.098	.073	.089	.068	.051	.052	.040	.030	.017	.013	.010	
4.0	.142	.100	.067	.122	.086	.058	.084	.060	.041	.049	.035	.024	.016	.011	.008	
5.0	.134	.088	.055	.115	.077	.048	.079	.053	.034	.046	.031	.020	.015	.010	.007	
6.0	.126	.080	.046	.109	.069	.040	.075	.048	.028	.043	.028	.017	.014	.009	.006	
7.0	.120	.072	.039	.103	.063	.034	.071	.044	.024	.041	.026	.014	.013	.008	.005	
8.0	.114	.066	.033	.098	.057	.029	.068	.040	.021	.039	.024	.012	.013	.008	.004	
9.0	.108	.061	.029	.093	.053	.025	.064	.037	.018	.038	.022	.011	.012	.007	.004	
10.0	.103	.057	.026	.089	.049	.022	.062	.035	.016	.036	.020	.010	.012	.007	.003	

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
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 Operators:LI
 Test Date:2020-06-12

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	22.3	23.6	22.7	23.9	24.2	18.9	20.2	19.3	20.5	20.8
3H	23.9	25.1	24.3	25.4	25.8	20.9	22.1	21.3	22.4	22.8
4H	24.5	25.5	24.9	25.9	26.3	24.6	25.6	25.0	26.0	26.4
6H	24.8	25.8	25.2	26.2	26.6	25.8	26.8	26.2	27.1	27.5
8H	24.9	25.9	25.4	26.2	26.7	26.1	27.0	26.5	27.4	27.8
12H	25.0	25.9	25.4	26.2	26.7	26.3	27.2	26.8	27.6	28.1
4H 2H	22.4	23.4	22.8	23.8	24.2	19.5	20.5	19.9	20.9	21.3
3H	24.1	25.0	24.5	25.4	25.8	21.7	22.5	22.1	23.0	23.4
4H	24.7	25.5	25.1	25.9	26.4	25.4	26.2	25.8	26.6	27.0
6H	25.2	25.8	25.6	26.3	26.8	26.9	27.6	27.4	28.1	28.5
8H	25.3	25.9	25.8	26.4	26.9	27.3	27.9	27.7	28.4	28.8
12H	25.4	26.0	25.9	26.5	26.9	27.6	28.2	28.1	28.6	29.1
8H 4H	24.9	25.5	25.3	25.9	26.4	25.5	26.1	26.0	26.6	27.1
6H	25.4	25.9	25.9	26.4	26.9	27.3	27.8	27.8	28.3	28.8
8H	25.6	26.0	26.1	26.6	27.1	27.8	28.3	28.3	28.8	29.3
12H	25.7	26.1	26.2	26.6	27.2	28.3	28.7	28.8	29.2	29.7
12H 4H	25.0	25.5	25.5	26.0	26.5	25.5	26.1	26.0	26.5	27.0
6H	25.6	26.0	26.1	26.5	27.0	27.3	27.8	27.9	28.3	28.8
8H	25.8	26.2	26.3	26.7	27.3	27.9	28.3	28.4	28.8	29.4
CIE190: 2010										

CIE190: 2010
Area: 0.066 m2

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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

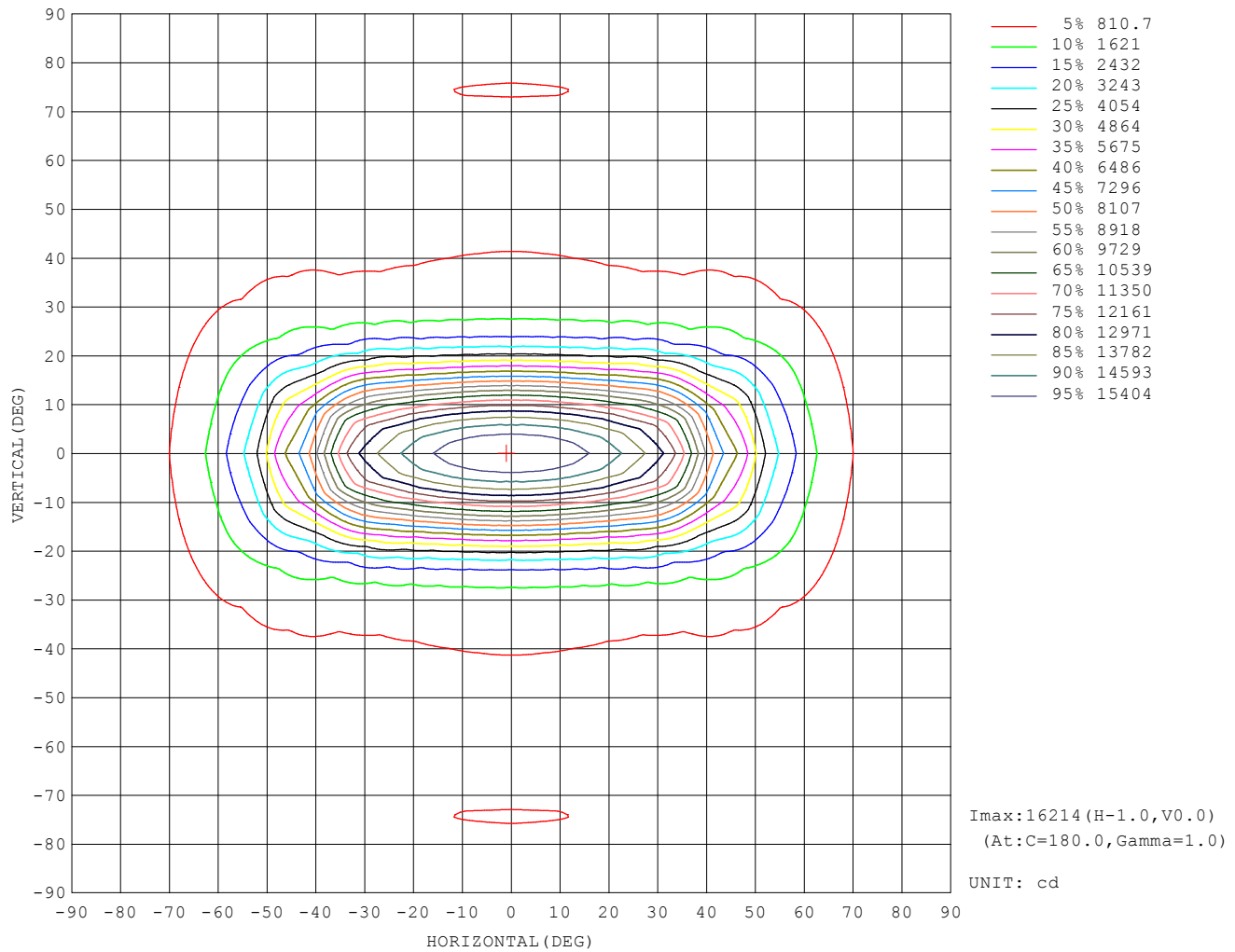
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	75	66	61	74	66	61	73	65	61	56
0.80	83	75	70	82	75	70	81	74	69	64
1.00	89	82	76	88	81	76	87	82	76	70
1.25	95	87	82	94	87	82	91	85	81	76
1.50	98	92	87	97	91	86	94	89	85	79
2.00	103	97	92	101	96	92	98	94	90	84
2.50	105	100	96	104	99	95	100	96	93	86
3.00	108	103	99	106	101	98	102	99	96	88
4.00	110	106	103	108	105	102	104	102	99	91
5.00	112	109	106	110	107	104	106	103	101	93
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

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 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

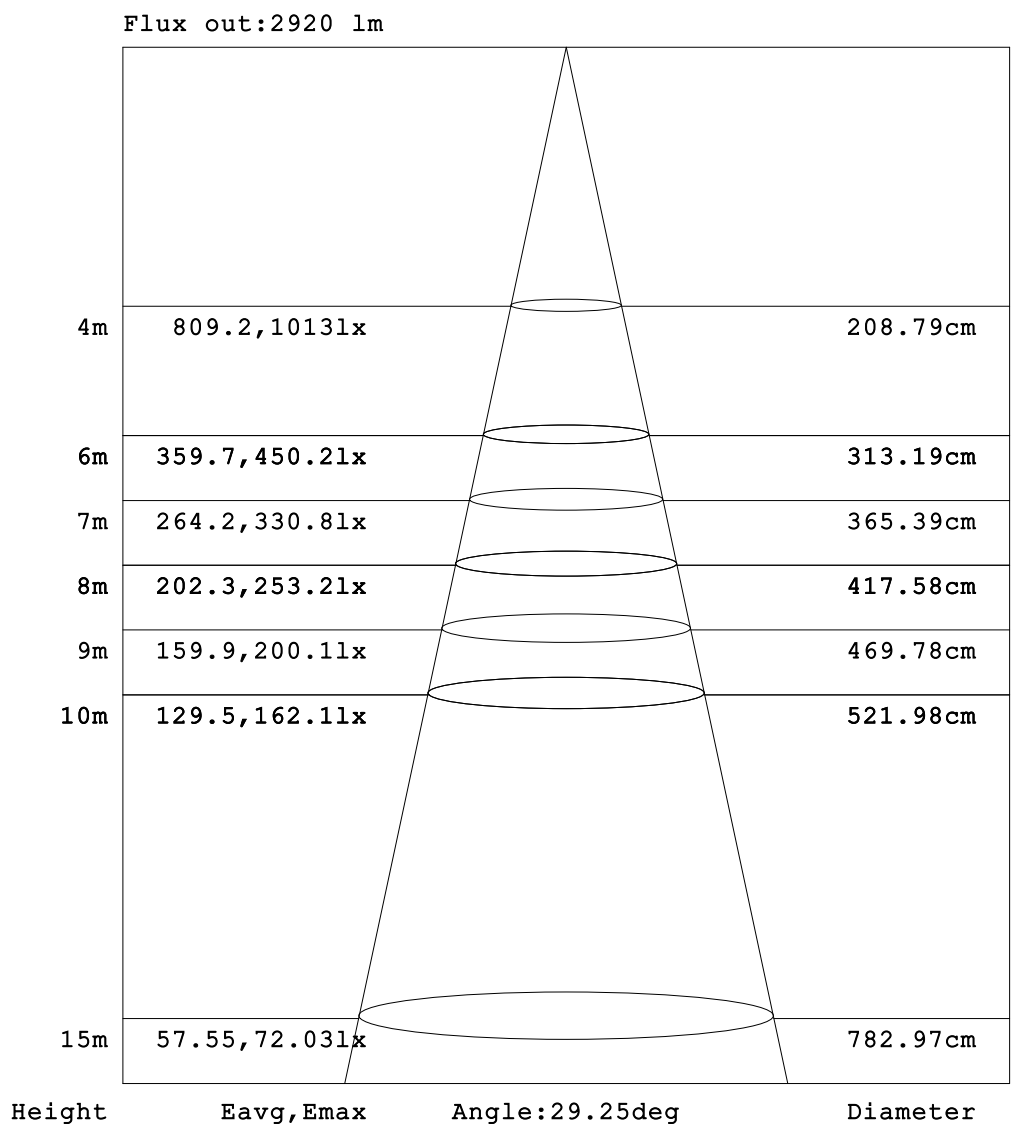
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
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Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

AAI Figure



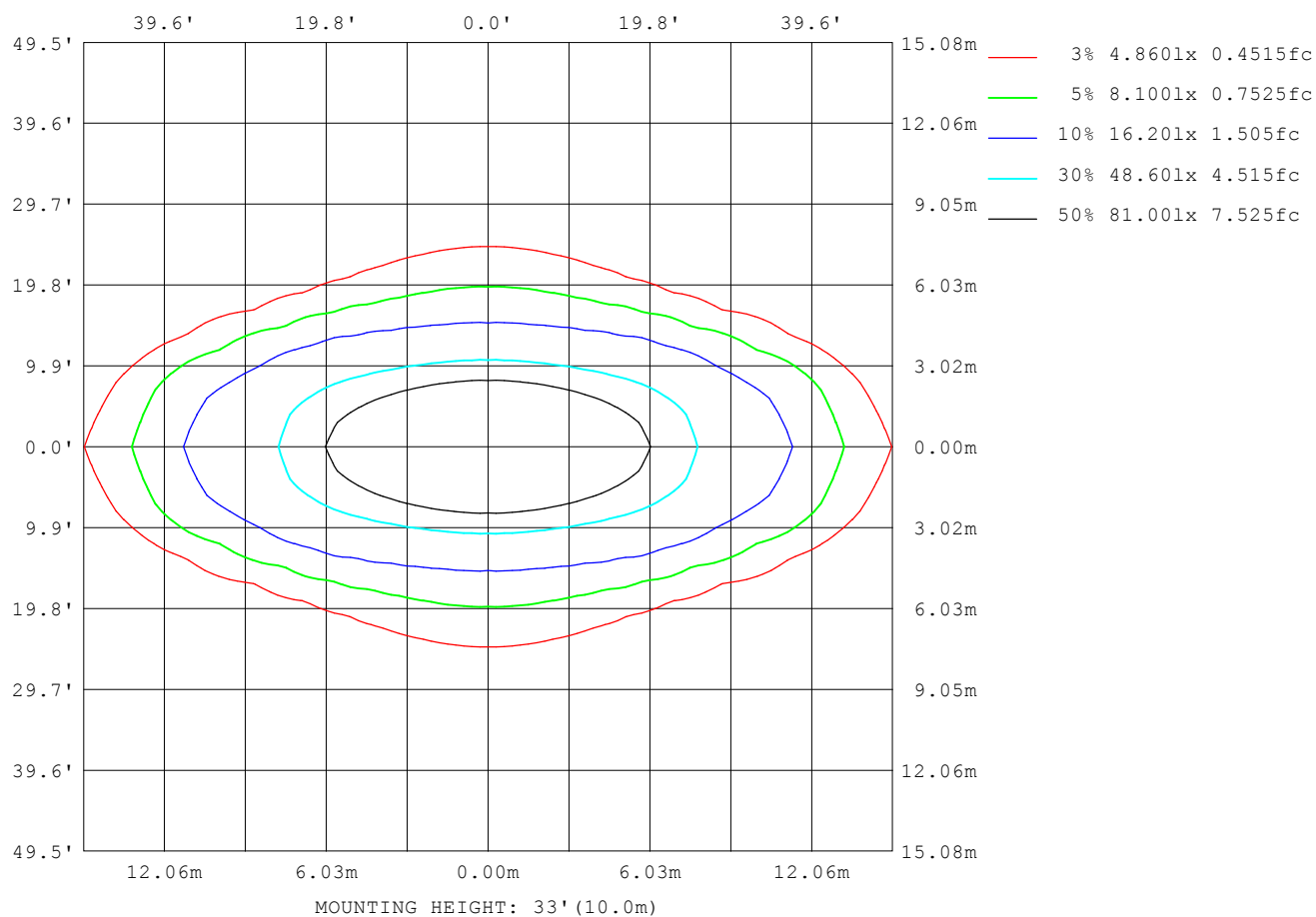
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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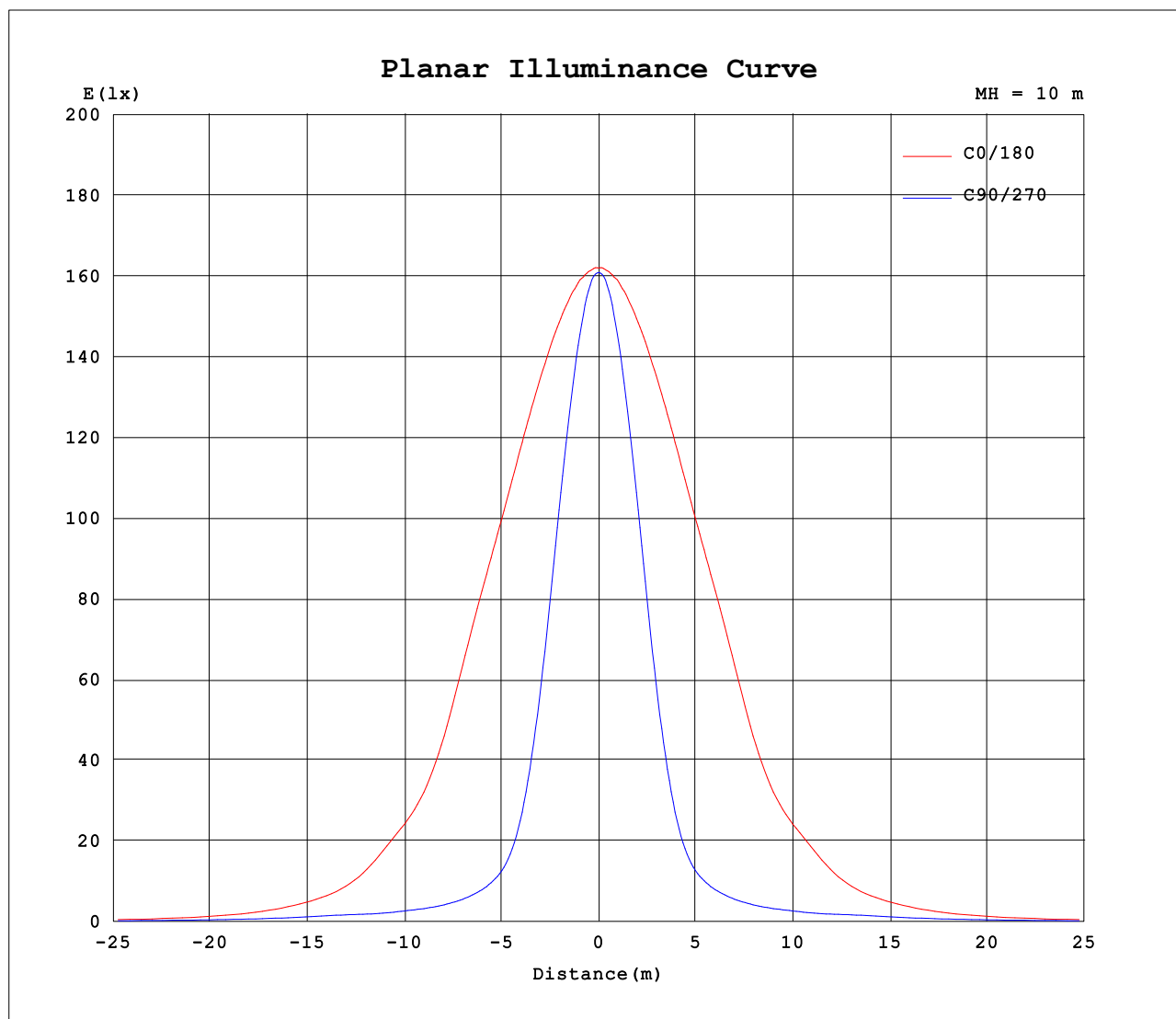
ISOLUX DIAGRAM



C Range: 0 - 360DEG
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Test Speed: HIGH
Temperature: 25.3DEG
Operators: LI
Test Date: 2020-06-12

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



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Test Speed: HIGH
Temperature: 25.3DEG
Operators: LI
Test Date: 2020-06-12

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: