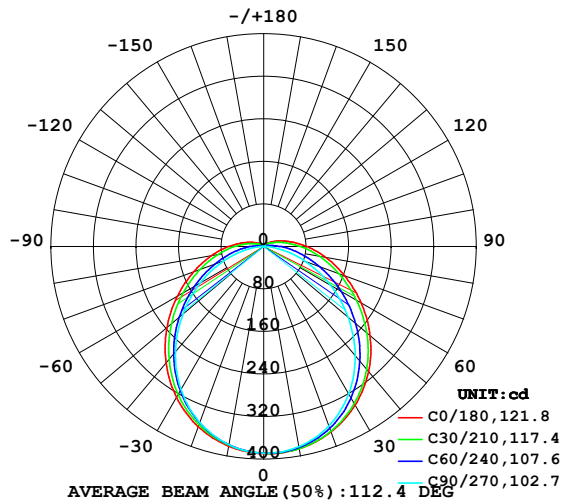


LUMINAIRE PHOTOMETRIC TEST REPORT

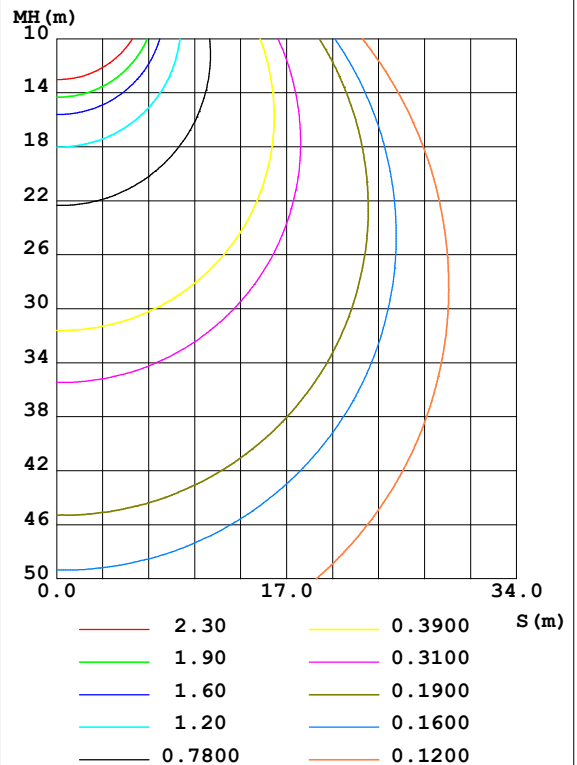
Test:U:220.5V I:0.0425A P:8.835W PF:0.9423 Freq:50.00Hz Lamp Flux:1200x1 lm		
NAME: T5 LED TUBE	TYPE:	WEIGHT:0.2
SPEC.:	DIM.:	SERIAL No.:
	SUR.:0.016*0.9	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 141.20 lm/W			
MODEL	NET-55-01-07	I _{max} (cd)	390.1	S/MH (C0/180)	1.25
NOMINAL POWER (W)	9	LOR (%)	104.0	S/MH (C90/270)	1.20
RATED VOLTAGE (V)	AC220	TOTAL FLUX (lm)	1247.4	η UP, DN (C0-180)	3.2, 49.9
NOMINAL FLUX (lm)	1200	CIE CLASS	DIRECT	η UP, DN (C180-360)	2.8, 48.0
LAMPS INSIDE	1	η up (%)	6.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	AC220	η down (%)	98.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: HXQ
Test Date: 2020-03-12

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.361
Humidity: 65.0%
Test Distance: 11.300m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	386.5	385.0	382.3	380.6	381.2	378.8	378.4	382.0	0- 10	36.78	36.78	2.95,3.07
20	370.8	366.6	359.1	358.7	360.6	354.7	352.2	361.5	10- 20	105.2	142.0	11.4,11.8
30	344.3	334.8	320.2	322.9	327.9	317.8	311.0	328.1	20- 30	158.8	300.8	24.1,25.1
40	306.9	291.5	268.3	276.1	285.7	270.4	258.3	284.1	30- 40	190.3	491.1	39.4,40.9
50	261.3	239.6	207.3	222.2	237.8	216.9	198.6	232.8	40- 50	196.3	687.4	55.1,57.3
60	211.4	184.4	144.8	167.1	187.5	162.8	138.1	178.5	50- 60	178.7	866.1	69.4,72.2
70	162.4	131.7	84.87	115.8	140.6	112.9	80.59	127.0	60- 70	144.4	1011	81,84.2
80	118.3	85.82	31.60	72.41	99.41	70.72	29.63	82.67	70- 80	102.4	1113	89.2,92.7
90	80.95	50.23	0.5029	40.24	65.81	39.51	0.4493	48.37	80- 90	62.44	1175	94.2,98
100	51.87	26.97	0.3250	20.66	40.51	20.38	0.3699	23.69	90-100	34.64	1210	97,101
110	31.04	14.22	0.5235	10.35	23.29	10.31	0.5774	13.03	100-110	18.45	1229	98.5,102
120	17.59	7.516	0.7492	5.337	12.52	5.413	0.8211	6.623	110-120	9.363	1238	99.2,103
130	9.683	3.672	0.9839	3.009	6.673	3.137	1.074	3.260	120-130	4.579	1242	99.6,104
140	5.239	2.219	1.201	1.962	3.724	2.059	1.272	2.122	130-140	2.295	1245	99.8,104
150	2.781	1.638	1.417	1.507	1.876	1.602	1.471	1.670	140-150	1.245	1246	99.9,104
160	1.742	1.566	1.571	1.615	1.670	1.701	1.634	1.656	150-160	0.7631	1247	99.9,104
170	1.733	1.706	1.715	1.728	1.733	1.769	1.724	1.737	160-170	0.4761	1247	100,104
180	1.832	1.792	1.814	1.801	1.796	1.810	1.787	1.805	170-180	0.1673	1247	100,104
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 590.09 lm

%lum = 47.3%

%lamp = 49.2%

Conical surface Flux(120deg): 866.13 lm

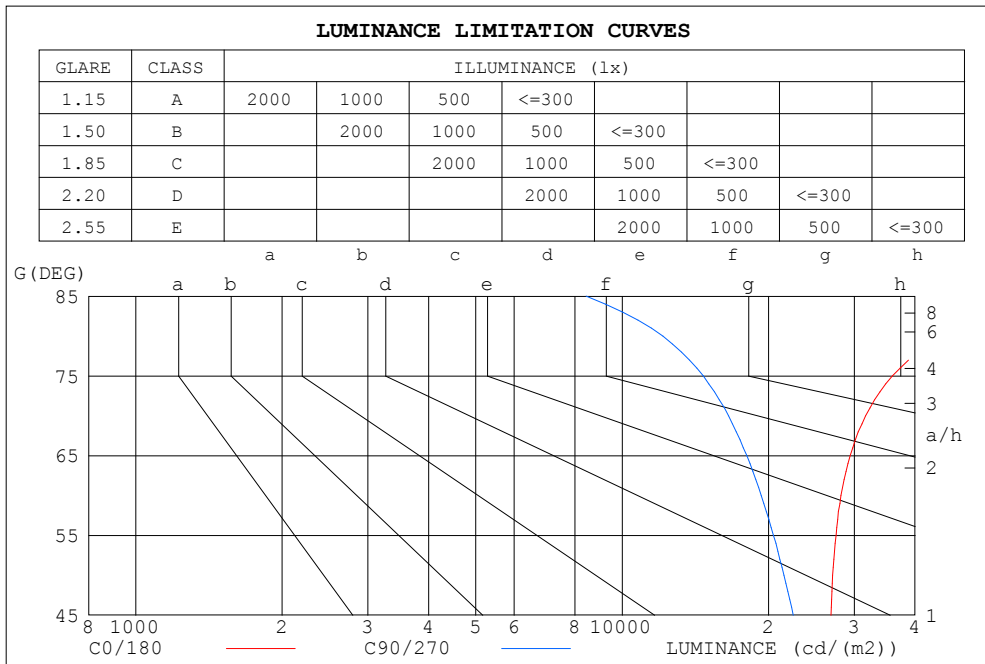
%lum = 69.4%

%lamp = 72.2%

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:HXQ
 Test Date:2020-03-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.361
 Humidity:65.0%
 Test Distance:11.300m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES



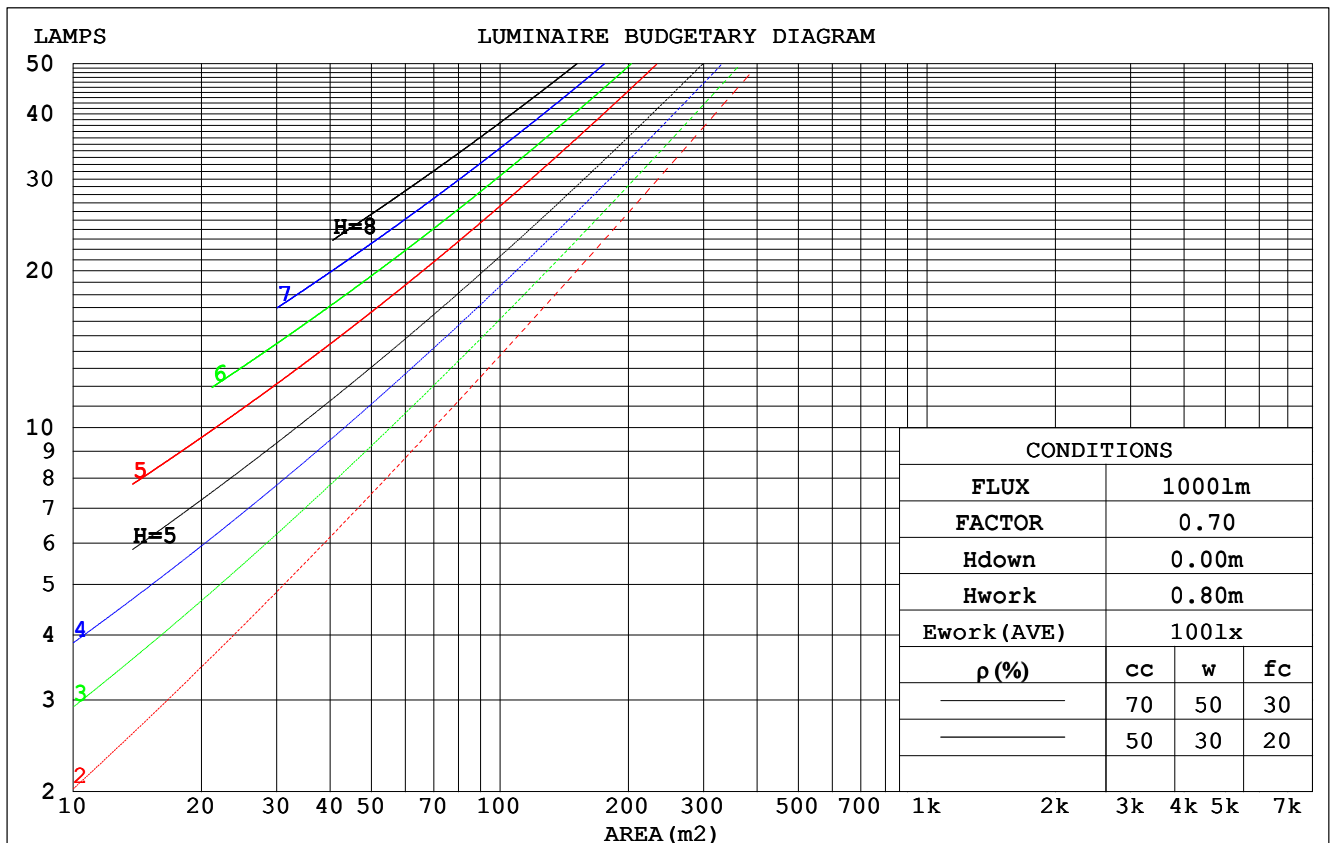
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	75409	8426
80	45422	12133
75	35957	14678
70	31656	16543
65	29414	18033
60	28185	19306
55	27527	20458
50	27098	21500
45	26878	22481

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: HXQ
 Test Date: 2020-03-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.361
 Humidity: 65.0%
 Test Distance: 11.300m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

pcc	80%			70%			50%			30%			10%			0
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Coefficients of Utilization (CU)												
0.0	1.22	1.22	1.22	1.19	1.19	1.19	1.12	1.12	1.12	1.06	1.06	1.06	1.01	1.01	1.01	.98
1.0	1.04	.99	.95	1.01	.97	.93	.96	.92	.89	.91	.88	.85	.86	.84	.81	.79
2.0	.90	.83	.76	.88	.81	.75	.83	.77	.72	.79	.74	.70	.75	.71	.67	.65
3.0	.79	.70	.63	.77	.69	.62	.73	.66	.60	.69	.63	.58	.66	.61	.57	.54
4.0	.70	.60	.53	.68	.59	.52	.65	.57	.51	.62	.55	.50	.59	.53	.48	.46
5.0	.62	.53	.46	.61	.52	.45	.58	.50	.44	.55	.48	.43	.53	.47	.42	.40
6.0	.56	.47	.40	.55	.46	.39	.52	.44	.38	.50	.43	.38	.48	.42	.37	.35
7.0	.51	.42	.35	.50	.41	.35	.47	.40	.34	.45	.39	.33	.44	.37	.33	.30
8.0	.46	.37	.31	.45	.37	.31	.43	.36	.30	.42	.35	.30	.40	.34	.29	.27
9.0	.42	.34	.28	.42	.33	.28	.40	.33	.27	.38	.32	.27	.37	.31	.26	.24
10.0	.39	.31	.25	.38	.30	.25	.37	.30	.25	.36	.29	.24	.34	.28	.24	.22



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: HXQ
 Test Date: 2020-03-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.361
 Humidity: 65.0%
 Test Distance: 11.300m [K=1.0000]
 Remarks:

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	.362	.206	.065	.352	.201	.064	.335	.192	.061	.319	.184	.059	.304	.176	.057		
2.0	.324	.178	.054	.316	.174	.054	.300	.167	.052	.286	.160	.050	.273	.154	.049		
3.0	.293	.156	.047	.286	.153	.046	.272	.147	.045	.259	.142	.044	.247	.137	.042		
4.0	.267	.139	.041	.261	.136	.040	.248	.132	.039	.237	.127	.038	.226	.123	.037		
5.0	.245	.125	.036	.239	.123	.036	.228	.119	.035	.218	.115	.034	.208	.111	.033		
6.0	.226	.113	.032	.221	.111	.032	.210	.108	.031	.201	.105	.031	.192	.101	.030		
7.0	.209	.103	.029	.204	.102	.029	.195	.099	.028	.187	.096	.028	.179	.093	.027		
8.0	.195	.095	.027	.191	.094	.027	.182	.091	.026	.175	.088	.026	.167	.086	.025		
9.0	.182	.088	.025	.178	.087	.024	.171	.084	.024	.164	.082	.023	.157	.080	.023		
10.0	.171	.082	.023	.167	.081	.023	.161	.079	.022	.154	.077	.022	.148	.074	.021		

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	.244	.244	.244	.208	.208	.208	.142	.142	.142	.082	.082	.082	.026	.026	.026	
1.0	.236	.208	.183	.202	.179	.157	.138	.123	.109	.080	.071	.063	.025	.023	.020	
2.0	.228	.183	.146	.195	.158	.126	.134	.109	.088	.077	.064	.052	.025	.021	.017	
3.0	.220	.166	.122	.189	.143	.106	.130	.099	.074	.075	.058	.044	.024	.019	.014	
4.0	.212	.152	.106	.182	.131	.092	.125	.092	.065	.072	.054	.038	.023	.017	.013	
5.0	.204	.141	.095	.175	.122	.083	.121	.085	.058	.070	.050	.035	.023	.016	.011	
6.0	.196	.133	.087	.169	.115	.076	.116	.081	.054	.068	.047	.032	.022	.015	.011	
7.0	.189	.126	.081	.163	.109	.071	.112	.076	.050	.065	.045	.030	.021	.015	.010	
8.0	.182	.120	.077	.157	.104	.067	.108	.073	.048	.063	.043	.028	.020	.014	.009	
9.0	.176	.115	.073	.151	.100	.064	.105	.070	.046	.061	.041	.027	.020	.014	.009	
10.0	.170	.110	.071	.146	.096	.062	.101	.067	.044	.059	.040	.026	.019	.013	.009	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:HXQ
 Test Date:2020-03-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.361
 Humidity:65.0%
 Test Distance:11.300m [K=1.0000]
 Remarks:

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	23.7	25.2	24.1	25.5	25.8	22.3	23.8	22.6	24.1	24.4
3H	25.9	27.2	26.2	27.6	27.9	23.6	25.0	24.0	25.3	25.7
4H	27.0	28.3	27.4	28.6	29.0	24.2	25.5	24.5	25.8	26.2
6H	28.2	29.4	28.6	29.8	30.2	24.5	25.7	24.9	26.1	26.5
8H	28.8	30.0	29.3	30.4	30.8	24.6	25.8	25.0	26.2	26.6
12H	29.6	30.7	30.0	31.1	31.6	24.6	25.8	25.1	26.2	26.6
4H 2H	24.3	25.6	24.7	25.9	26.3	23.2	24.5	23.6	24.8	25.2
3H	26.6	27.8	27.1	28.2	28.6	24.8	25.9	25.2	26.3	26.7
4H	28.0	29.0	28.4	29.4	29.9	25.4	26.5	25.9	26.9	27.4
6H	29.4	30.3	29.9	30.8	31.3	26.0	26.9	26.5	27.4	27.9
8H	30.1	31.0	30.6	31.5	32.0	26.1	27.0	26.6	27.5	28.0
12H	31.0	31.8	31.5	32.3	32.9	26.2	27.0	26.7	27.5	28.1
8H 4H	28.3	29.1	28.8	29.6	30.1	26.2	27.0	26.7	27.5	28.0
6H	30.0	30.7	30.5	31.2	31.8	27.0	27.7	27.5	28.2	28.8
8H	30.9	31.6	31.5	32.1	32.7	27.3	27.9	27.8	28.5	29.1
12H	32.1	32.6	32.6	33.2	33.8	27.5	28.1	28.1	28.7	29.3
12H 4H	28.3	29.1	28.8	29.6	30.1	26.4	27.2	26.9	27.7	28.2
6H	30.1	30.7	30.6	31.2	31.8	27.3	28.0	27.9	28.5	29.1
8H	31.1	31.7	31.7	32.3	32.9	27.8	28.4	28.3	28.9	29.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.1 / - 0.4				

CIE Pub.117, 1200 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.6)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:HXQ
Test Date:2020-03-12

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.361
Humidity:65.0%
Test Distance:11.300m [K=1.0000]
Remarks:

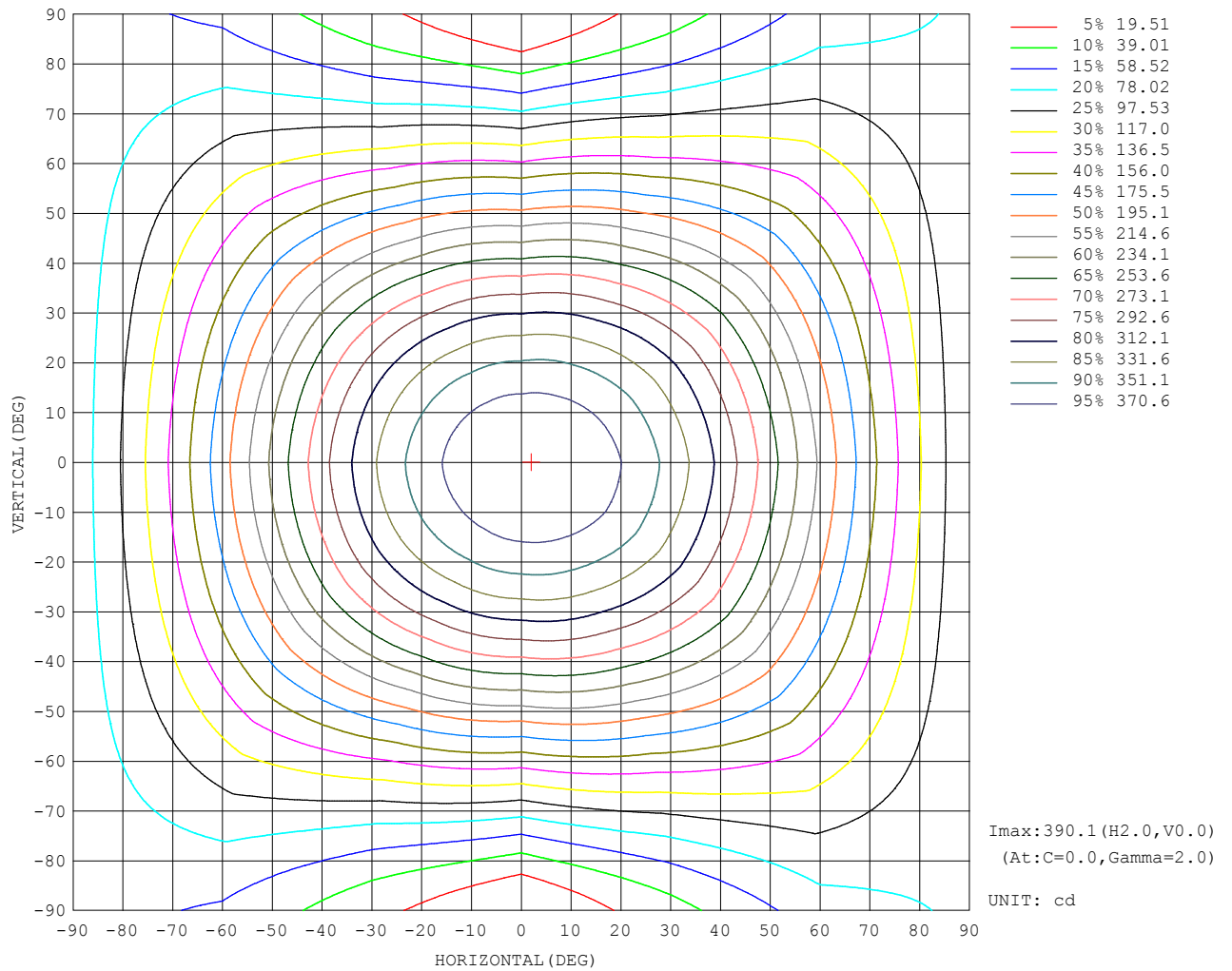
UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	56	44	37	56	44	37	54	43	36	30
0.80	66	54	46	65	53	46	63	52	45	38
1.00	75	63	54	73	62	54	71	63	53	46
1.25	82	70	62	80	69	62	77	67	61	52
1.50	87	76	68	85	75	67	81	73	66	57
2.00	94	84	77	92	83	76	88	80	74	65
2.50	99	89	82	96	88	81	91	84	79	69
3.00	102	94	87	99	92	86	94	88	83	73
4.00	107	100	94	104	97	92	98	93	89	78
5.00	109	103	98	106	101	96	101	96	92	81
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: HXQ
 Test Date: 2020-03-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.361
 Humidity: 65.0%
 Test Distance: 11.300m [K=1.0000]
 Remarks:

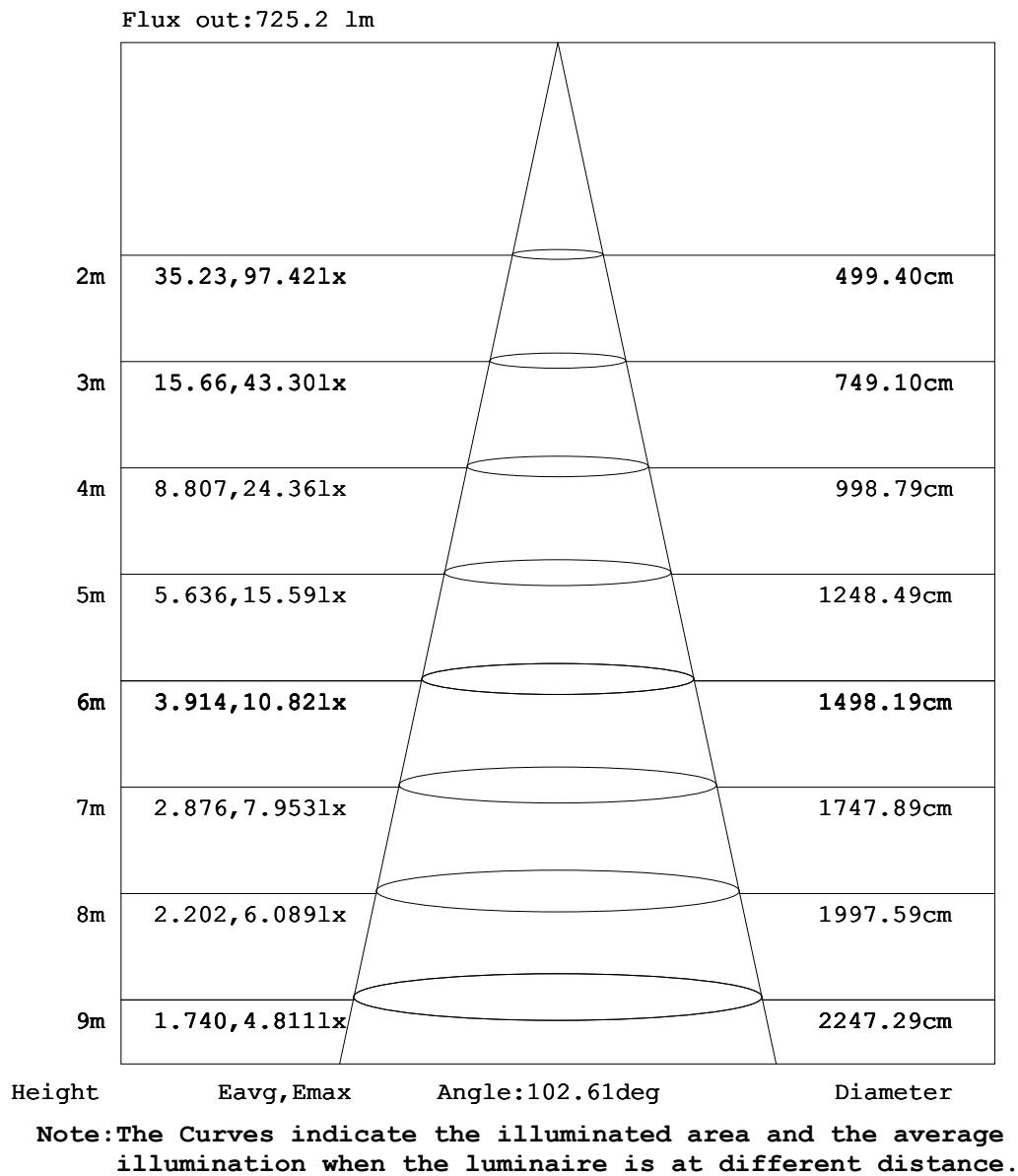
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:HXQ
Test Date:2020-03-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.361
Humidity:65.0%
Test Distance:11.300m [K=1.0000]
Remarks:

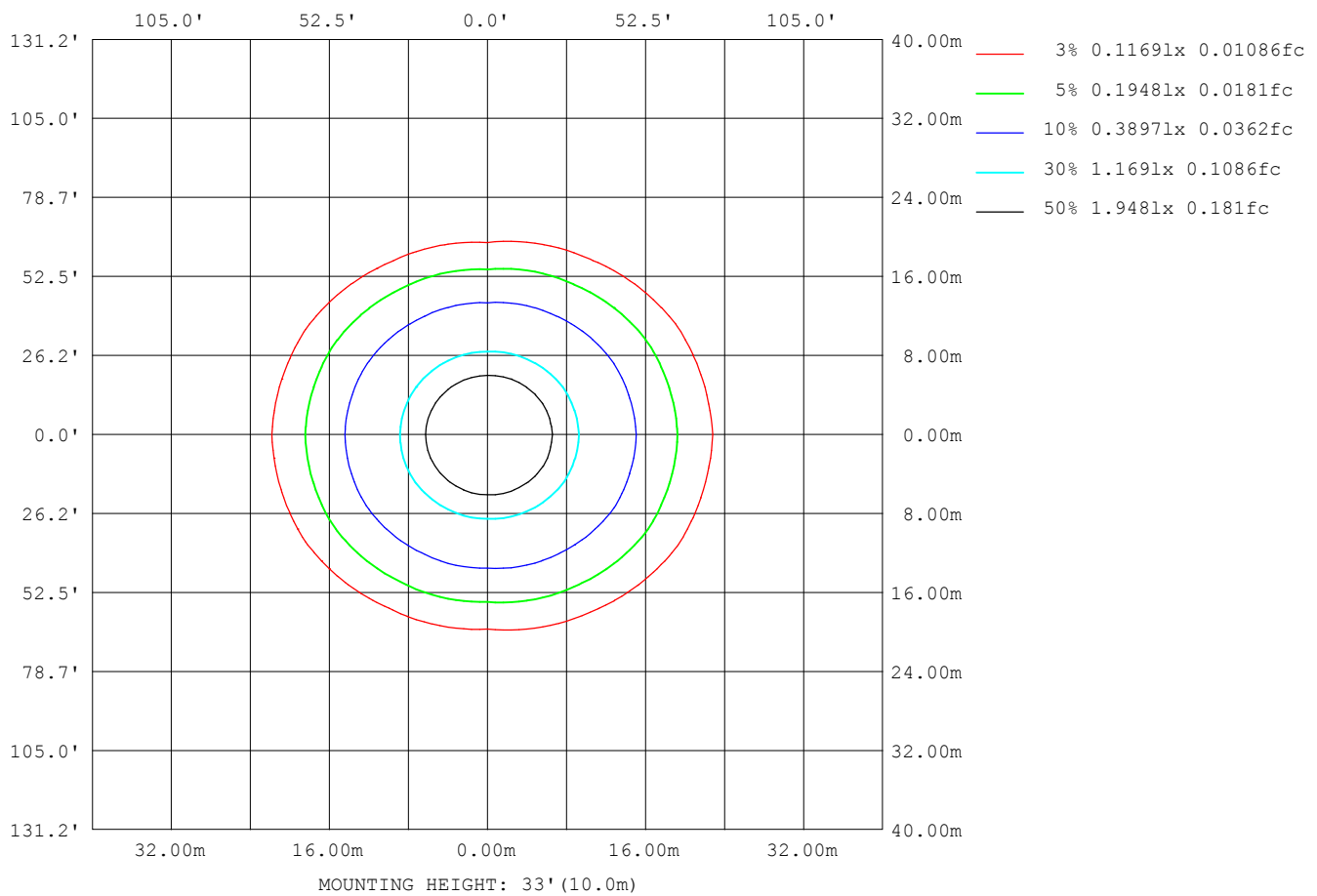
AAI Figure



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: HXQ
 Test Date: 2020-03-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.361
 Humidity: 65.0%
 Test Distance: 11.300m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: HXQ
Test Date: 2020-03-12

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.361
Humidity: 65.0%
Test Distance: 11.300m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:220.5V I:0.0425A P:8.835W PF:0.9423 Freq:50.00Hz Lamp Flux:1200x1 lm		
NAME: T5 LED TUBE	TYPE:	WEIGHT:0.2
SPEC.:	DIM.:	SERIAL No.:
	SUR.:0.016*0.9	Shielding Angle:

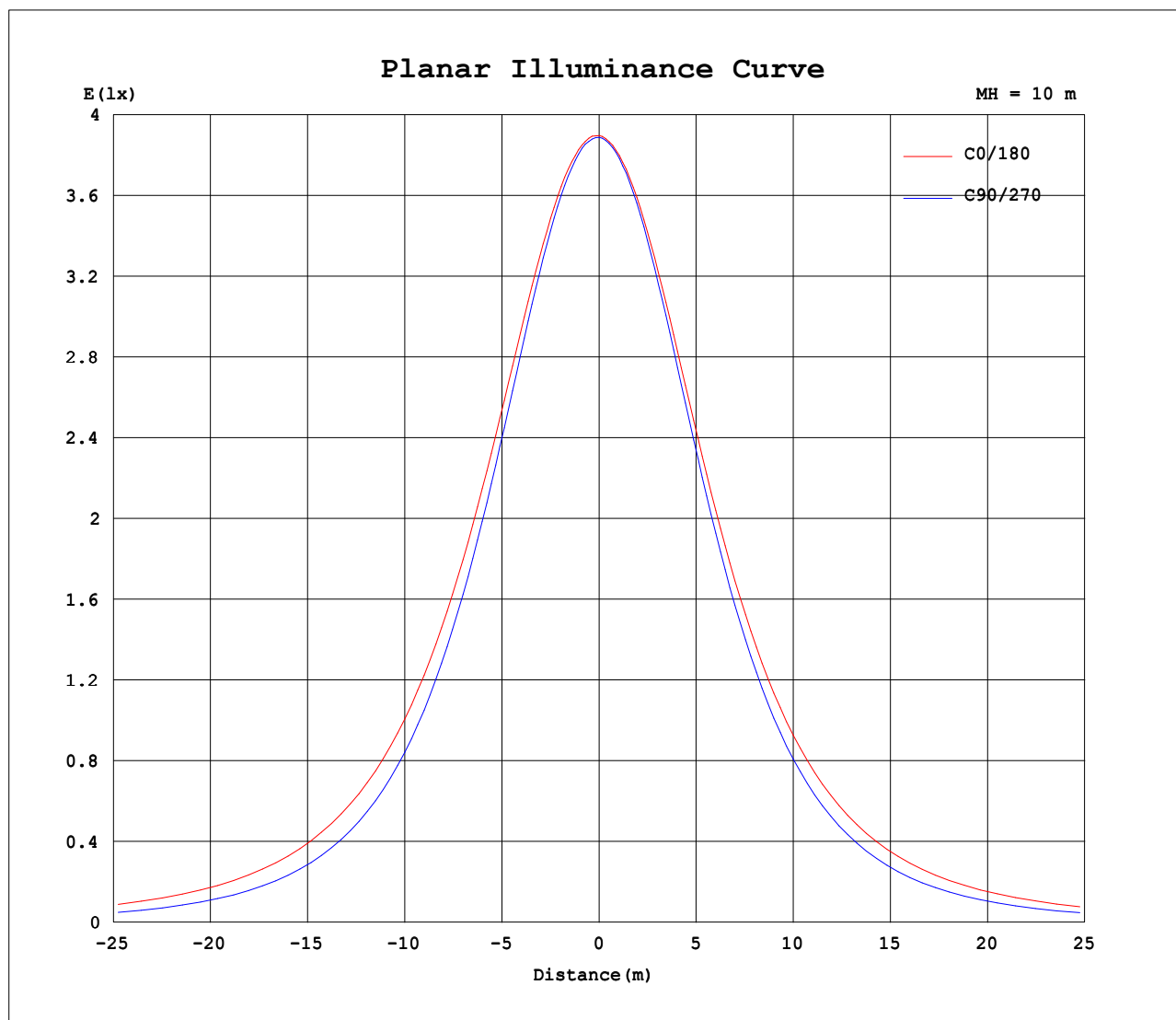
AvgL	cd/m2
L_0~180 (65) av	27606
L_0~180 (75) av	33315
L_0~180 (85) av	68882
L_90~270 (65) av	17604
L_90~270 (75) av	14278
L_90~270 (85) av	8071
L_45 (65) av	23225
L_45 (75) av	25646
L_45 (85) av	46580

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:HXQ
 Test Date:2020-03-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.361
 Humidity:65.0%
 Test Distance:11.300m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: HXQ
 Test Date: 2020-03-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.361
 Humidity: 65.0%
 Test Distance: 11.300m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	390	389	389	389	389	388	390	389	389	389	389	388							
5	389	389	389	388	387	386	387	386	385	386	387	387							
10	386	386	384	382	381	380	381	379	378	378	381	383							
15	380	379	376	373	371	371	372	370	368	367	371	376							
20	371	370	364	359	358	359	361	357	353	352	358	365							
25	359	357	348	341	341	344	346	341	335	333	341	352							
30	344	341	329	320	320	326	328	322	314	311	321	335							
35	327	323	306	296	297	305	308	300	290	286	298	316							
40	307	302	281	268	270	282	286	277	264	258	273	295							
45	285	278	254	238	242	257	262	252	236	229	246	272							
50	261	253	226	207	213	231	238	226	207	199	219	247							
55	237	227	197	176	184	205	213	201	179	168	190	221							
60	211	201	168	145	155	179	187	175	150	138	161	196							
65	186	175	140	114	127	154	164	151	123	109	134	170							
70	162	151	113	84.9	101	131	141	128	97.9	80.6	108	146							
75	140	128	87.7	57.0	76.9	109	119	106	74.8	53.9	84.1	124							
80	118	106	65.4	31.6	55.8	89.0	99.4	86.9	54.5	29.6	62.6	103							
85	98.6	86.7	46.4	11.0	38.2	71.3	81.5	69.7	37.5	10.1	44.4	83.7							
90	80.9	69.3	31.1	0.50	24.7	55.8	65.8	54.5	24.5	0.45	29.9	66.9							
95	65.3	54.4	19.5	0.24	15.3	42.7	52.1	41.7	15.3	0.28	18.1	52.0							
100	51.9	41.7	12.2	0.32	9.40	31.9	40.5	31.3	9.46	0.37	11.5	35.9							
105	40.5	31.3	7.77	0.41	5.86	23.4	31.0	23.0	5.99	0.47	7.22	29.1							
110	31.0	23.2	5.25	0.52	3.82	16.9	23.3	16.7	3.94	0.58	4.76	21.3							
115	23.5	17.0	3.49	0.61	2.67	12.1	17.3	12.0	2.86	0.69	3.06	15.4							
120	17.6	12.5	2.57	0.75	2.05	8.62	12.5	8.62	2.21	0.82	2.31	10.9							
125	13.1	8.51	1.98	0.86	1.66	6.31	8.97	6.33	1.80	0.94	1.89	7.43							
130	9.68	5.71	1.63	0.98	1.36	4.65	6.67	4.78	1.50	1.07	1.55	4.97							
135	7.15	4.13	1.44	1.10	1.25	3.44	5.00	3.58	1.38	1.20	1.43	3.70							
140	5.24	3.06	1.38	1.20	1.31	2.62	3.72	2.71	1.41	1.27	1.40	2.84							
145	3.85	2.30	1.36	1.33	1.39	1.92	2.67	2.02	1.50	1.39	1.40	2.20							
150	2.78	1.87	1.41	1.42	1.47	1.54	1.88	1.63	1.57	1.47	1.49	1.85							
155	2.11	1.67	1.51	1.49	1.56	1.54	1.66	1.63	1.65	1.56	1.53	1.71							
160	1.74	1.58	1.55	1.57	1.63	1.60	1.67	1.71	1.69	1.63	1.64	1.67							
165	1.71	1.64	1.62	1.64	1.68	1.67	1.71	1.72	1.74	1.69	1.69	1.71							
170	1.73	1.71	1.70	1.71	1.73	1.72	1.73	1.75	1.79	1.72	1.72	1.75							
175	1.79	1.75	1.73	1.75	1.76	1.75	1.76	1.76	1.80	1.75	1.76	1.81							
180	1.83	1.79	1.80	1.81	1.80	1.81	1.80	1.80	1.82	1.79	1.78	1.83							

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: HXQ
 Test Date: 2020-03-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.361
 Humidity: 65.0%
 Test Distance: 11.300m [K=1.0000]
 Remarks: