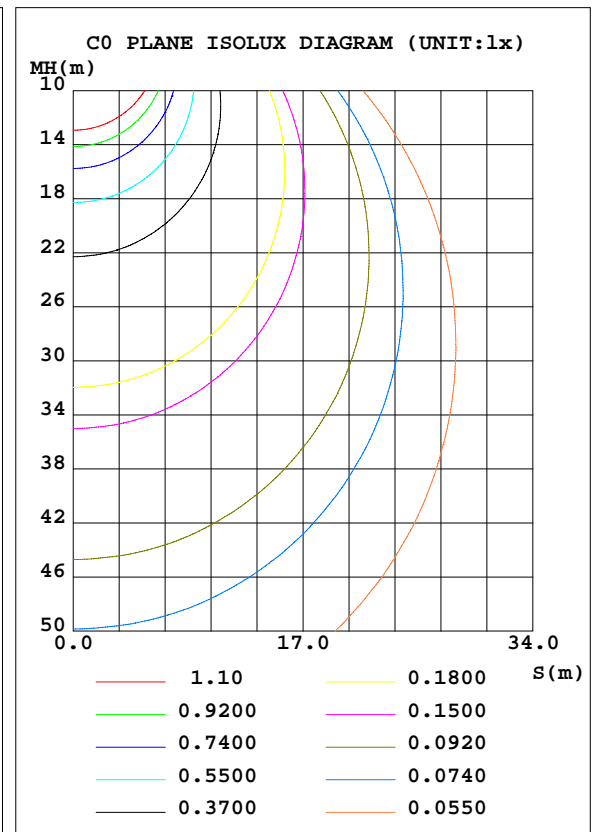
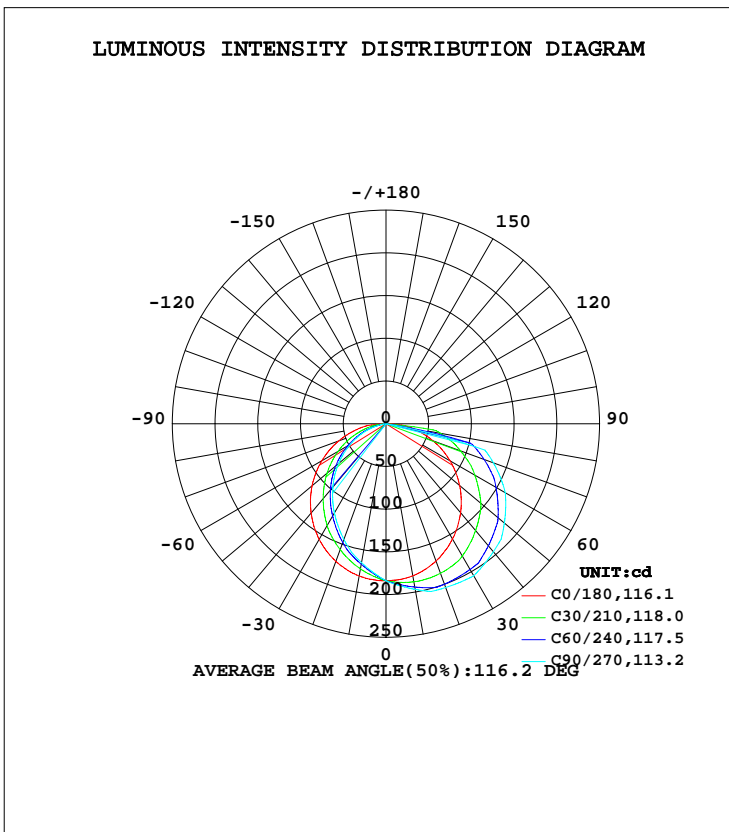


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: LED Ceiling Light	TYPE:Ceiling Light	WEIGHT:
SPEC.:230	DIM.: 230MM	SERIAL No.:
MFR.: YOYO LIGHTING	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	YBE12W4K-WH	Imax(cd)	205.5	S/MH(C0/180)	1.26
NOMINAL POWER(W)	12	LOR(%)	100.0	S/MH(C90/270)	1.01
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	584.78	η UP, DN(C0-180)	0.0,63.9
NOMINAL FLUX(lm)	584.779	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0,36.1
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	230	η down(%)	100.0	CIBSE SHR MAX	1.50



H(β) Range:-90 - 90DEG
 H(β) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:ZZQ
 Test Date:25 January 2018

V(B) Range:-75 - 75DEG
 V(B) Interval: 5.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:8.791m [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	180.8	191.3	196.8	191.6	180.9	169.4	165.2	169.2	0- 10	17.36	17.36	2.97,2.97
20	171.1	195.0	204.0	195.5	171.4	152.4	144.1	151.8	10- 20	50.13	67.49	11.5,11.5
30	155.8	187.8	205.5	188.6	156.3	130.0	120.8	129.5	20- 30	76.78	144.3	24.7,24.7
40	135.9	177.8	195.6	178.2	136.4	106.7	96.79	106.4	30- 40	94.43	238.7	40.8,40.8
50	112.7	158.4	180.9	159.3	112.9	82.33	72.51	81.64	40- 50	101.3	340.0	58.1,58.1
60	86.53	135.6	161.2	136.6	86.73	57.40	47.97	56.61	50- 60	96.98	437.0	74.7,74.7
70	58.71	109.6	133.8	110.4	58.88	32.67	25.13	32.06	60- 70	82.54	519.5	88.8,88.8
80	31.89	66.30	0	67.45	32.00	9.598	0	9.039	70- 80	56.51	576.0	98.5,98.5
90	0.2172	0	0	0	0.1988	0	0	0	80- 90	8.741	584.8	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:cd									UNIT:lm		

Conical surface Flux(90deg): 289.18 lm

%lum = 49.5%
 %lamp = 49.5%

Conical surface Flux(120deg): 436.99 lm

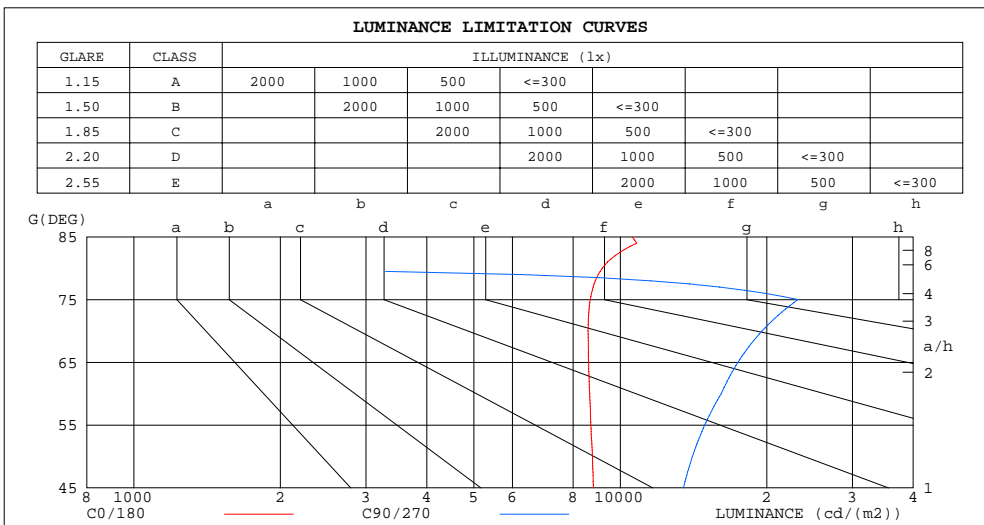
%lum = 74.7%
 %lamp = 74.7%

H(β) Range:-90 - 90DEG
 H(β) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:ZZQ
 Test Date:25 January 2018

V(B) Range:-75 - 75DEG
 V(B) Interval: 5.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:8.791m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

NAME: LED Ceiling Light	TYPE:Ceiling Light	WEIGHT:
SPEC.:230	DIM.: 230MM	SERIAL No.:
MFR.: YOYO LIGHTING	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	10578	0
80	9183	0
75	8668	23193
70	8582	19556
65	8605	17449
60	8653	16119
55	8701	14909
50	8763	14068
45	8805	13483

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZZQ
Test Date:25 January 2018

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:8.791m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: LED Ceiling Light	TYPE:Ceiling Light	WEIGHT:
SPEC.:230	DIM.: 230MM	SERIAL No.:
MFR.: YOYO LIGHTING	SUR.:	Shielding 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	.325	.185	.059	.318	.181	.058	.305	.175	.056	.292	.169	.054	.281	.163	.053	
2.0	.306	.168	.052	.300	.165	.051	.288	.160	.050	.277	.156	.049	.267	.151	.048	
3.0	.282	.150	.045	.277	.148	.045	.266	.144	.044	.257	.141	.043	.247	.137	.042	
4.0	.259	.135	.040	.254	.133	.039	.245	.130	.039	.236	.127	.038	.228	.124	.038	
5.0	.238	.122	.035	.234	.120	.035	.226	.118	.035	.218	.115	.034	.211	.113	.034	
6.0	.220	.110	.032	.216	.109	.031	.209	.107	.031	.202	.105	.031	.196	.103	.031	
7.0	.204	.101	.029	.201	.100	.029	.194	.098	.028	.188	.096	.028	.182	.095	.028	
8.0	.190	.093	.026	.187	.092	.026	.181	.091	.026	.176	.089	.026	.171	.088	.026	
9.0	.178	.086	.024	.175	.085	.024	.170	.084	.024	.165	.083	.024	.160	.081	.024	
10.0	.167	.080	.022	.164	.079	.022	.160	.078	.022	.155	.077	.022	.151	.076	.022	

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	.181	.156	.133	.155	.134	.115	.106	.092	.079	.061	.053	.046	.020	.017	.015	
2.0	.174	.132	.096	.149	.113	.083	.102	.079	.058	.059	.046	.034	.019	.015	.011	
3.0	.167	.114	.073	.143	.099	.063	.098	.069	.044	.057	.040	.026	.018	.013	.009	
4.0	.159	.101	.057	.137	.087	.049	.094	.061	.035	.054	.036	.021	.017	.012	.007	
5.0	.152	.091	.046	.130	.079	.040	.090	.055	.028	.052	.032	.017	.017	.011	.006	
6.0	.144	.083	.038	.124	.072	.033	.086	.050	.024	.050	.029	.014	.016	.010	.005	
7.0	.137	.076	.032	.118	.066	.028	.082	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.131	.070	.028	.113	.061	.025	.078	.043	.017	.045	.025	.010	.015	.008	.003	
9.0	.125	.065	.025	.107	.056	.022	.074	.040	.015	.043	.023	.009	.014	.008	.003	
10.0	.119	.061	.022	.102	.053	.019	.071	.037	.014	.041	.022	.008	.013	.007	.003	

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZZQ
Test Date:25 January 2018

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:8.791m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

NAME: LED Ceiling Light					TYPE:Ceiling Light					WEIGHT:				
SPEC.:230					DIM.: 230MM					SERIAL No.:				
MFR.: YOYO LIGHTING					SUR.:					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	23.4	25.0	23.7	25.2	25.4	25.8	27.3	26.0	27.5	27.8				
3H	25.1	26.6	25.4	26.8	27.1	28.3	29.8	28.6	30.0	30.3				
4H	25.9	27.3	26.2	27.5	27.8	29.7	31.1	30.0	31.3	31.6				
6H	26.5	27.9	26.9	28.1	28.4	29.9	31.2	30.3	31.5	31.8				
8H	26.8	28.1	27.2	28.4	28.7	29.9	31.1	30.2	31.4	31.7				
12H	27.1	28.3	27.5	28.6	28.9	29.8	31.0	30.2	31.3	31.6				
4H 2H	24.8	26.2	25.1	26.4	26.7	26.4	27.8	26.7	28.1	28.3				
3H	26.8	28.0	27.1	28.3	28.6	29.2	30.5	29.6	30.8	31.1				
4H	27.7	28.8	28.1	29.2	29.5	30.8	31.9	31.2	32.2	32.6				
6H	28.6	29.6	29.0	29.9	30.3	31.1	32.1	31.5	32.4	32.8				
8H	28.9	29.9	29.3	30.2	30.6	31.0	32.0	31.4	32.3	32.7				
12H	29.3	30.1	29.7	30.5	30.9	31.0	31.8	31.4	32.2	32.6				
8H 4H	28.7	29.7	29.2	30.0	30.4	31.2	32.1	31.6	32.5	32.9				
6H	30.0	30.7	30.4	31.1	31.6	31.6	32.3	32.0	32.7	33.2				
8H	30.5	31.2	31.0	31.6	32.1	31.5	32.2	32.0	32.6	33.1				
12H	31.1	31.6	31.5	32.1	32.6	31.5	32.1	32.0	32.5	33.0				
12H 4H	28.8	29.6	29.2	30.0	30.4	31.2	32.1	31.7	32.5	32.9				
6H	30.0	30.7	30.5	31.1	31.6	31.6	32.3	32.1	32.7	33.2				
8H	30.6	31.2	31.1	31.7	32.2	31.6	32.2	32.1	32.6	33.1				
Variations with the observer position at spacings:														
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2								
1.5H	+ 0.3 / - 0.4					+ 0.3 / - 0.3								
2.0H	+ 0.2 / - 0.5					+ 0.5 / - 0.7								

CIE Pub.117, 584.8 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -1.9)

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZZQ
Test Date:25 January 2018

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:8.791m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

NAME: LED Ceiling Light	TYPE:Ceiling Light	WEIGHT:
SPEC.:230	DIM.: 230MM	SERIAL No.:
MFR.: YOYO LIGHTING	SUR.:	Shielding Angle:

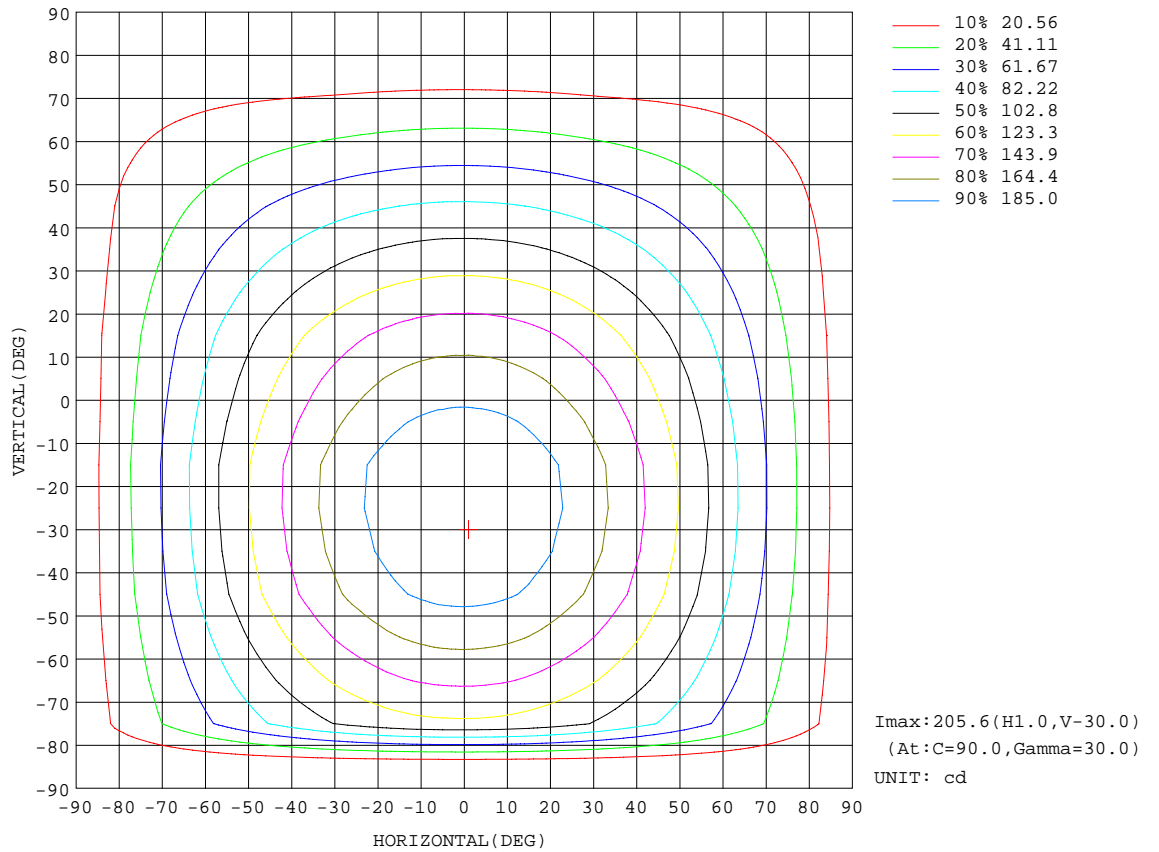
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	56	44	36	55	43	36	54	43	36	30
0.80	65	53	46	64	53	46	63	52	45	38
1.00	74	62	54	73	62	54	70	63	54	46
1.25	81	70	62	79	69	62	77	68	61	54
1.50	86	76	68	84	75	68	81	73	67	59
2.00	93	84	77	91	83	77	88	81	75	67
2.50	98	89	83	95	88	82	92	85	80	72
3.00	101	94	88	99	92	87	95	89	85	76
4.00	105	99	95	103	98	93	99	94	91	81
5.00	108	103	99	106	101	97	101	97	94	85
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZZQ
Test Date:25 January 2018

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:8.791m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: LED Ceiling Light	TYPE:Ceiling Light	WEIGHT:
SPEC.:230	DIM.: 230MM	SERIAL No.:
MFR.: YOYO LIGHTING	SUR.:	Shielding Angle:

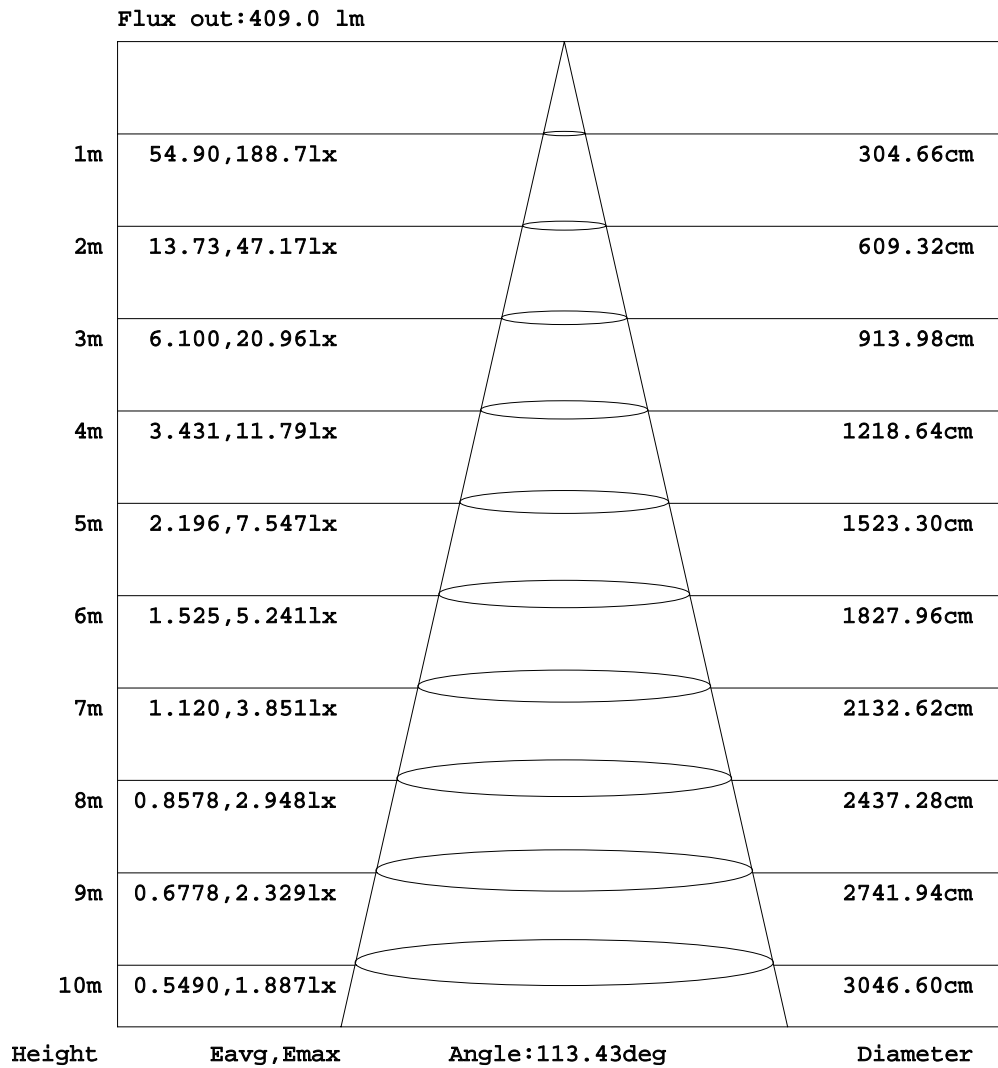


H(β) Range:-90 - 90DEG
 H(β) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:ZZQ
 Test Date:25 January 2018

V(B) Range:-75 - 75DEG
 V(B) Interval: 5.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
 Humidity:65.0%
 Test Distance:8.791m [K=1.0000]
 Remarks:

AAI Figure

NAME: LED Ceiling Light	TYPE:Ceiling Light	WEIGHT:
SPEC.:230	DIM.: 230MM	SERIAL No.:
MFR.: YOYO LIGHTING	SUR.:	Shielding Angle:

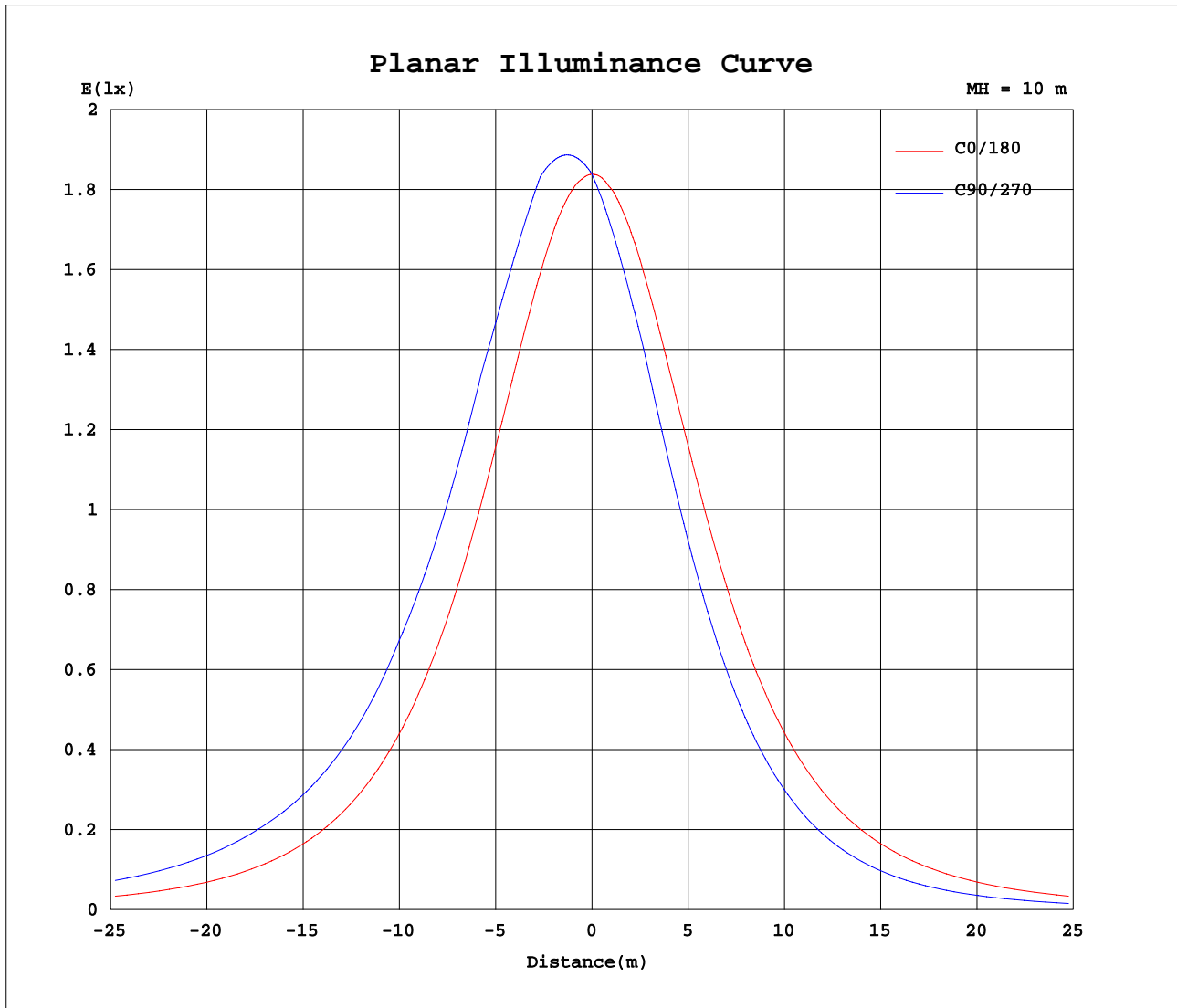


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:ZZQ
Test Date:25 January 2018

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:8.791m [K=1.0000]
Remarks:

Planar Illuminance Curve



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
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Test Date:25 January 2018

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.366
Humidity:65.0%
Test Distance:8.791m [K=1.0000]
Remarks:

