

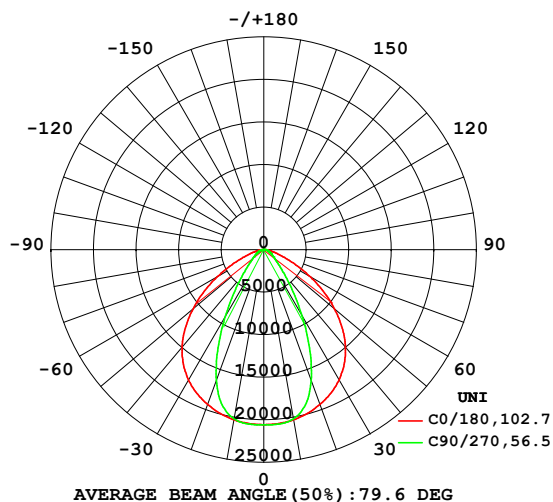
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

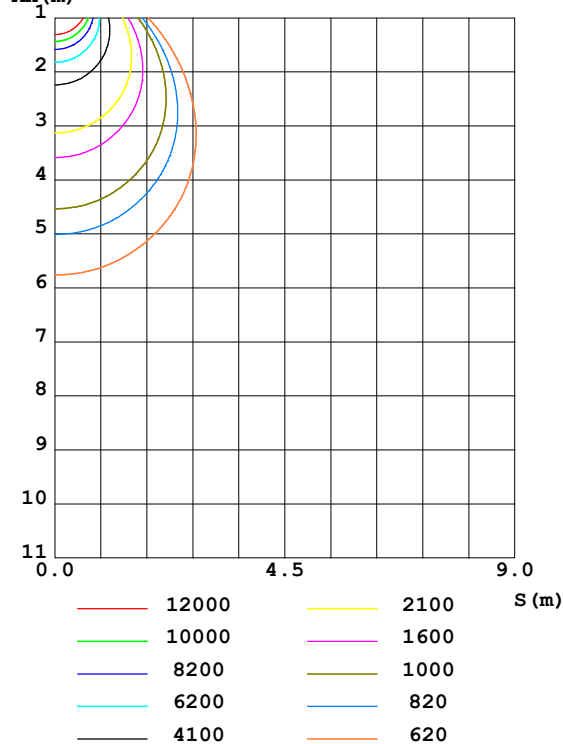
Test:U:229.6V I:0.8770A P:200.0W PF:0.9933 Freq:50.00Hz UTHDi:0% ITHDi:0% Lamp Flux:32012.4x1 lm		
NAME: LHB09-200-5070-L00402	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 160.06 lm/W
MODEL	/	I _{max} (cd)	20602	S/MH (C0/180)	1.27	
NOMINAL POWER(W)	200	LOR(%)	100.0	S/MH (C90/270)	0.86	
RATED VOLTAGE(V)	230	TOTAL FLUX (lm)	32012	η UP,DN (C0-180)	0.0,50.0	
NOMINAL FLUX(lm)	32012.4	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	2030	2031	2018	2031	2030	2031	2018	2031	0- 10	1953	1953	6.1,6.1
20	1935	1826	1633	1826	1935	1826	1633	1826	10- 20	5468	7421	23.2,23.2
30	1770	1302	906.5	1302	1770	1302	906.5	1302	20- 30	7242	14663	45.8,45.8
40	1494	725.6	381.3	725.6	1494	725.6	381.3	725.6	30- 40	6633	21296	66.5,66.5
50	1089	406.0	177.0	406.0	1089	406.0	177.0	406.0	40- 50	4865	26161	81.7,81.7
60	619.2	215.3	103.7	215.3	619.2	215.3	103.7	215.3	50- 60	3092	29253	91.4,91.4
70	234.3	110.3	59.76	110.3	234.3	110.3	59.76	110.3	60- 70	1729	30982	96.8,96.8
80	68.72	42.71	26.19	42.71	68.72	42.71	26.19	42.71	70- 80	817.5	31799	99.3,99.3
90	0.2352	0.1684	0.1486	0.1684	0.2352	0.1684	0.1486	0.1684	80- 90	213.1	32012	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): 23967 lm

%lum = 74.9%

%lamp = 74.9%

Conical surface Flux(120deg): 29253 lm

%lum = 91.4%

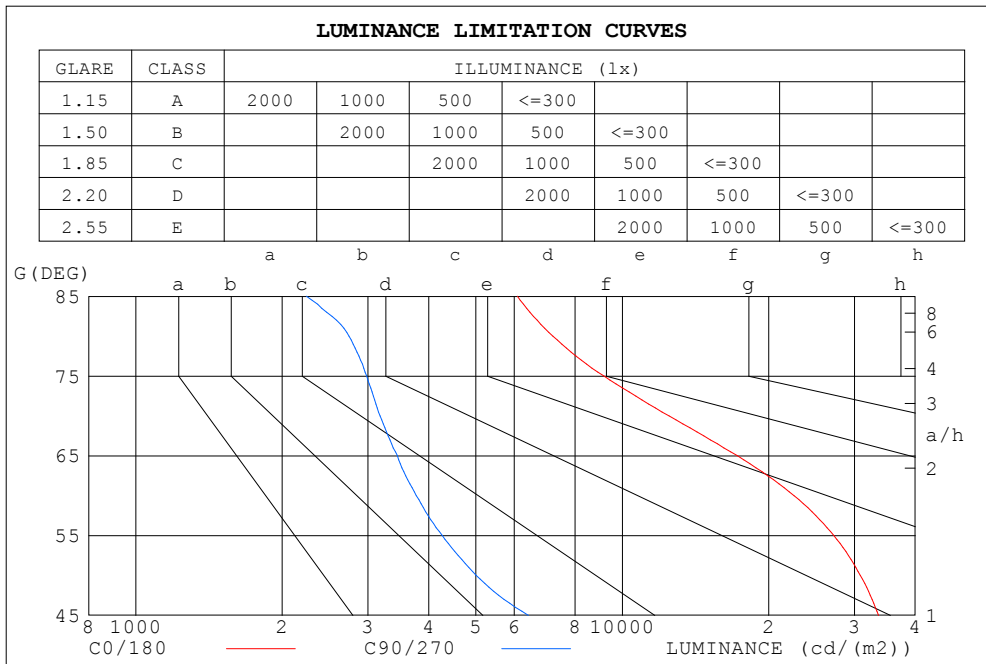
%lamp = 91.4%

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C Interval: 10.0DEG
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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:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	6091	2243
80	7208	2744
75	9166	2985
70	12477	3179
65	17242	3447
60	22556	3775
55	27212	4262
50	30861	5011
45	33625	6413

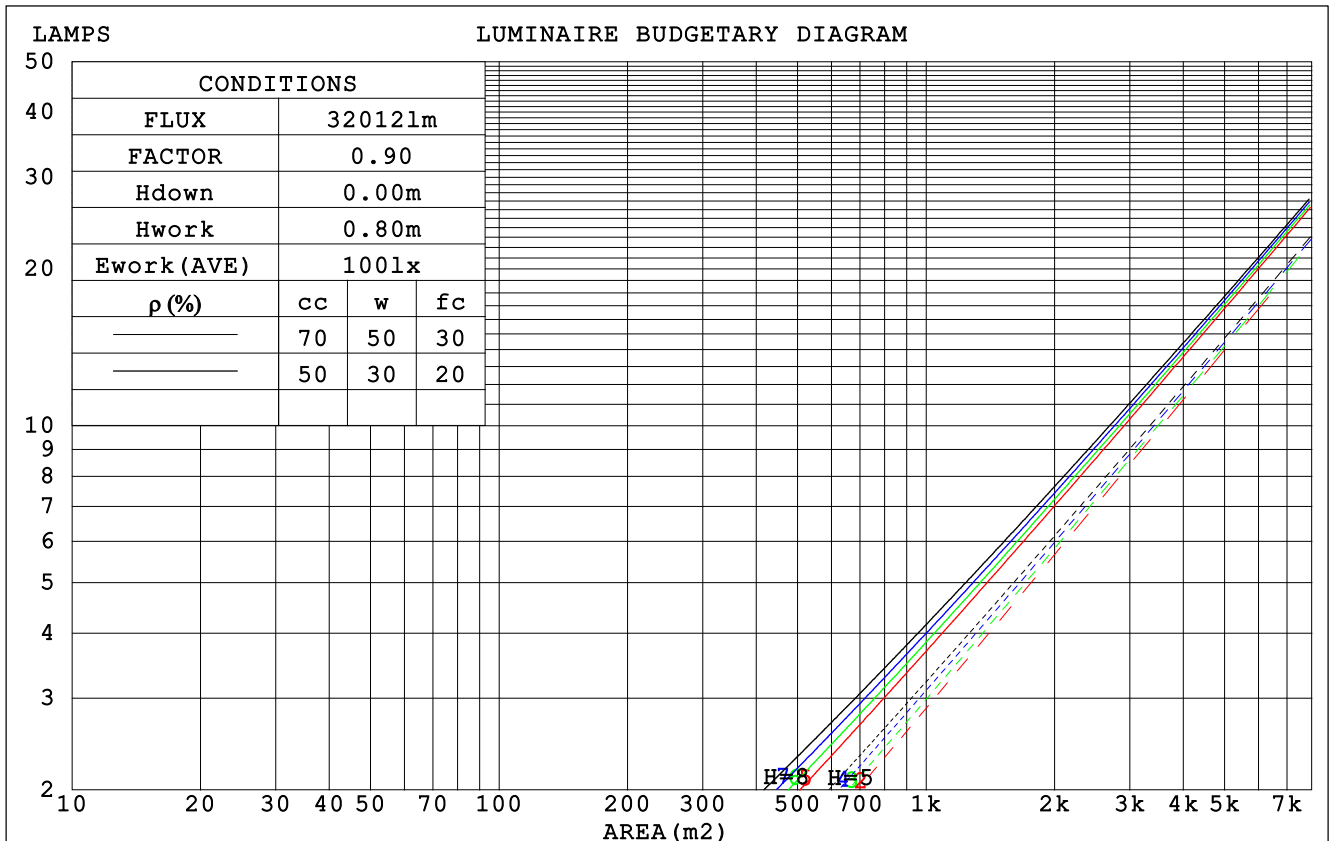
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2020-06-18

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
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	20.5	21.9	20.9	22.2	22.5	12.8	14.1	13.1	14.4	14.8
3H	21.8	23.0	22.2	23.3	23.7	14.1	15.3	14.5	15.6	16.0
4H	22.2	23.3	22.6	23.7	24.1	14.6	15.7	15.0	16.1	16.5
6H	22.5	23.5	22.9	23.9	24.3	15.0	16.0	15.4	16.4	16.8
8H	22.6	23.5	23.0	23.9	24.3	15.1	16.1	15.6	16.5	16.9
12H	22.6	23.5	23.0	23.9	24.3	15.2	16.1	15.6	16.5	17.0
4H 2H	20.6	21.7	21.0	22.0	22.4	14.4	15.5	14.8	15.9	16.3
3H	22.1	23.0	22.5	23.4	23.8	15.7	16.6	16.1	17.0	17.4
4H	22.6	23.4	23.0	23.8	24.2	16.2	17.1	16.7	17.5	17.9
6H	22.9	23.7	23.4	24.1	24.6	16.7	17.4	17.1	17.8	18.3
8H	23.1	23.7	23.5	24.2	24.6	16.8	17.5	17.3	17.9	18.4
12H	23.2	23.7	23.6	24.2	24.7	16.9	17.5	17.4	17.9	18.4
8H 4H	22.6	23.2	23.0	23.7	24.1	17.0	17.6	17.4	18.1	18.5
6H	23.0	23.6	23.5	24.1	24.6	17.5	18.0	18.0	18.5	19.0
8H	23.2	23.7	23.7	24.2	24.7	17.6	18.1	18.1	18.6	19.1
12H	23.4	23.8	23.9	24.3	24.9	17.8	18.2	18.3	18.7	19.3
12H 4H	22.5	23.1	23.0	23.6	24.1	17.1	17.7	17.5	18.1	18.6
6H	23.0	23.5	23.5	24.0	24.5	17.6	18.1	18.1	18.6	19.1
8H	23.2	23.6	23.7	24.1	24.7	17.8	18.3	18.4	18.8	19.3
CIE190: 2010										

CIE190: 2010
Area: 0.221 m2

C Range: 0 - 360DEG
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Test Speed: HIGH
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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

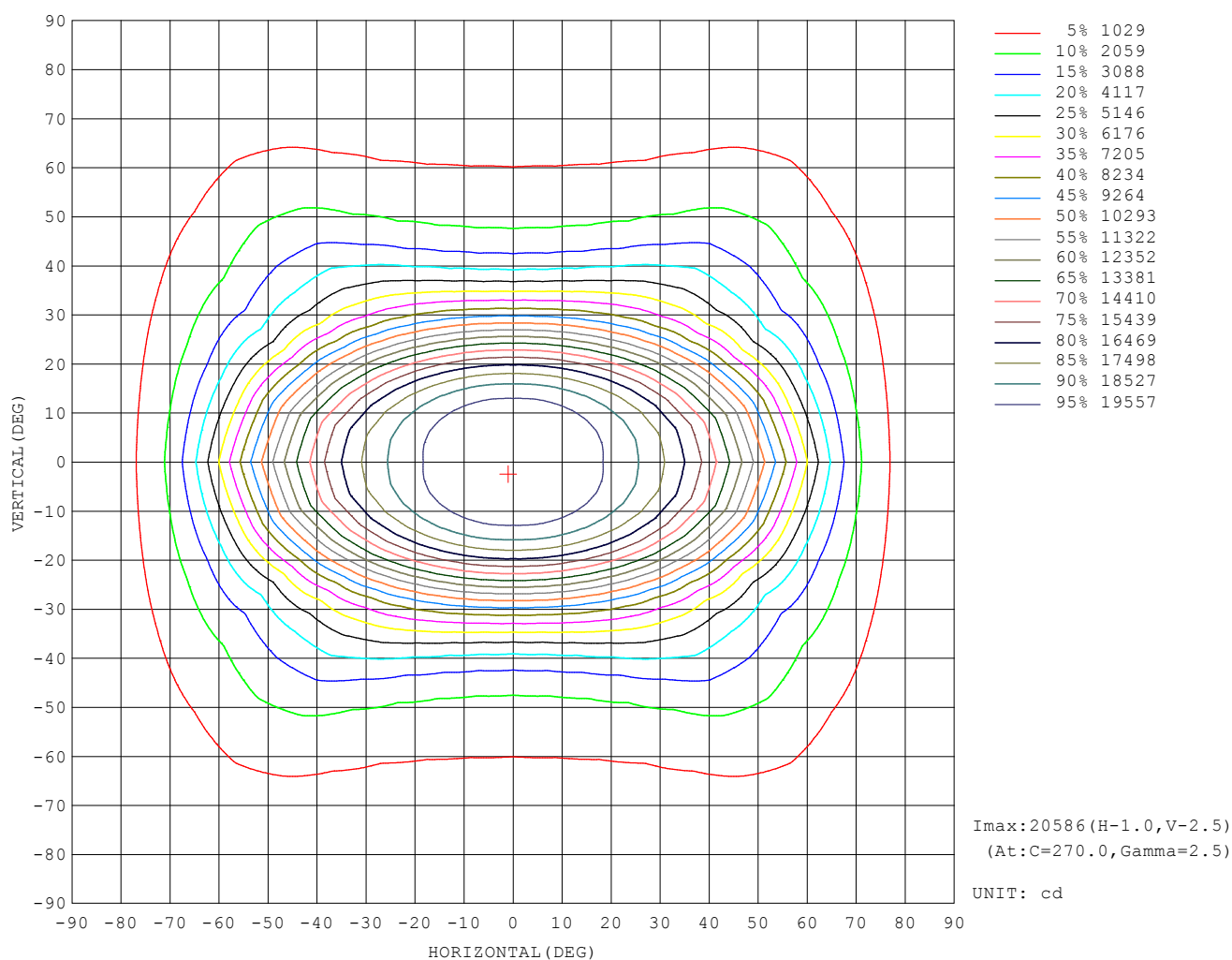
UTILIZATION FACTORS TABLE

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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 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:

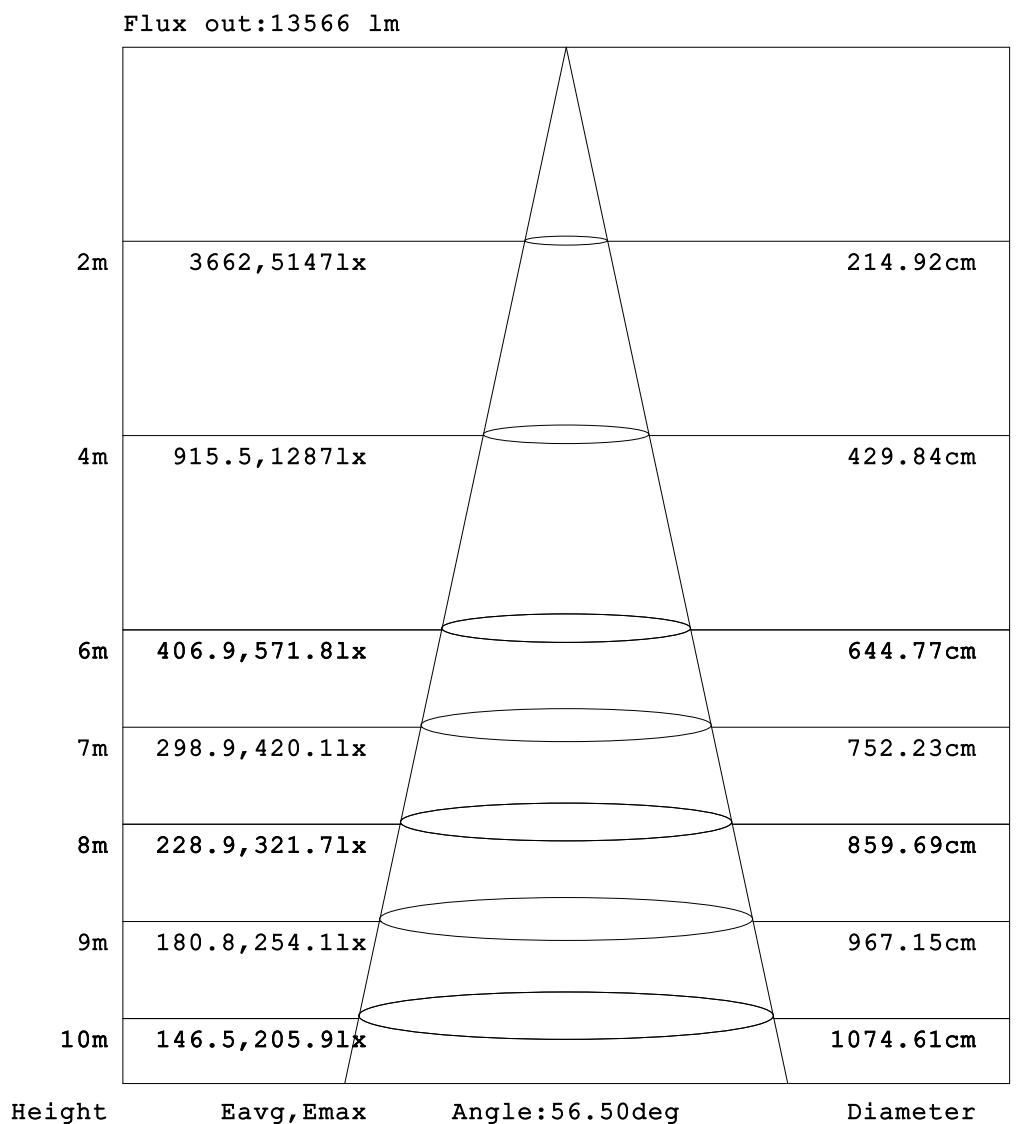
ISOCANDELA DIAGRAM



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
 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



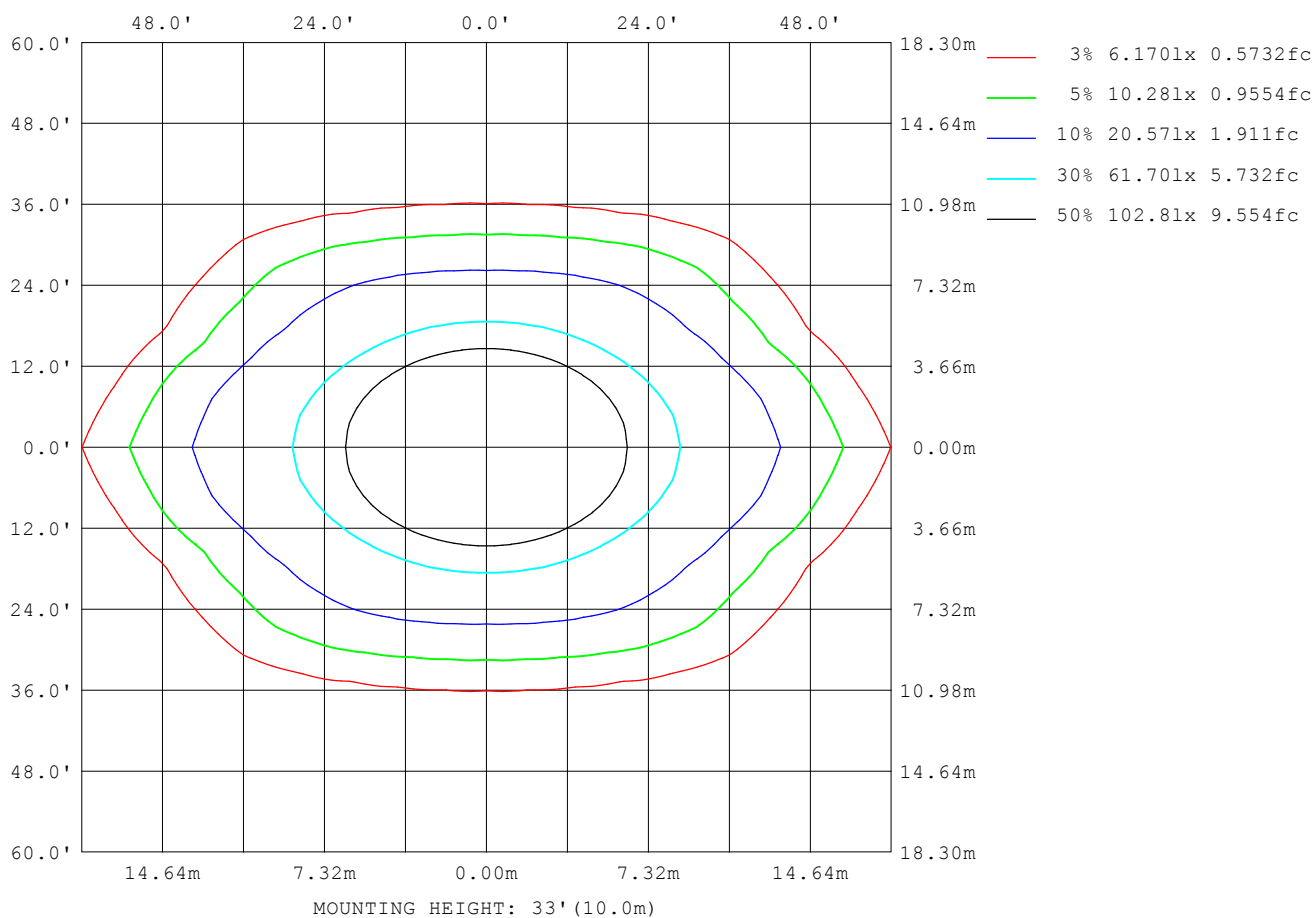
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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C Interval: 10.0DEG
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γ Range: 0 - 90DEG
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Remarks:

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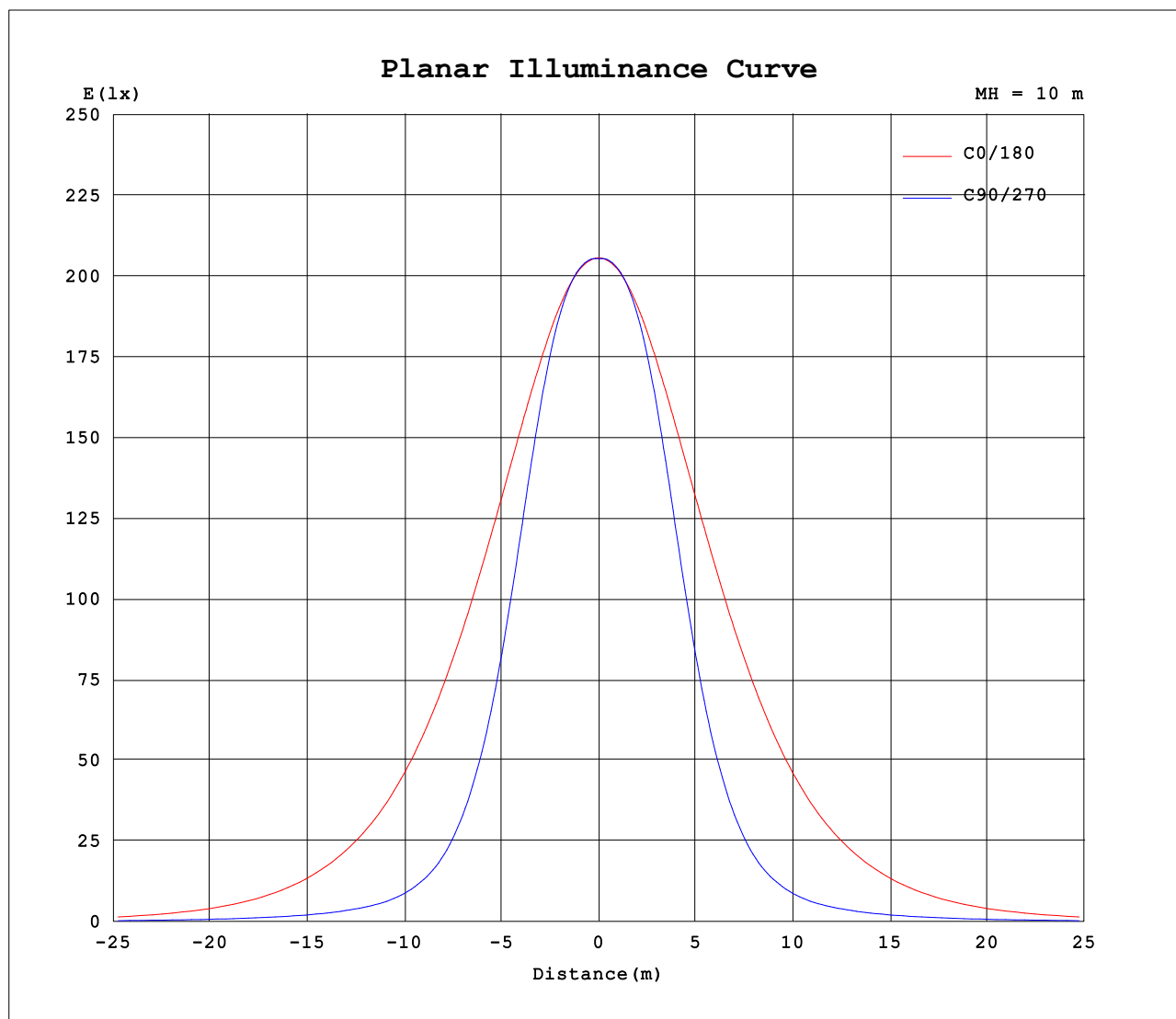
ISOLUX DIAGRAM



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: