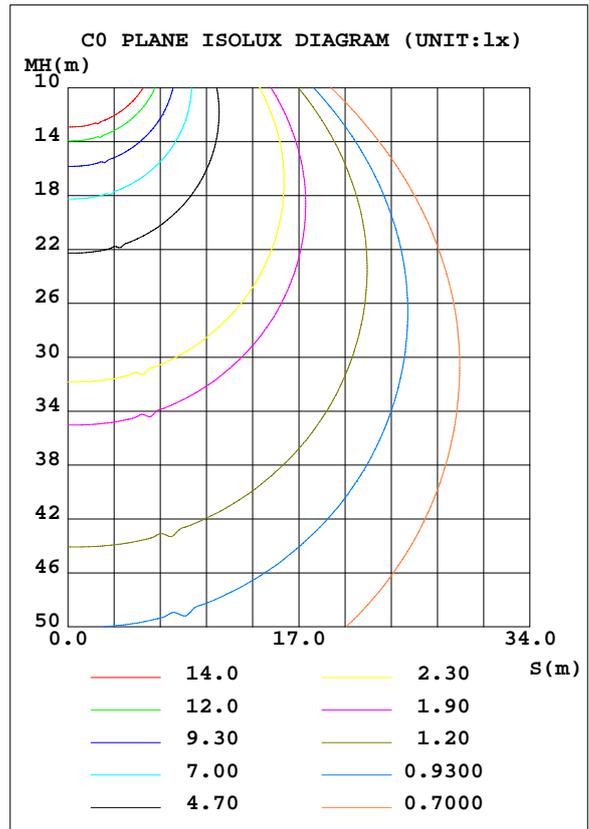
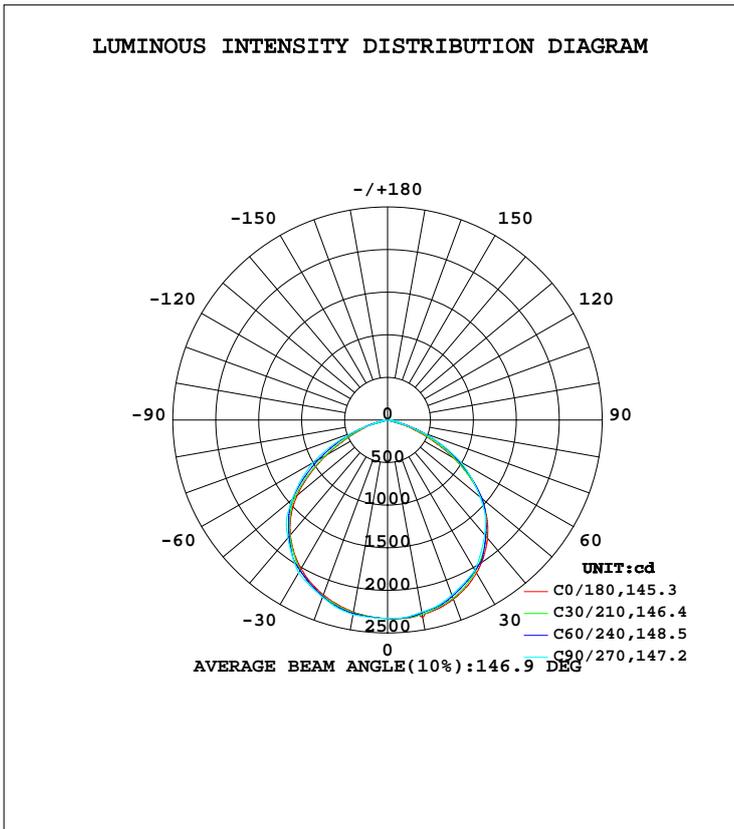


EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:121.0V I:0.4356A P:52.07W PF:0.9882 Lamp Flux:6225.08x1 lm		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 119.56 lm/W			
MODEL		I _{max} (cd)	2356	S/MH(C0/180)	1.28
NOMINAL POWER(W)	50	LOR(%)	100.0	S/MH(C90/270)	1.31
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	6225.1	η UP, DN(C0-180)	0.0,49.7
NOMINAL FLUX(lm)	6225.08	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,50.3
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	120	η down(%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2017-07-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity:65.0%
 Test Distance:7.850m [K=1.0000]
 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
5	2335	2333	2325	2319	2317	2317	2324	2328	0- 5	55.64	55.64	0.89,0.89
10	2356	2310	2289	2286	2288	2298	2319	2319	5- 10	165.6	221.2	3.55,3.55
15	2291	2269	2255	2239	2244	2262	2279	2297	10- 15	271.2	492.4	7.91,7.91
20	2238	2213	2185	2181	2184	2206	2212	2243	15- 20	368.8	861.1	13.8,13.8
25	2166	2130	2110	2093	2108	2124	2143	2164	20- 25	454.9	1316	21.1,21.1
30	2073	2035	2036	1994	2015	2027	2073	2069	25- 30	528.1	1844	29.6,29.6
35	1954	1931	1898	1884	1899	1920	1939	1964	30- 35	584.8	2429	39,39
40	1810	1806	1759	1758	1761	1794	1806	1840	35- 40	619.3	3048	49,49
45	1637	1620	1614	1581	1592	1610	1664	1653	40- 45	631.3	3679	59.1,59.1
50	1424	1425	1407	1390	1372	1409	1451	1452	45- 50	615.8	4295	69,69
55	1171	1211	1194	1175	1104	1181	1230	1228	50- 55	564.9	4860	78.1,78.1
60	883.2	927.6	979.8	887.4	814.8	885.9	1008	934.1	55- 60	482.8	5343	85.8,85.8
65	586.9	641.0	709.1	601.7	543.4	598.4	718.8	638.7	60- 65	375.6	5718	91.9,91.9
70	319.0	394.7	438.5	366.3	323.5	364.5	429.3	390.0	65- 70	256.2	5975	96,96
75	167.8	209.8	189.5	196.9	188.2	195.6	164.2	206.6	70- 75	146.5	6121	98.3,98.3
80	62.94	60.96	113.2	59.84	63.72	58.09	94.35	58.57	75- 80	65.82	6187	99.4,99.4
85	10.38	31.03	58.39	30.35	10.13	29.76	48.90	29.79	80- 85	28.69	6216	99.9,99.9
90	3.162	3.270	3.627	3.084	2.504	2.816	3.437	2.671	85- 90	9.335	6225	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 3679.4 lm

%lum = 59.1%
%lamp = 59.1%

Conical surface Flux(120deg): 5342.9 lm

%lum = 85.8%
%lamp = 85.8%

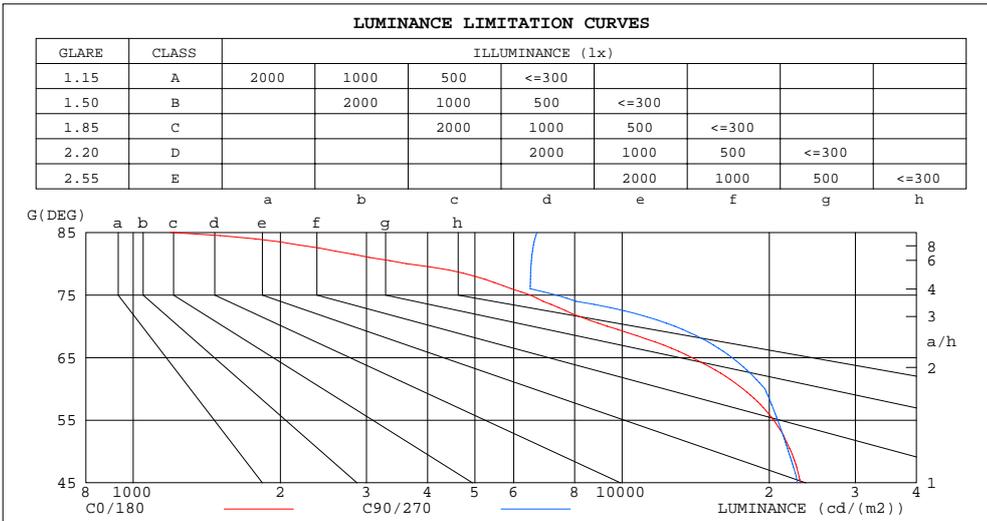
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2017-07-04

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.350
Humidity:65.0%
Test Distance:7.850m [K=1.0000]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES

Test:U:121.0V I:0.4356A P:52.07W PF:0.9882 Lamp Flux:6225.08x1 lm		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	1192	6700
80	3624	6517
75	6485	7322
70	9326	12822
65	13888	16780
60	17664	19595
55	20414	20809
50	22157	21895
45	23153	22821

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2017-07-04

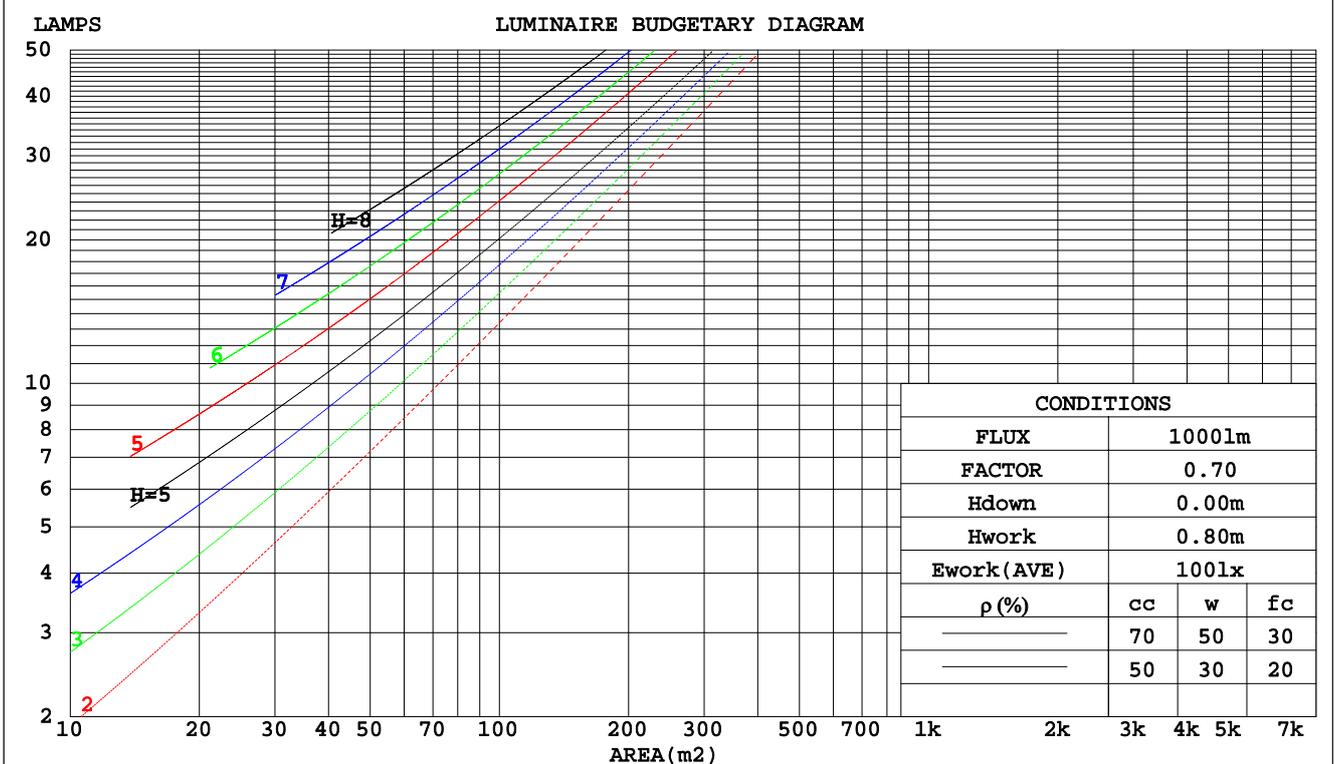
γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity:65.0%
 Test Distance:7.850m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:121.0V I:0.4356A P:52.07W PF:0.9882 Lamp Flux:6225.08x1 lm																

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																
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	1.06	1.02	.99	1.04	1.00	.97	.99	.96	.94	.95	.93	.91	.92	.90	.88	.86
2.0	.93	.87	.82	.91	.86	.81	.88	.83	.79	.85	.81	.77	.82	.78	.75	.73
3.0	.82	.75	.69	.81	.74	.68	.78	.72	.67	.75	.70	.66	.73	.68	.65	.63
4.0	.73	.65	.59	.72	.64	.58	.69	.63	.57	.67	.61	.57	.65	.60	.56	.54
5.0	.66	.57	.51	.64	.56	.50	.62	.55	.50	.60	.54	.49	.59	.53	.49	.47
6.0	.59	.50	.44	.58	.50	.44	.56	.49	.44	.55	.48	.43	.53	.47	.43	.41
7.0	.54	.45	.39	.53	.45	.39	.51	.44	.39	.50	.43	.38	.49	.43	.38	.36
8.0	.49	.41	.35	.48	.40	.35	.47	.40	.35	.46	.39	.34	.45	.39	.34	.32
9.0	.45	.37	.31	.44	.37	.31	.43	.36	.31	.42	.36	.31	.41	.35	.31	.29
10.0	.41	.34	.28	.41	.33	.28	.40	.33	.28	.39	.33	.28	.38	.32	.28	.26



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2017-07-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity: 65.0%
 Test Distance: 7.850m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

Test:U:121.0V I:0.4356A P:52.07W PF:0.9882 Lamp Flux:6225.08x1 lm															

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.274	.156	.049	.267	.152	.048	.254	.145	.046	.242	.139	.045	.230	.134	.043	
2.0	.265	.145	.045	.259	.143	.044	.248	.138	.043	.237	.133	.042	.228	.129	.041	
3.0	.251	.133	.040	.245	.131	.040	.235	.127	.039	.226	.124	.038	.217	.120	.037	
4.0	.235	.122	.036	.230	.120	.036	.221	.117	.035	.213	.114	.034	.205	.111	.034	
5.0	.219	.112	.032	.215	.110	.032	.207	.108	.032	.200	.105	.031	.193	.103	.031	
6.0	.205	.103	.029	.201	.102	.029	.194	.100	.029	.188	.097	.029	.181	.095	.028	
7.0	.192	.095	.027	.189	.094	.027	.182	.092	.027	.176	.090	.026	.171	.089	.026	
8.0	.180	.088	.025	.177	.087	.025	.172	.086	.024	.166	.084	.024	.161	.083	.024	
9.0	.170	.082	.023	.167	.081	.023	.162	.080	.023	.157	.079	.023	.152	.077	.022	
10.0	.160	.077	.021	.158	.076	.021	.153	.075	.021	.149	.074	.021	.144	.073	.021	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.178	.156	.137	.152	.134	.118	.104	.092	.082	.060	.053	.047	.019	.017	.015	
2.0	.169	.132	.101	.145	.114	.087	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.161	.114	.077	.138	.098	.067	.095	.068	.047	.055	.040	.028	.018	.013	.009	
4.0	.153	.101	.060	.132	.087	.053	.090	.061	.037	.052	.036	.022	.017	.012	.007	
5.0	.146	.090	.049	.126	.078	.042	.086	.054	.030	.050	.032	.018	.016	.010	.006	
6.0	.139	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.015	.010	.005	
7.0	.133	.075	.034	.114	.065	.030	.079	.045	.021	.046	.027	.013	.015	.009	.004	
8.0	.127	.069	.029	.109	.060	.026	.075	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.121	.064	.026	.104	.056	.022	.072	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.115	.060	.023	.100	.052	.020	.069	.037	.014	.040	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2017-07-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity:65.0%
 Test Distance:7.850m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

UGR(Unified Glare Rating) Table

Test:U:121.0V I:0.4356A P:52.07W PF:0.9882 Lamp Flux:6225.08x1 lm										
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	23.2	24.7	23.5	24.9	25.1	23.6	25.0	23.8	25.2	25.4
3H	23.8	25.2	24.1	25.4	25.6	24.5	25.8	24.8	26.1	26.3
4H	23.9	25.2	24.2	25.4	25.7	24.6	25.9	24.9	26.1	26.4
6H	23.9	25.1	24.2	25.3	25.6	24.6	25.8	25.0	26.1	26.4
8H	23.8	25.0	24.2	25.3	25.5	24.6	25.8	25.0	26.1	26.4
12H	23.8	24.9	24.1	25.2	25.5	24.7	25.7	25.0	26.0	26.3
4H 2H	23.7	24.9	24.0	25.2	25.4	23.9	25.2	24.3	25.5	25.7
3H	24.3	25.4	24.7	25.7	26.0	25.0	26.1	25.4	26.4	26.7
4H	24.5	25.5	24.8	25.8	26.1	25.2	26.2	25.5	26.5	26.8
6H	24.5	25.4	24.9	25.7	26.1	25.3	26.1	25.6	26.5	26.8
8H	24.5	25.3	24.9	25.7	26.0	25.3	26.1	25.7	26.5	26.9
12H	24.4	25.2	24.9	25.6	26.0	25.3	26.1	25.7	26.4	26.9
8H 4H	24.5	25.3	24.9	25.7	26.1	25.2	26.0	25.6	26.4	26.7
6H	24.6	25.3	25.0	25.7	26.1	25.3	26.0	25.7	26.4	26.8
8H	24.6	25.2	25.0	25.6	26.0	25.4	26.0	25.8	26.4	26.8
12H	24.6	25.1	25.0	25.5	26.0	25.4	26.0	25.9	26.4	26.9
12H 4H	24.5	25.2	24.9	25.6	26.0	25.1	25.9	25.6	26.3	26.7
6H	24.6	25.2	25.0	25.6	26.0	25.3	25.9	25.7	26.3	26.7
8H	24.6	25.1	25.0	25.5	26.0	25.4	25.9	25.8	26.3	26.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				
1.5H	+ 0.3 / - 0.6					+ 0.3 / - 0.6				
2.0H	+ 0.7 / - 0.7					+ 0.5 / - 0.4				

CIE Pub.117 Corrected 6225 lm Total Lamp Luminous Flux.(8log(F/F0) = 6.4)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2017-07-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity:65.0%
 Test Distance:7.850m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

Test:U:121.0V I:0.4356A P:52.07W PF:0.9882 Lamp Flux:6225.08x1 lm										

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	59	48	41	59	48	41	58	47	41	35
0.80	70	59	52	69	59	52	67	58	51	45
1.00	79	68	62	78	68	61	76	69	61	54
1.25	86	76	70	85	76	69	82	74	69	62
1.50	91	82	75	89	81	75	86	79	74	67
2.00	98	90	84	96	89	83	92	87	82	74
2.50	101	94	89	99	93	88	95	90	86	78
3.00	104	98	93	102	97	92	98	94	90	82
4.00	108	103	99	106	101	97	101	98	95	86
5.00	110	106	102	108	104	100	103	100	97	89
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

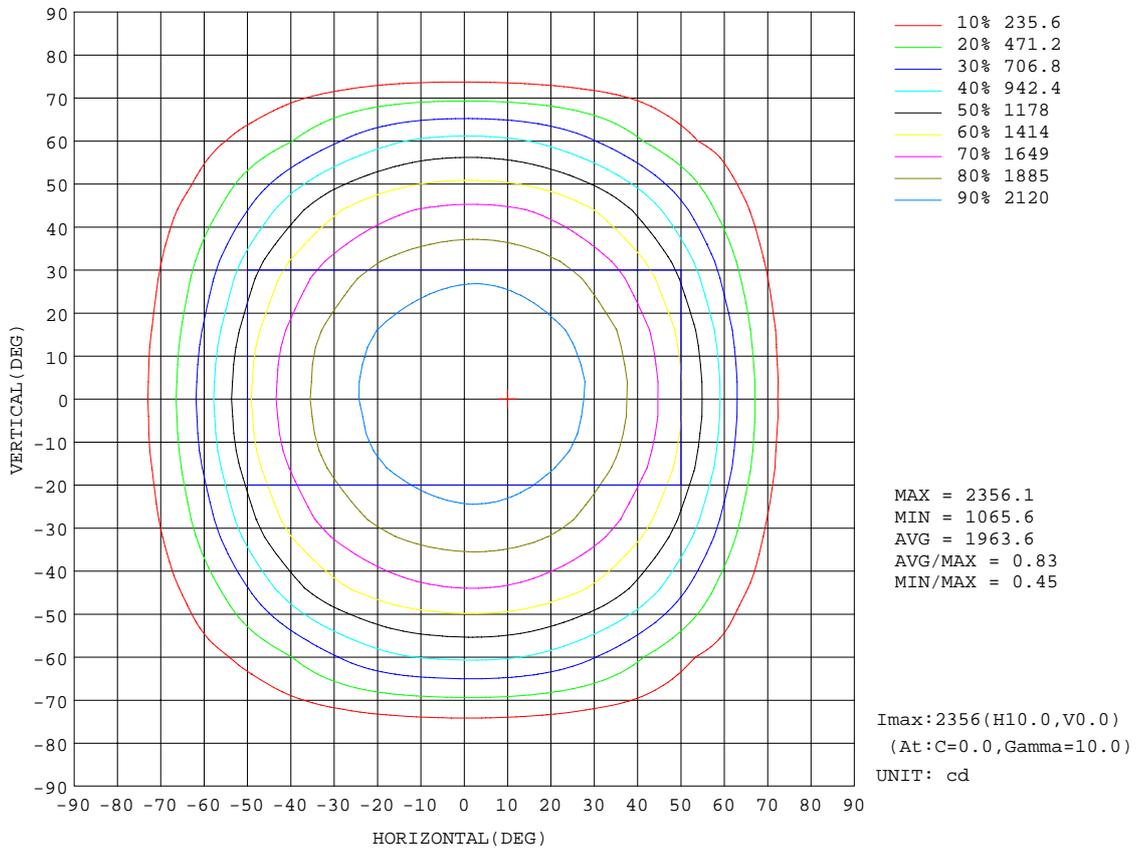
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2017-07-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity:65.0%
 Test Distance:7.850m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOCANDELA DIAGRAM

Test:U:121.0V I:0.4356A P:52.07W PF:0.9882 Lamp Flux:6225.08x1 lm		



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2017-07-04

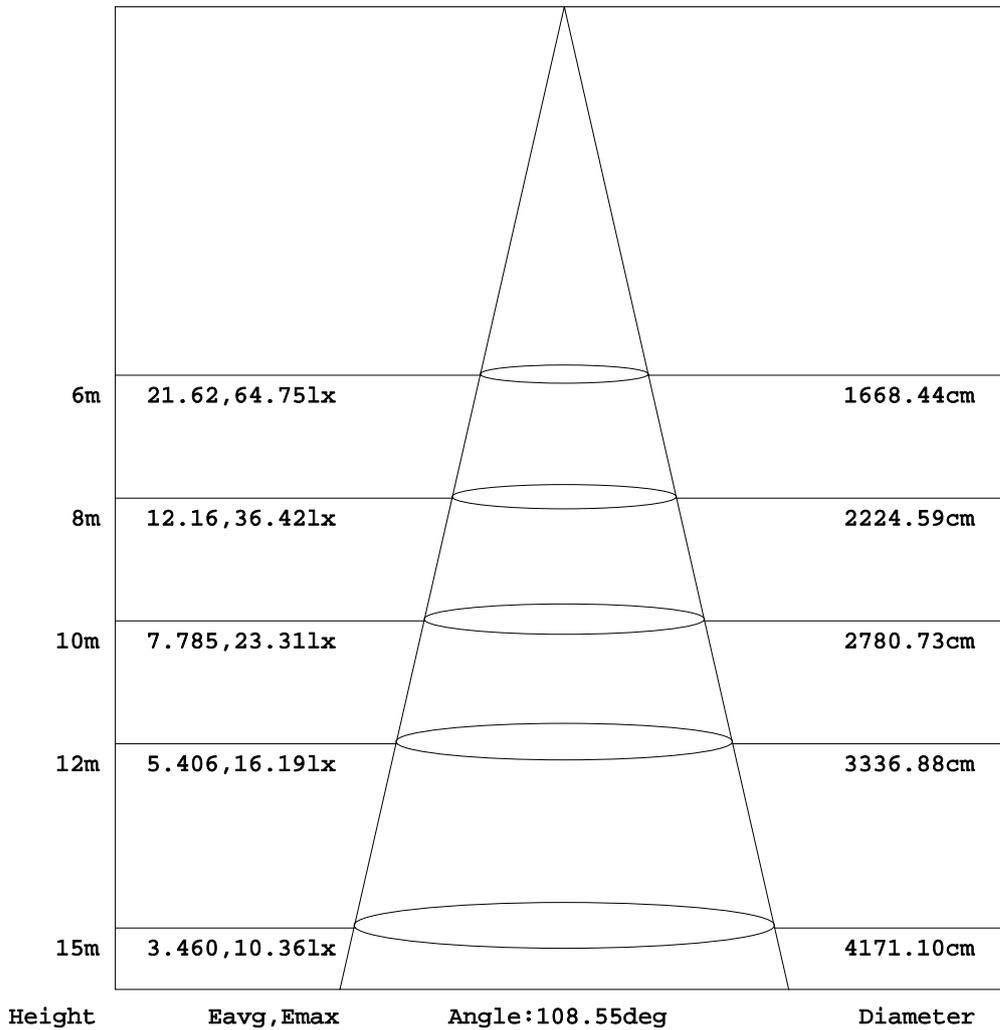
γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity: 65.0%
 Test Distance: 7.850m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

AAI Figure

Test:U:121.0V I:0.4356A P:52.07W PF:0.9882 Lamp Flux:6225.08x1 lm		

Flux out:4807 lm



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

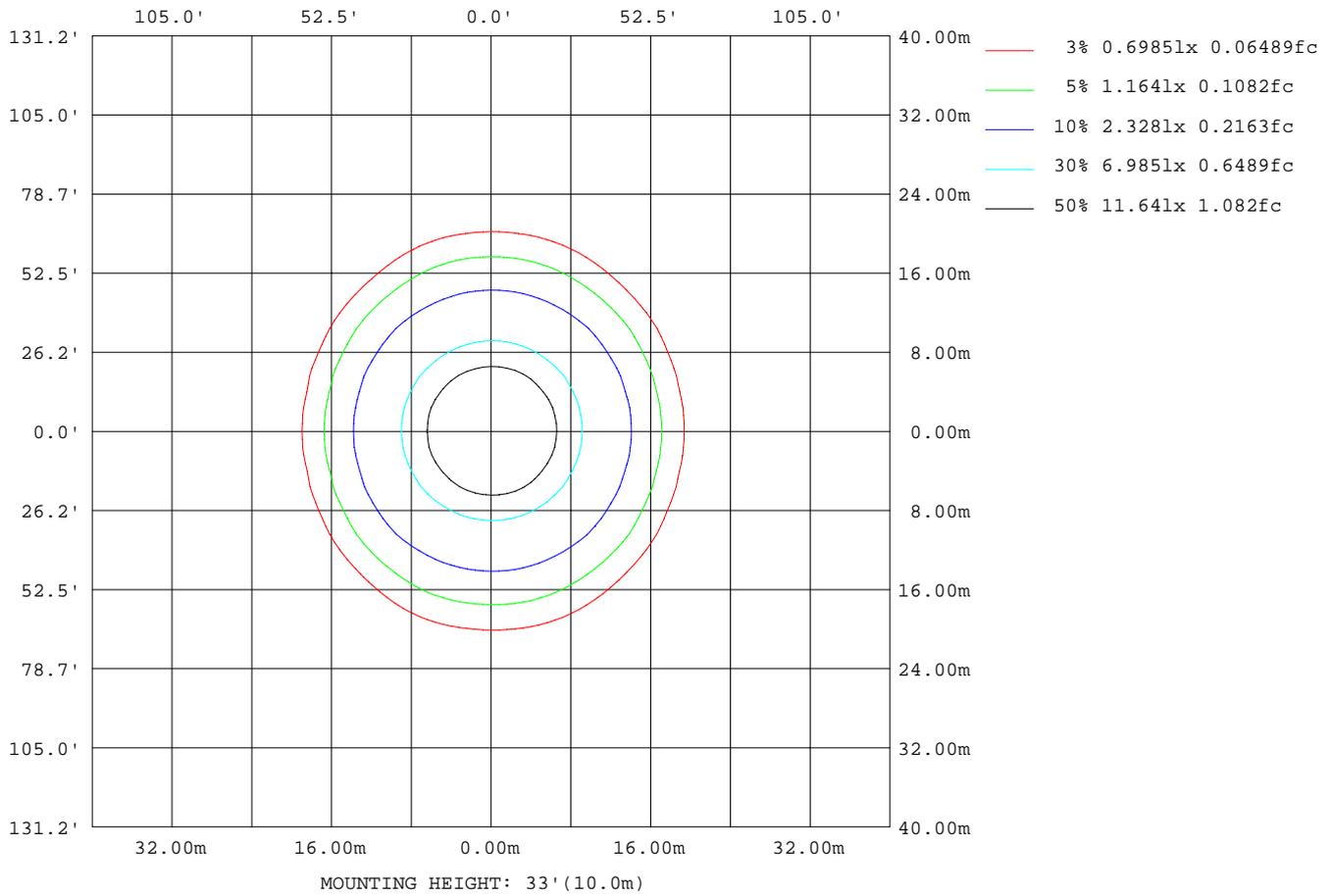
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2017-07-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity: 65.0%
 Test Distance: 7.850m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Test:U:121.0V I:0.4356A P:52.07W PF:0.9882 Lamp Flux:6225.08x1 lm		



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2017-07-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity: 65.0%
 Test Distance: 7.850m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LED Avg.L Report

Test:U:121.0V I:0.4356A P:52.07W PF:0.9882 Lamp Flux:6225.08x1 lm		

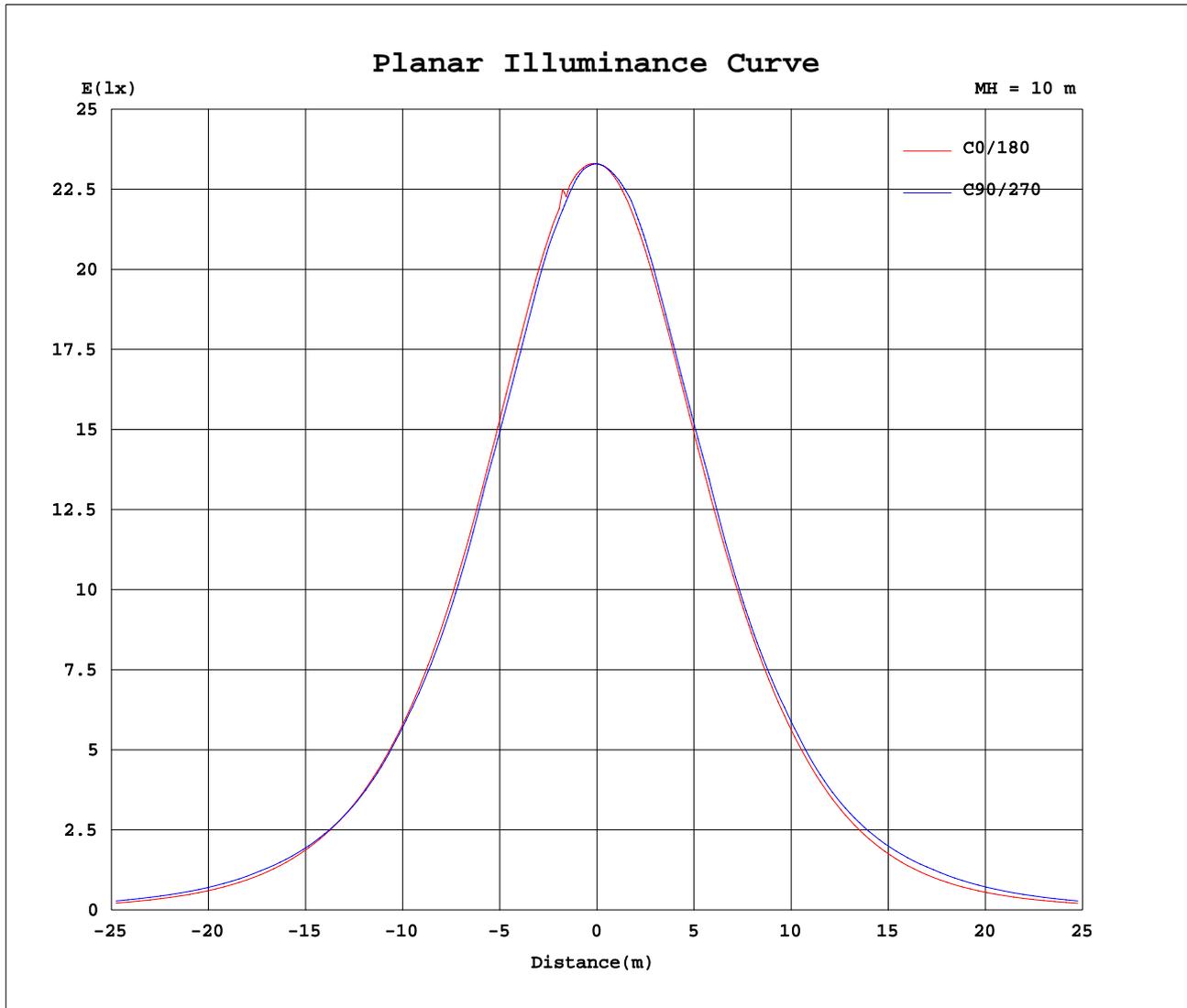
AvgL	cd/m2
L_0~180(65)av	13373
L_0~180(75)av	6879
L_0~180(85)av	1177
L_90~270(65)av	16894
L_90~270(75)av	6834
L_90~270(85)av	6155
L_45(65)av	14670
L_45(75)av	7814
L_45(85)av	3469

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2017-07-04

γ Range: 0 - 90DEG
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 Humidity:65.0%
 Test Distance:7.850m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2017-07-04

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity: 65.0%
 Test Distance: 7.850m [K=1.0000]
 Remarks:

