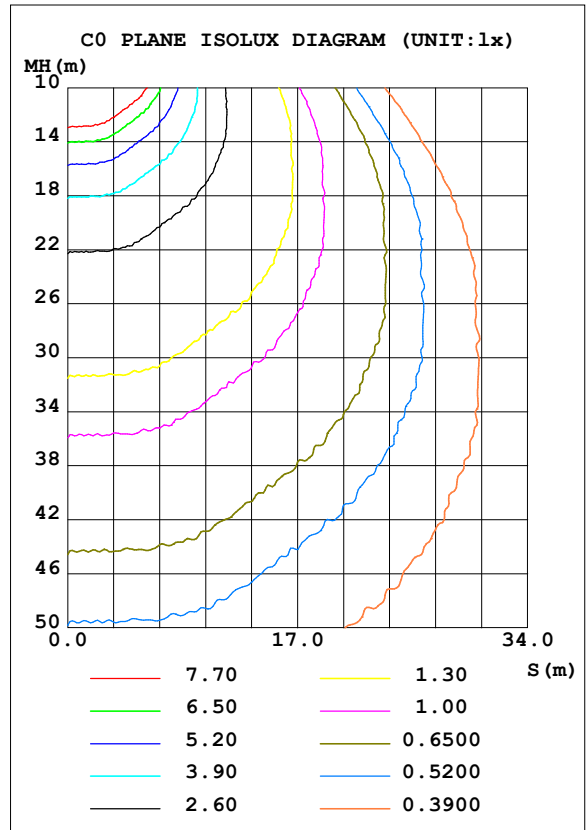
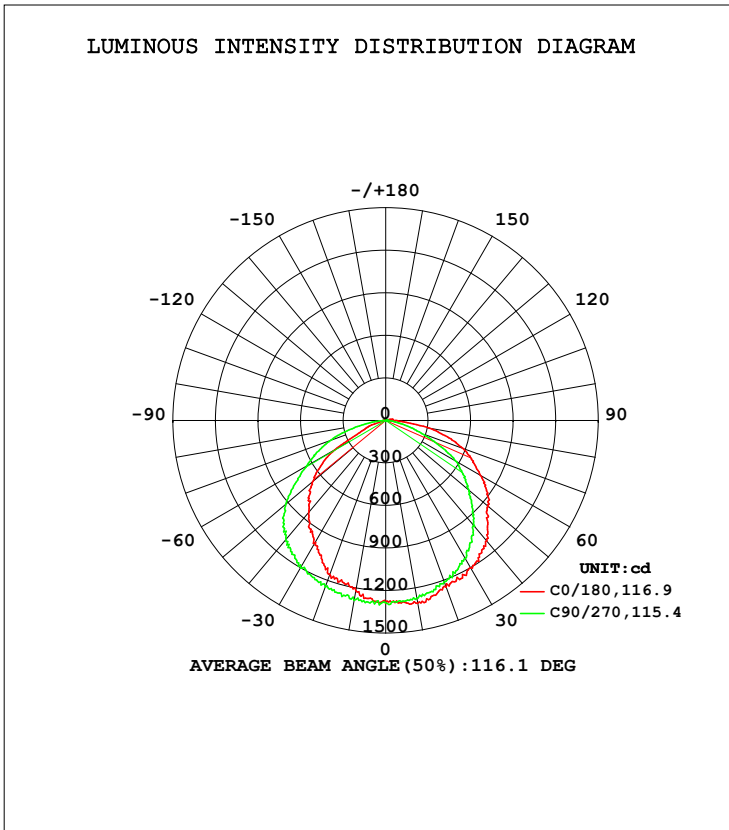


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.3V I:0.3835A P:30.99W PF:0.6719 Freq:60.01Hz Lamp Flux:3832.46x1 lm		
NAME: CT-D02030TBW	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:1.12*0.03	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 123.65 lm/W			
MODEL	4'LED T5 Tube	I _{max} (cd)	1313	S/MH (C0/180)	1.15
NOMINAL POWER (W)	30W	LOR (%)	100.0	S/MH (C90/270)	1.37
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	3832.5	η UP, DN (C0-180)	0.6, 53.5
NOMINAL FLUX (lm)	3832.46	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.1, 45.8
LAMPS INSIDE	1	η up (%)	0.7	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)		η down (%)	99.3	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Paul
 Test Date: 2016-11-17

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.364
 Humidity: 65.0%
 Test Distance: 2.900m [K=0.8389]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270				γ	Φ zone	Φ total	%lum, lamp
10	1309	1273	1219	1287				0- 10	121.9	121.9	3.18,3.18
20	1251	1209	1154	1252				10- 20	351.4	473.3	12.4,12.4
30	1200	1125	992.4	1203				20- 30	541.4	1015	26.5,26.5
40	1109	976.9	845.1	1096				30- 40	670.4	1685	44,44
50	945.8	766.0	673.2	918.9				40- 50	706.4	2392	62.4,62.4
60	770.3	569.6	414.1	643.7				50- 60	643.3	3035	79.2,79.2
70	579.9	272.5	131.7	412.9				60- 70	459.8	3495	91.2,91.2
80	312.3	78.49	13.01	140.3				70- 80	245.7	3740	97.6,97.6
90	44.69	5.676	6.805	0.1257				80- 90	64.68	3805	99.3,99.3
100	46.73	1.023	4.711	0.8996				90-100	12.15	3817	99.6,99.6
110	11.76	0.4174	3.408	1.053				100-110	9.636	3827	99.9,99.9
120	4.740	0.3727	1.821	0.7843				110-120	2.595	3829	99.9,99.9
130	2.974	0.4143	0.9619	0.6006				120-130	1.428	3831	100,100
140	1.610	0.3855	0.5915	0.5065				130-140	0.7404	3832	100,100
150	0.9139	0.3379	0.5381	0.5225				140-150	0.4236	3832	100,100
160	0.5751	0.3675	0.4647	0.4742				150-160	0.2429	3832	100,100
170	0.3938	0.3631	0.4143	0.4298				160-170	0.1253	3832	100,100
180	0.4352	0.4292	0.4331	0.4347				170-180	0.0379	3832	100,100
DEG	LUMINOUS INTENSITY:cd								UNIT:lm		

Conical surface Flux(90deg): 2040.3 lm

%lum = 53.2%
%lamp = 53.2%

Conical surface Flux(120deg): 3034.8 lm

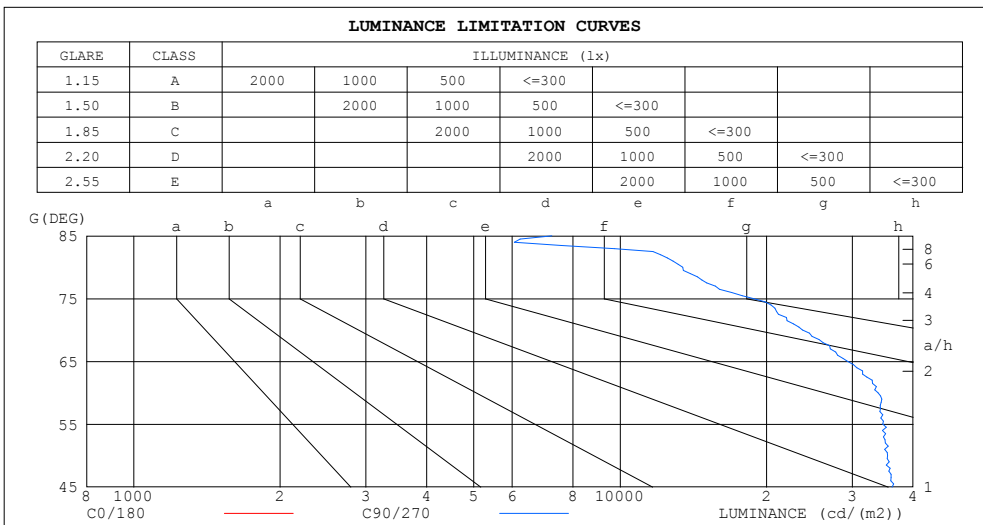
%lum = 79.2%
%lamp = 79.2%

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Paul
Test Date:2016-11-17

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.364
Humidity:65.0%
Test Distance:2.900m [K=0.8389]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.3V I:0.3835A P:30.99W PF:0.6719 Freq:60.01Hz Lamp Flux:3832.46x1 lm		
NAME: CT-D02030TBW	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:1.12*0.03	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	42111	7240
80	53528	13452
75	52015	18789
70	50463	23713
65	48075	29334
60	45854	33905
55	45090	34673
50	43793	35467
45	42910	36235

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Paul
Test Date:2016-11-17

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.364
Humidity:65.0%
Test Distance:2.900m [K=0.8389]
Remarks:

WEC AND CCEC

Test:U:120.3V I:0.3835A P:30.99W PF:0.6719 Freq:60.01Hz Lamp Flux:3832.46x1 lm														
NAME: CT-D02030TBW					TYPE:					WEIGHT:				
SPEC.:					DIM.:					SERIAL No.:				
MFR.: EVERFINE					SUR.:1.12*0.03					Shielding Angle:				

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	.306	.174	.055	.298	.170	.054	.285	.163	.052	.272	.157	.050	.261	.151	.049	
2.0	.289	.158	.049	.283	.156	.048	.271	.151	.047	.260	.146	.046	.249	.141	.044	
3.0	.268	.143	.043	.263	.141	.042	.252	.137	.042	.242	.133	.041	.233	.129	.040	
4.0	.248	.129	.038	.243	.127	.038	.234	.124	.037	.225	.121	.036	.217	.118	.036	
5.0	.230	.117	.034	.225	.116	.034	.217	.113	.033	.209	.110	.033	.202	.108	.032	
6.0	.213	.107	.031	.210	.106	.030	.202	.104	.030	.195	.101	.030	.188	.099	.029	
7.0	.199	.098	.028	.195	.097	.028	.189	.095	.027	.182	.093	.027	.176	.092	.027	
8.0	.186	.091	.026	.183	.090	.025	.177	.088	.025	.171	.087	.025	.166	.085	.025	
9.0	.174	.084	.024	.171	.084	.023	.166	.082	.023	.161	.081	.023	.156	.079	.023	
10.0	.164	.079	.022	.161	.078	.022	.156	.077	.022	.152	.075	.021	.147	.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	.196	.196	.196	.167	.167	.167	.114	.114	.114	.066	.066	.066	.021	.021	.021	
1.0	.186	.162	.140	.159	.139	.121	.109	.095	.083	.062	.055	.049	.020	.018	.016	
2.0	.177	.137	.104	.152	.118	.090	.104	.082	.063	.060	.048	.037	.019	.015	.012	
3.0	.170	.120	.080	.146	.103	.069	.100	.072	.049	.058	.042	.029	.019	.014	.009	
4.0	.162	.107	.064	.139	.092	.056	.096	.064	.039	.055	.038	.023	.018	.012	.008	
5.0	.155	.096	.053	.133	.083	.046	.092	.058	.032	.053	.034	.019	.017	.011	.006	
6.0	.148	.088	.045	.127	.076	.039	.088	.053	.028	.051	.031	.016	.016	.010	.005	
7.0	.141	.081	.039	.121	.070	.034	.084	.049	.024	.049	.029	.014	.016	.009	.005	
8.0	.135	.075	.034	.116	.065	.030	.080	.046	.021	.047	.027	.013	.015	.009	.004	
9.0	.129	.070	.031	.111	.061	.027	.077	.043	.019	.045	.025	.011	.014	.008	.004	
10.0	.123	.066	.028	.106	.057	.024	.074	.040	.017	.043	.024	.010	.014	.008	.003	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Paul
 Test Date:2016-11-17

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.364
 Humidity:65.0%
 Test Distance:2.900m [K=0.8389]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.3V I:0.3835A P:30.99W PF:0.6719 Freq:60.01Hz Lamp Flux:3832.46x1 lm										
NAME: CT-D02030TBW					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: EVERFINE					SUR.:1.12*0.03			Shielding 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	21.9	23.4	22.2	23.6	23.9	20.8	22.3	21.1	22.5	22.8
3H	24.0	25.4	24.3	25.6	25.9	22.0	23.4	22.3	23.6	23.9
4H	24.9	26.3	25.3	26.5	26.8	22.3	23.6	22.6	23.9	24.2
6H	25.7	27.0	26.1	27.3	27.6	22.4	23.7	22.8	24.0	24.3
8H	26.0	27.2	26.3	27.5	27.8	22.5	23.7	22.8	24.0	24.3
12H	26.1	27.3	26.5	27.6	27.9	22.4	23.6	22.8	23.9	24.2
4H 2H	22.5	23.8	22.8	24.1	24.3	21.6	22.9	21.9	23.2	23.5
3H	24.7	25.8	25.0	26.1	26.5	23.0	24.1	23.3	24.4	24.8
4H	25.8	26.8	26.1	27.1	27.5	23.5	24.5	23.8	24.8	25.2
6H	26.7	27.6	27.1	28.0	28.4	23.7	24.6	24.1	25.0	25.4
8H	27.0	27.9	27.5	28.3	28.7	23.8	24.6	24.2	25.0	25.4
12H	27.2	28.0	27.6	28.4	28.8	23.8	24.6	24.2	25.0	25.4
8H 4H	25.9	26.8	26.4	27.2	27.6	23.9	24.8	24.3	25.2	25.6
6H	27.1	27.8	27.5	28.2	28.6	24.4	25.1	24.8	25.5	25.9
8H	27.5	28.1	27.9	28.5	29.0	24.5	25.1	25.0	25.6	26.0
12H	27.7	28.3	28.2	28.7	29.2	24.5	25.1	25.0	25.5	26.0
12H 4H	25.9	26.7	26.4	27.1	27.5	24.0	24.8	24.4	25.2	25.6
6H	27.1	27.7	27.5	28.2	28.6	24.5	25.1	25.0	25.6	26.0
8H	27.5	28.1	28.0	28.5	29.0	24.7	25.2	25.1	25.7	26.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.2 / - 0.2				
1.5H	+ 0.1 / - 0.2					+ 0.3 / - 0.4				
2.0H	+ 0.1 / - 0.2					+ 0.3 / - 0.6				

CIE Pub.117, 3832 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 4.7$)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Paul
Test Date:2016-11-17

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.364
Humidity:65.0%
Test Distance:2.900m [K=0.8389]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.3V I:0.3835A P:30.99W PF:0.6719 Freq:60.01Hz Lamp Flux:3832.46x1 lm		
NAME: CT-D02030TBW	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:1.12*0.03	Shielding Angle:

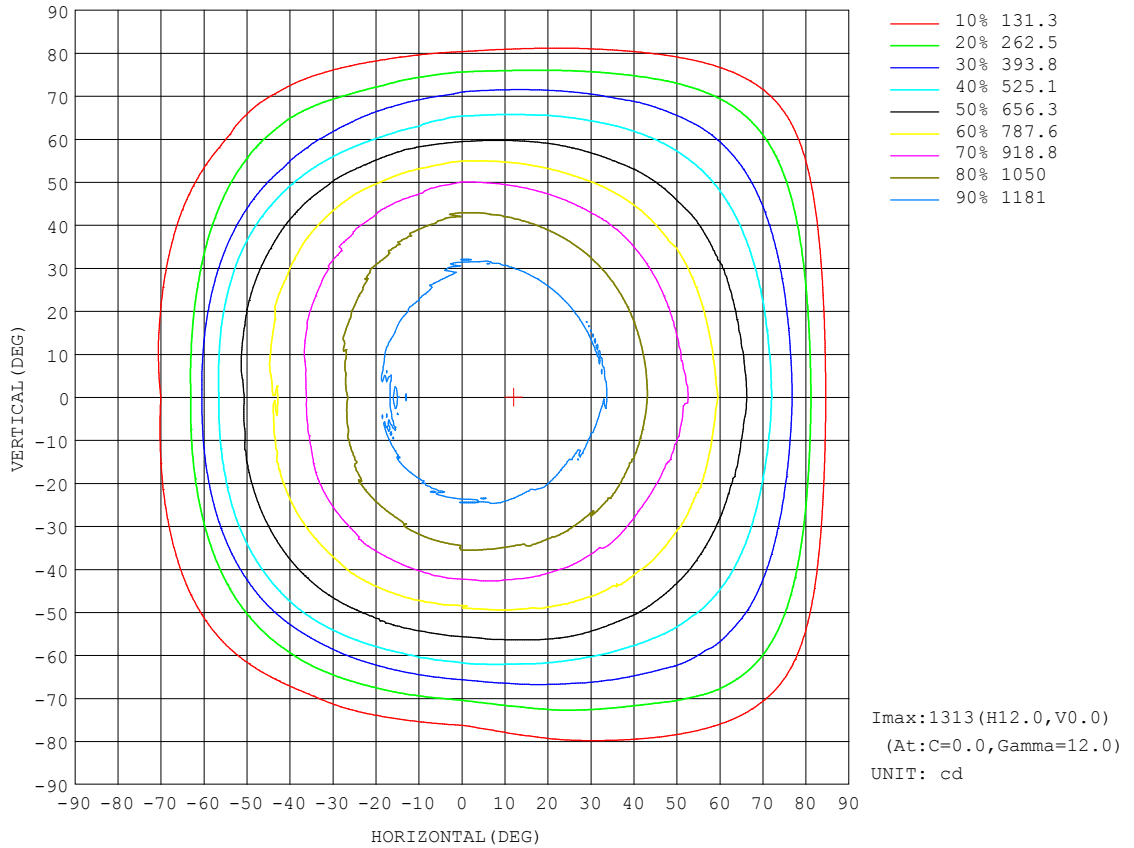
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	57	45	38	56	45	38	55	44	38	31
0.80	67	55	48	66	55	48	64	54	47	40
1.00	76	65	57	74	64	57	72	65	56	49
1.25	83	72	65	81	72	65	79	70	64	57
1.50	88	78	71	86	77	71	83	75	69	62
2.00	95	86	80	93	85	79	89	83	78	70
2.50	99	91	85	97	90	84	93	87	82	74
3.00	102	95	90	100	94	89	96	91	86	78
4.00	106	100	96	104	99	94	99	95	92	83
5.00	109	104	100	106	102	98	101	98	95	86
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNM = 1.25			

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Paul
 Test Date:2016-11-17

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.364
 Humidity:65.0%
 Test Distance:2.900m [K=0.8389]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.3V I:0.3835A P:30.99W PF:0.6719 Freq:60.01Hz Lamp Flux:3832.46x1 lm		
NAME: CT-D02030TBW	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:1.12*0.03	Shielding Angle:

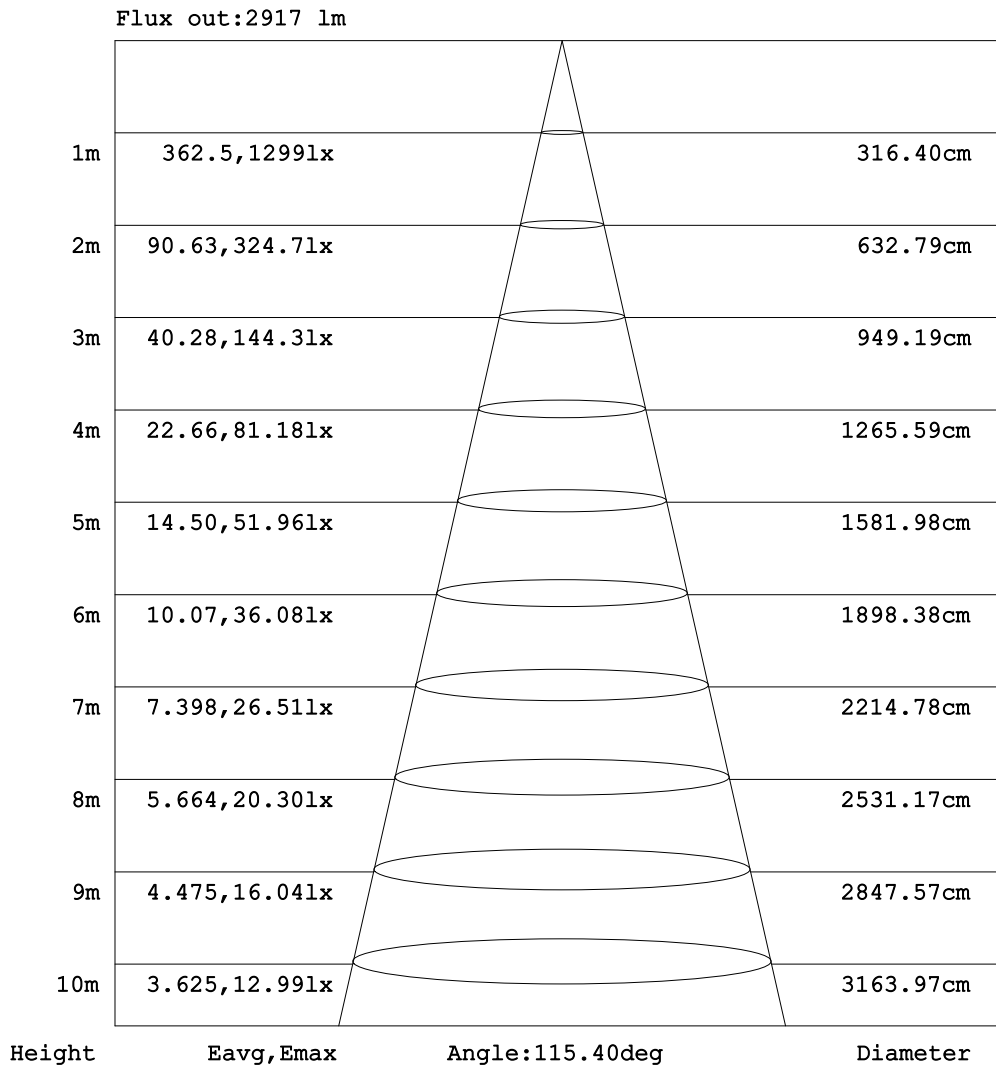


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Paul
Test Date:2016-11-17

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.364
Humidity:65.0%
Test Distance:2.900m [K=0.8389]
Remarks:

AAI Figure

Test:U:120.3V I:0.3835A P:30.99W PF:0.6719 Freq:60.01Hz Lamp Flux:3832.46x1 lm		
NAME: CT-D02030TBW	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:1.12*0.03	Shielding Angle:

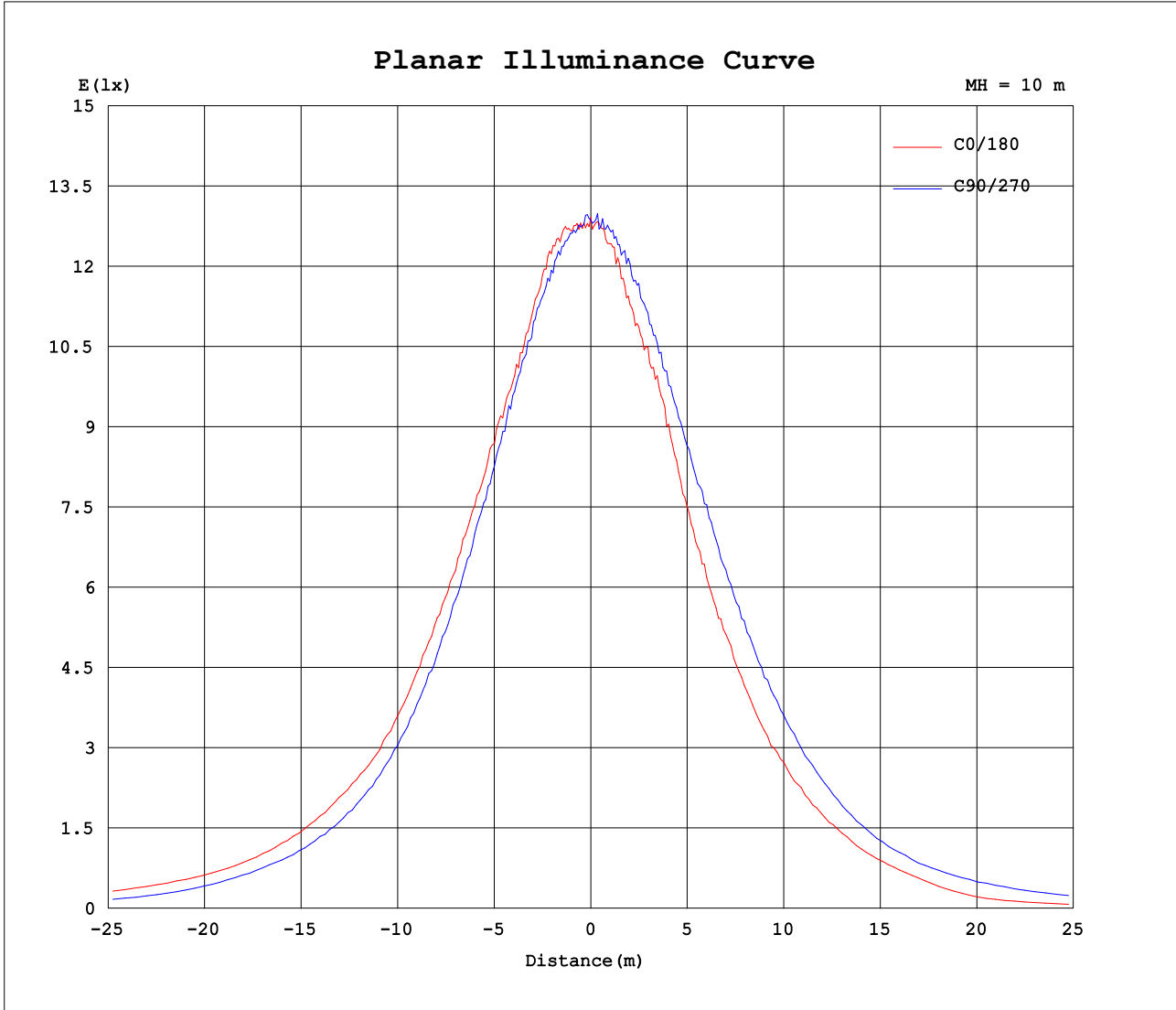


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Paul
Test Date:2016-11-17

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.364
Humidity:65.0%
Test Distance:2.900m [K=0.8389]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Paul
 Test Date: 2016-11-17

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.364
 Humidity: 65.0%
 Test Distance: 2.900m [K=0.8389]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.3V I:0.3835A P:30.99W PF:0.6719 Freq:60.01Hz Lamp Flux:3832.46x1 lm		
NAME: CT-D02030TBW	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: EVERFINE	SUR.:1.12*0.03	Shielding Angle:

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	90	180	270															
0	1291	1286	1291	1286															
5	1291	1282	1257	1292															
10	1309	1273	1219	1287															
15	1281	1249	1181	1260															
20	1251	1209	1154	1252															
25	1237	1170	1074	1221															
30	1200	1125	992	1203															
35	1149	1051	933	1153															
40	1109	977	845	1096															
45	1019	861	775	1022															
50	946	766	673	919															
55	869	668	556	783															
60	770	570	414	644															
65	683	417	203	538															
70	580	273	132	413															
75	452	163	17.8	282															
80	312	78.5	13.0	140															
85	123	21.2	14.7	35.3															
90	44.7	5.68	6.80	0.13															
95	38.2	2.08	5.56	0.47															
100	46.7	1.02	4.71	0.90															
105	30.8	0.56	4.12	1.09															
110	11.8	0.42	3.41	1.05															
115	5.83	0.37	2.52	0.93															
120	4.74	0.37	1.82	0.78															
125	3.90	0.40	1.37	0.68															
130	2.97	0.41	0.96	0.60															
135	1.94	0.41	0.74	0.55															
140	1.61	0.39	0.59	0.51															
145	1.27	0.35	0.55	0.51															
150	0.91	0.34	0.54	0.52															
155	0.71	0.36	0.51	0.50															
160	0.58	0.37	0.46	0.47															
165	0.48	0.37	0.45	0.46															
170	0.39	0.36	0.41	0.43															
175	0.40	0.39	0.41	0.42															
180	0.44	0.43	0.43	0.43															

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Paul
 Test Date:2016-11-17

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.364
 Humidity:65.0%
 Test Distance:2.900m [K=0.8389]
 Remarks: