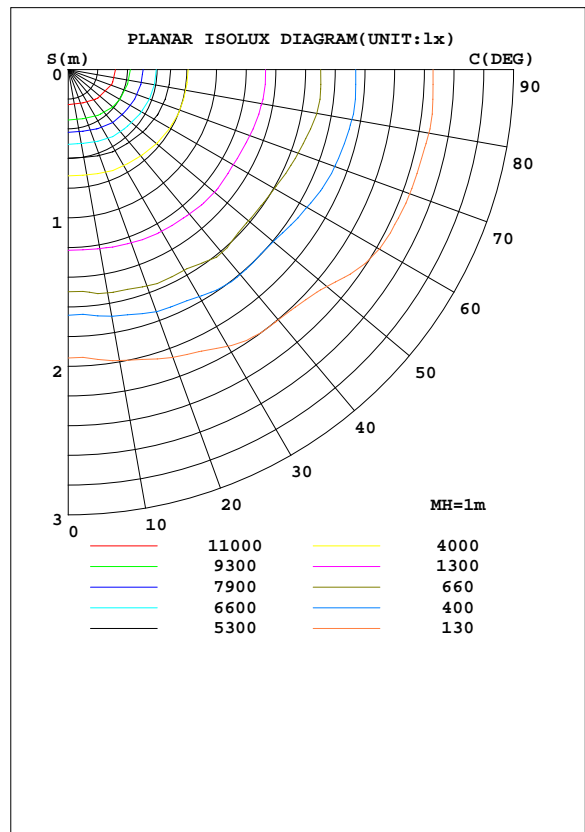
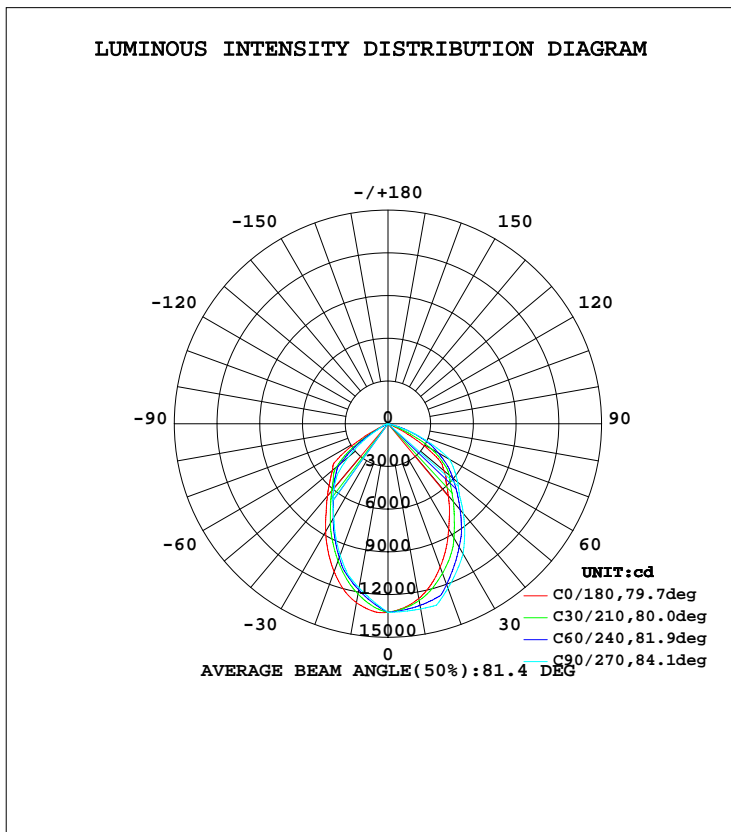


EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.0V I:1.150A P:250.0W PF:0.9500 Lamp Flux:23575.7x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:495mm	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 94.30 lm/W			
MODEL		I _{max} (cd)	13277	S/MH(C0/180)	1.03
NOMINAL POWER(W)	250	LOR(%)	100.0	S/MH(C90/270)	0.92
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	23576	η UP, DN(C0-180)	0.0, 57.5
NOMINAL FLUX(lm)	23575.7	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 42.5
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE(V)		η down(%)	100.0	CIBSE SHR MAX	1.15



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DALU
 Test Date:2014-10-20

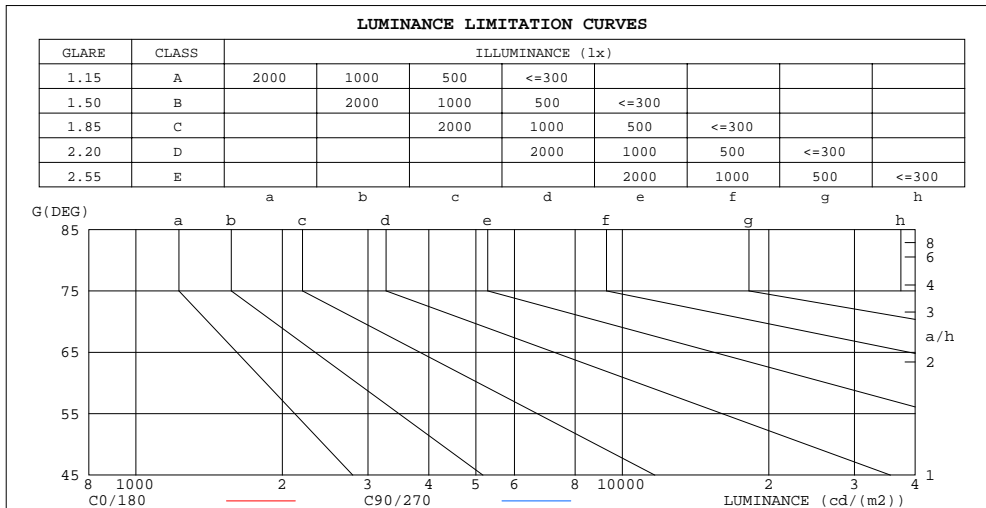
γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.288
 Humidity:65.0%
 Test Distance:7.000m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM
AND LUMINANCE LIMITATION CURVES

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	lum, lamp
5	1297	1306	1322	1323	1318	1270	1247	1254	0- 5	311.7	311.7	1.32,1.32
10	1246	1277	1320	1300	1276	1196	1171	1177	5- 10	905.4	1217	5.16,5.16
15	1169	1234	1319	1264	1205	1111	1094	1092	10- 15	1438	2655	11.3,11.3
20	1071	1174	1231	1211	1107	1015	982.8	1001	15- 20	1875	4530	19.2,19.2
25	965.6	1068	1143	1105	994.0	900.7	871.6	889.0	20- 25	2178	6708	28.5,28.5
30	853.3	957.9	1055	984.5	876.0	786.2	760.3	779.0	25- 30	2359	9067	38.5,38.5
35	754.0	853.4	939.2	869.9	757.7	686.0	675.0	680.2	30- 35	2432	11499	48.8,48.8
40	659.1	755.5	823.7	761.5	662.5	598.8	589.7	594.9	35- 40	2423	13922	59.1,59.1
45	577.4	662.8	708.2	662.6	577.1	516.3	504.4	516.2	40- 45	2351	16273	69,69
50	514.7	585.9	638.8	582.0	508.9	422.2	361.7	425.5	45- 50	2226	18499	78.5,78.5
55	429.5	512.5	569.4	510.0	429.8	315.0	218.9	317.3	50- 55	1994	20493	86.9,86.9
60	236.1	375.3	499.9	380.3	233.9	171.7	76.12	169.4	55- 60	1543	22036	93.5,93.5
65	55.18	212.7	335.4	215.7	56.79	56.43	51.10	53.95	60- 65	930.8	22967	97.4,97.4
70	3.281	87.95	170.8	91.28	4.911	3.405	26.08	2.147	65- 70	429.2	23396	99.2,99.2
75	1.765	32.26	6.179	35.57	2.688	1.995	1.055	1.284	70- 75	155.5	23552	99.9,99.9
80	0.9737	1.874	0	2.194	1.315	0.6763	0	0.4932	75- 80	19.19	23571	100,100
85	1.205	0	0	0	0.6424	0	0	0	80- 85	2.743	23574	100,100
90	0.9822	0	0	0	1.364	0	0	0	85- 90	2.016	23576	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:×10cd									UNIT:lm		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	115178	0
80	46726	0
75	56827	198955
70	79937	4160736
65	1088081	6612628
60	3935697	8332360
55	6239642	8272320
50	6672544	8281796
45	6805017	8346778

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DALU
Test Date: 2014-10-20

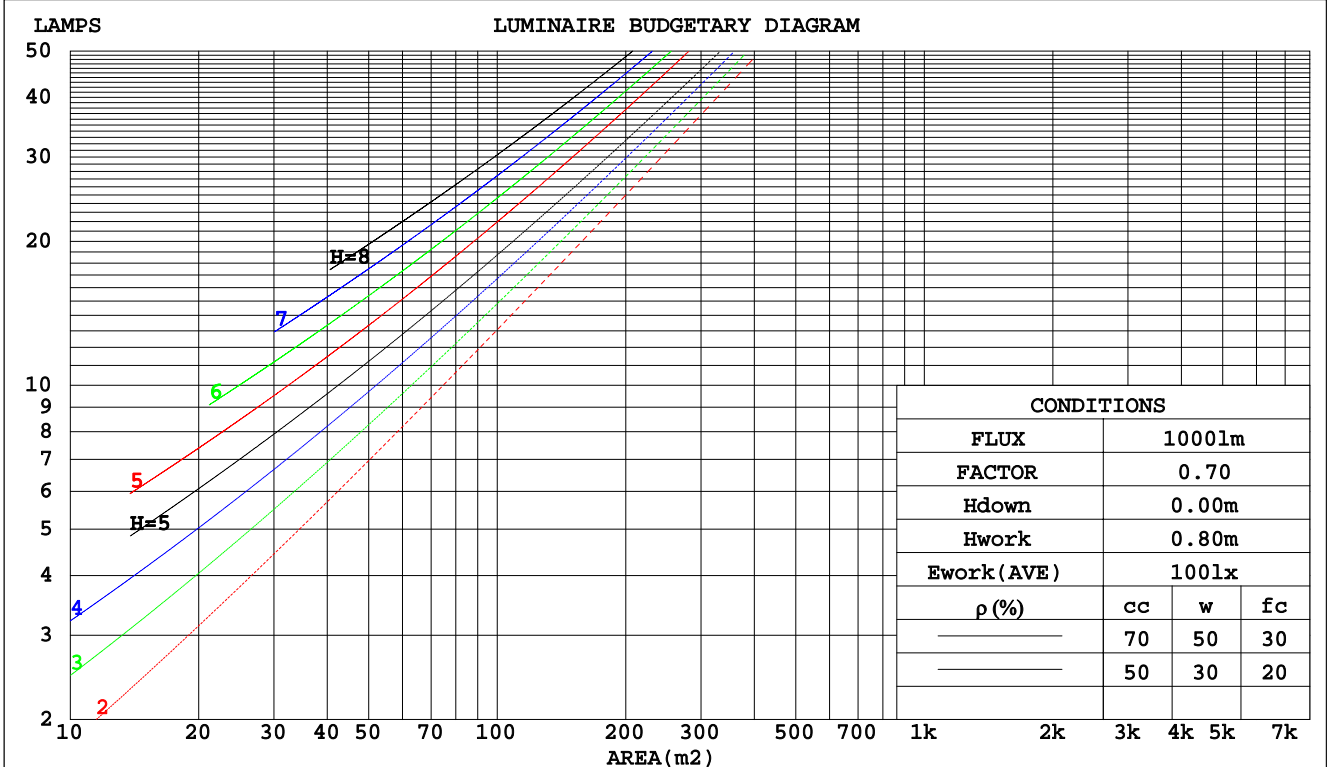
γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.288
Humidity: 65.0%
Test Distance: 7.800m [K=1.0000]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.0V I:1.150A P:250.0W PF:0.9500 Lamp Flux:23575.7x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:495mm	PROTECTION ANGLE:

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	.00
1.0	1.08	1.04	1.02	1.06	1.03	.00	1.01	.99	.97	.98	.96	.94	.94	.93	.91	.89
2.0	.97	.91	.87	.95	.90	.86	.91	.87	.84	.88	.85	.82	.85	.83	.80	.78
3.0	.87	.80	.75	.85	.79	.74	.82	.77	.73	.80	.75	.71	.77	.74	.70	.68
4.0	.78	.71	.65	.77	.70	.65	.75	.69	.64	.72	.67	.63	.70	.66	.62	.60
5.0	.71	.63	.57	.70	.62	.57	.68	.61	.56	.66	.60	.56	.64	.59	.55	.53
6.0	.64	.57	.51	.64	.56	.51	.62	.55	.50	.60	.54	.50	.59	.53	.49	.48
7.0	.59	.51	.46	.58	.51	.45	.57	.50	.45	.55	.49	.45	.54	.49	.45	.43
8.0	.54	.46	.41	.54	.46	.41	.52	.46	.41	.51	.45	.41	.50	.44	.40	.39
9.0	.50	.43	.37	.49	.42	.37	.48	.42	.37	.47	.41	.37	.46	.41	.37	.35
10.0	.46	.39	.34	.46	.39	.34	.45	.39	.34	.44	.38	.34	.43	.38	.34	.32



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DALU
 Test Date:2014-10-20

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.288
 Humidity:65.0%
 Test Distance:7.000m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

Test:U:220.0V I:1.150A P:250.0W PF:0.9500 Lamp Flux:23575.7x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:495mm	PROTECTION ANGLE:

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	.236	.134	.042	.229	.130	.041	.216	.124	.040	.204	.118	.038	.193	.112	.036	
2.0	.232	.127	.039	.226	.125	.038	.215	.120	.037	.205	.115	.036	.195	.110	.035	
3.0	.223	.118	.035	.217	.116	.035	.208	.112	.034	.198	.109	.033	.190	.105	.033	
4.0	.211	.110	.032	.206	.108	.032	.198	.105	.031	.190	.102	.031	.182	.099	.030	
5.0	.199	.102	.029	.195	.100	.029	.188	.098	.029	.180	.095	.028	.174	.093	.028	
6.0	.188	.094	.027	.184	.093	.027	.178	.091	.026	.171	.089	.026	.165	.087	.026	
7.0	.177	.088	.025	.174	.087	.025	.168	.085	.024	.162	.083	.024	.157	.082	.024	
8.0	.168	.082	.023	.165	.081	.023	.159	.080	.023	.154	.078	.023	.149	.077	.022	
9.0	.159	.077	.021	.156	.076	.021	.151	.075	.021	.146	.073	.021	.142	.072	.021	
10.0	.150	.072	.020	.148	.071	.020	.143	.070	.020	.139	.069	.020	.135	.068	.020	

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	.175	.157	.140	.150	.135	.121	.103	.093	.083	.059	.054	.049	.019	.017	.016	
2.0	.164	.132	.105	.141	.114	.091	.096	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.155	.114	.081	.133	.098	.070	.091	.068	.049	.053	.040	.029	.017	.013	.010	
4.0	.147	.100	.064	.127	.087	.056	.087	.060	.039	.050	.035	.023	.016	.012	.008	
5.0	.140	.089	.052	.120	.077	.045	.083	.054	.032	.048	.032	.019	.015	.010	.006	
6.0	.134	.081	.043	.115	.070	.037	.079	.049	.026	.046	.029	.016	.015	.009	.005	
7.0	.127	.074	.036	.110	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.121	.068	.031	.105	.059	.027	.072	.041	.019	.042	.024	.011	.014	.008	.004	
9.0	.116	.063	.027	.100	.055	.024	.069	.038	.017	.040	.023	.010	.013	.007	.003	
10.0	.111	.059	.024	.096	.051	.021	.066	.036	.015	.039	.021	.009	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DALU
 Test Date:2014-10-20

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.288
 Humidity:65.0%
 Test Distance:7.000m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

UGR(Unified Glare Rating) Table

Test:U:220.0V I:1.150A P:250.0W PF:0.9500 Lamp Flux:23575.7x1 lm										
NAME:					TYPE:LED			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.:					SUR.:495mm			PROTECTION ANGLE:		
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	43.0	44.3	43.3	44.5	44.7	44.9	46.2	45.1	46.4	46.6
3H	42.9	44.1	43.1	44.3	44.5	45.7	46.9	46.0	47.1	47.4
4H	42.8	43.9	43.1	44.1	44.4	45.7	46.8	46.0	47.0	47.3
6H	42.7	43.7	43.0	44.0	44.2	45.6	46.6	45.9	46.9	47.2
8H	42.6	43.6	42.9	43.9	44.2	45.5	46.5	45.8	46.8	47.1
12H	42.6	43.5	42.9	43.8	44.1	45.5	46.4	45.8	46.7	47.0
4H 2H	43.5	44.6	43.8	44.8	45.1	45.1	46.2	45.4	46.4	46.7
3H	43.4	44.3	43.7	44.6	44.9	46.0	47.0	46.3	47.3	47.6
4H	43.3	44.1	43.6	44.5	44.8	46.0	46.9	46.3	47.2	47.5
6H	43.2	43.9	43.6	44.3	44.6	45.9	46.7	46.3	47.0	47.4
8H	43.1	43.8	43.5	44.2	44.6	45.8	46.6	46.2	46.9	47.3
12H	43.1	43.7	43.5	44.1	44.5	45.8	46.4	46.2	46.8	47.2
8H 4H	43.2	43.9	43.6	44.3	44.7	45.9	46.6	46.3	46.9	47.3
6H	43.1	43.7	43.6	44.1	44.5	45.8	46.4	46.2	46.8	47.2
8H	43.1	43.6	43.6	44.0	44.5	45.7	46.2	46.2	46.7	47.1
12H	43.1	43.5	43.5	43.9	44.4	45.7	46.1	46.2	46.6	47.0
12H 4H	43.2	43.8	43.6	44.2	44.6	45.8	46.5	46.2	46.8	47.2
6H	43.1	43.6	43.6	44.0	44.5	45.7	46.2	46.2	46.7	47.1
8H	43.1	43.5	43.5	43.9	44.4	45.7	46.1	46.2	46.6	47.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.3 / - 0.5					+ 0.4 / - 0.6				
1.5H	+ 1.2 / - 1.5					+ 0.3 / - 0.3				
2.0H	+ 1.1 / - 2.7					+ 0.7 / - 0.8				

CIE Pub.117 Corrected 23576 lm Total Lamp Luminous Flux. (8log(F/F0) = 11.0)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DALU
 Test Date:2014-10-20

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.288
 Humidity:65.0%
 Test Distance:7.000m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

Test:U:220.0V I:1.150A P:250.0W PF:0.9500 Lamp Flux:23575.7x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:495mm	PROTECTION ANGLE:

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	65	55	49	64	55	49	63	54	48	43
0.80	76	66	59	75	65	59	73	65	59	53
1.00	84	75	69	83	75	69	81	75	68	62
1.25	91	83	77	90	82	76	87	81	76	70
1.50	95	88	82	94	87	82	91	85	81	74
2.00	101	95	90	100	93	89	96	91	87	81
2.50	104	98	93	102	97	93	99	94	91	84
3.00	107	102	97	105	100	96	101	97	94	87
4.00	110	105	102	108	104	101	104	100	98	90
5.00	111	108	105	109	106	103	105	102	100	92
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:25.3DEG
 Operators:DALU
 Test Date:2014-10-20

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.288
 Humidity:65.0%
 Test Distance:7.000m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOCANDELA DIAGRAM

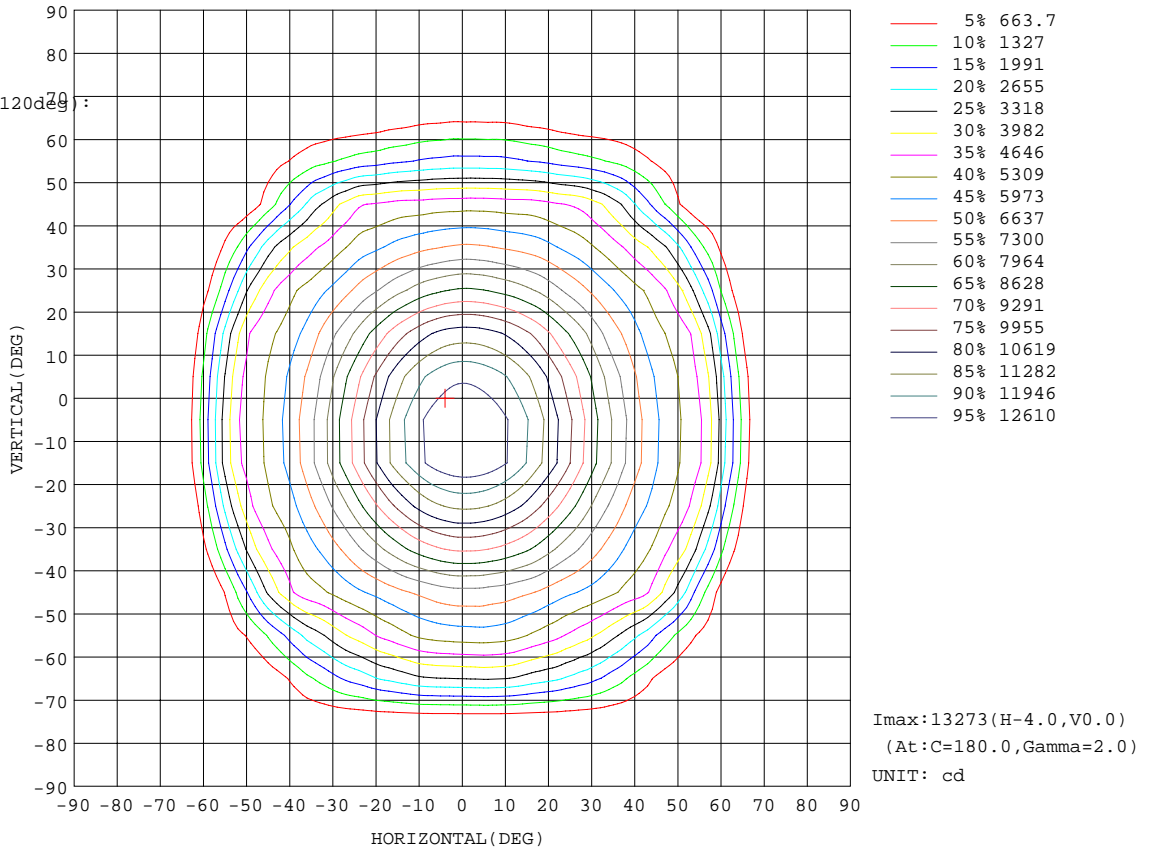
Test:U:220.0V I:1.150A P:250.0W PF:0.9500 Lamp Flux:23575.7x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:495mm	PROTECTION ANGLE:

Conical surface Flux(90deg):
16273 lm

%lum = 69.0%
%lamp = 69.0%

Conical surface Flux(120deg):
22036 lm

%lum = 93.5%
%lamp = 93.5%



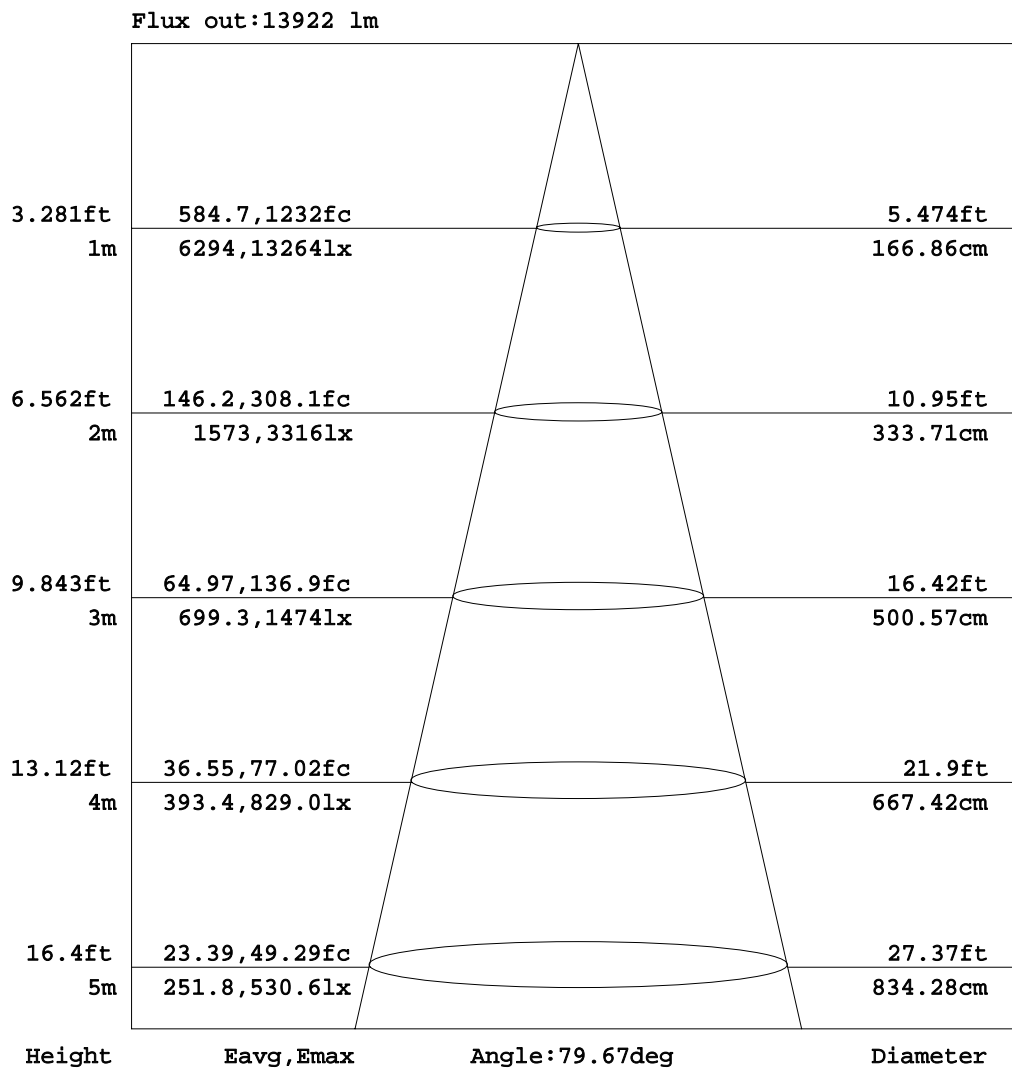
C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DALU
Test Date:2014-10-20

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.288
Humidity:65.0%
Test Distance:7.000m [K=1.0000]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

AAI Figure

Test:U:220.0V I:1.150A P:250.0W PF:0.9500 Lamp Flux:23575.7x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:495mm	PROTECTION ANGLE:



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

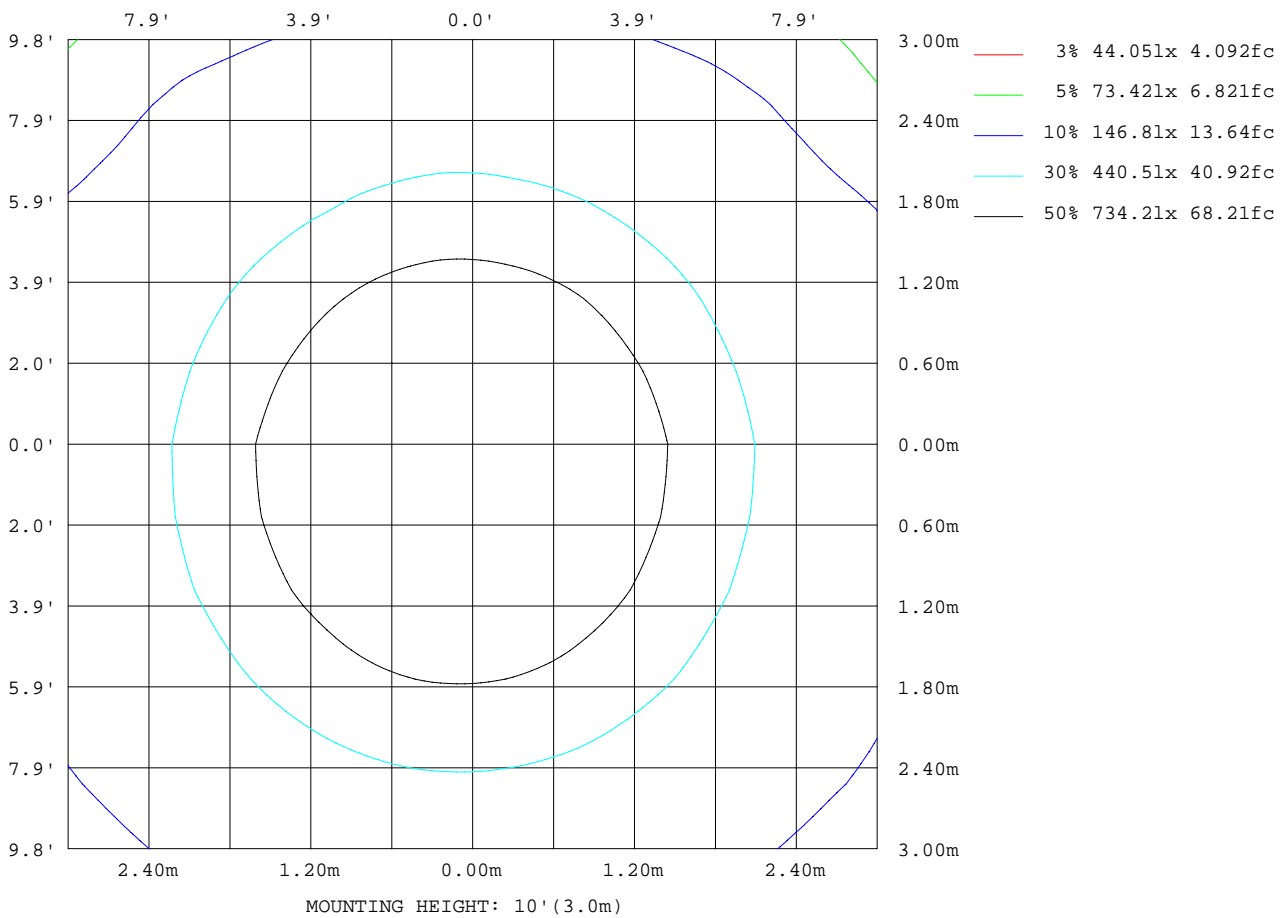
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DALU
 Test Date:2014-10-20

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.288
 Humidity:65.0%
 Test Distance:7.000m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

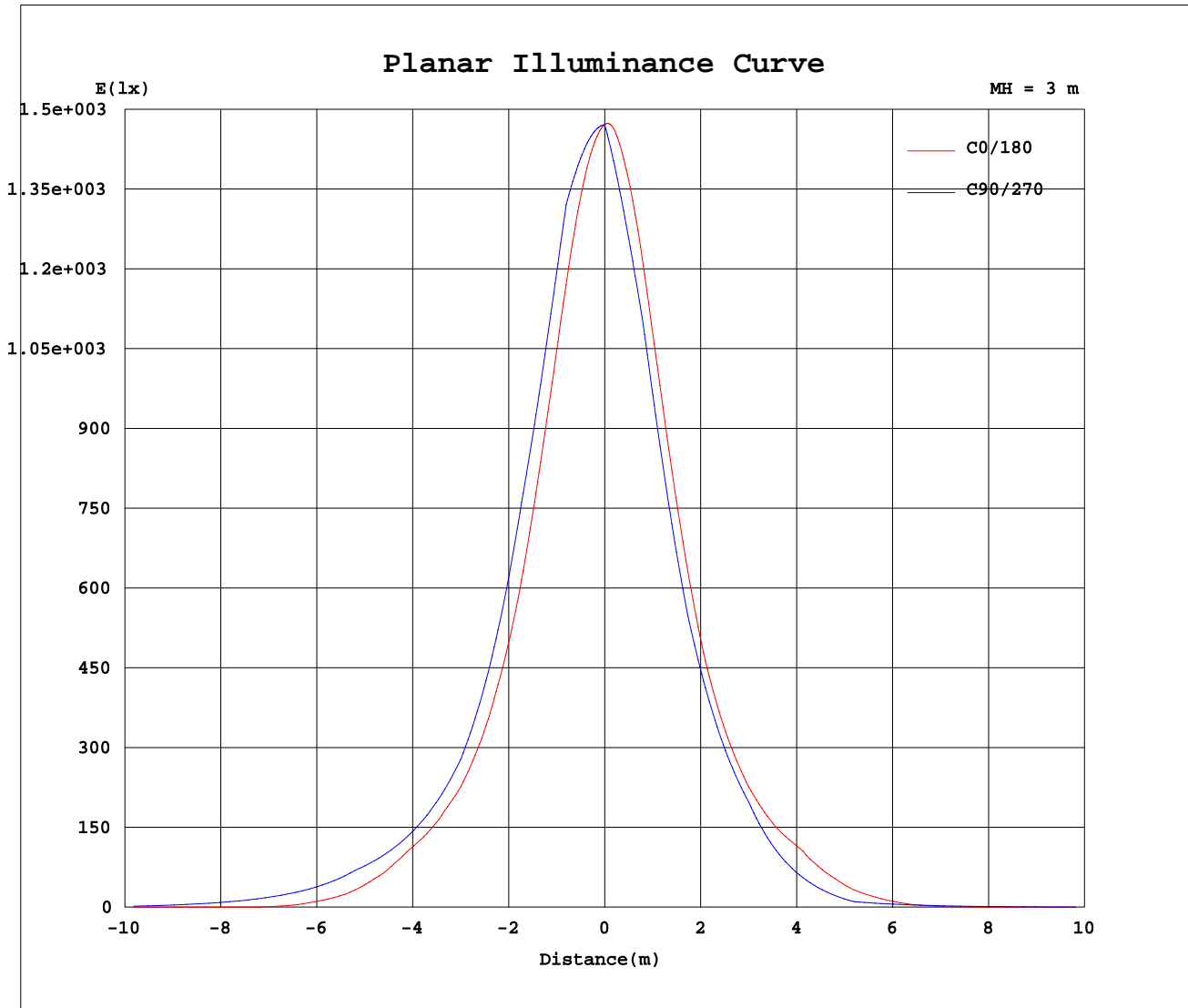
Test:U:220.0V I:1.150A P:250.0W PF:0.9500 Lamp Flux:23575.7x1 lm		
NAME:	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:495mm	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DALU
 Test Date:2014-10-20

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.288
 Humidity:65.0%
 Test Distance:7.000m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DALU
Test Date: 2014-10-20

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.288
Humidity: 65.0%
Test Distance: 7.000m [K=1.0000]
Remarks:

