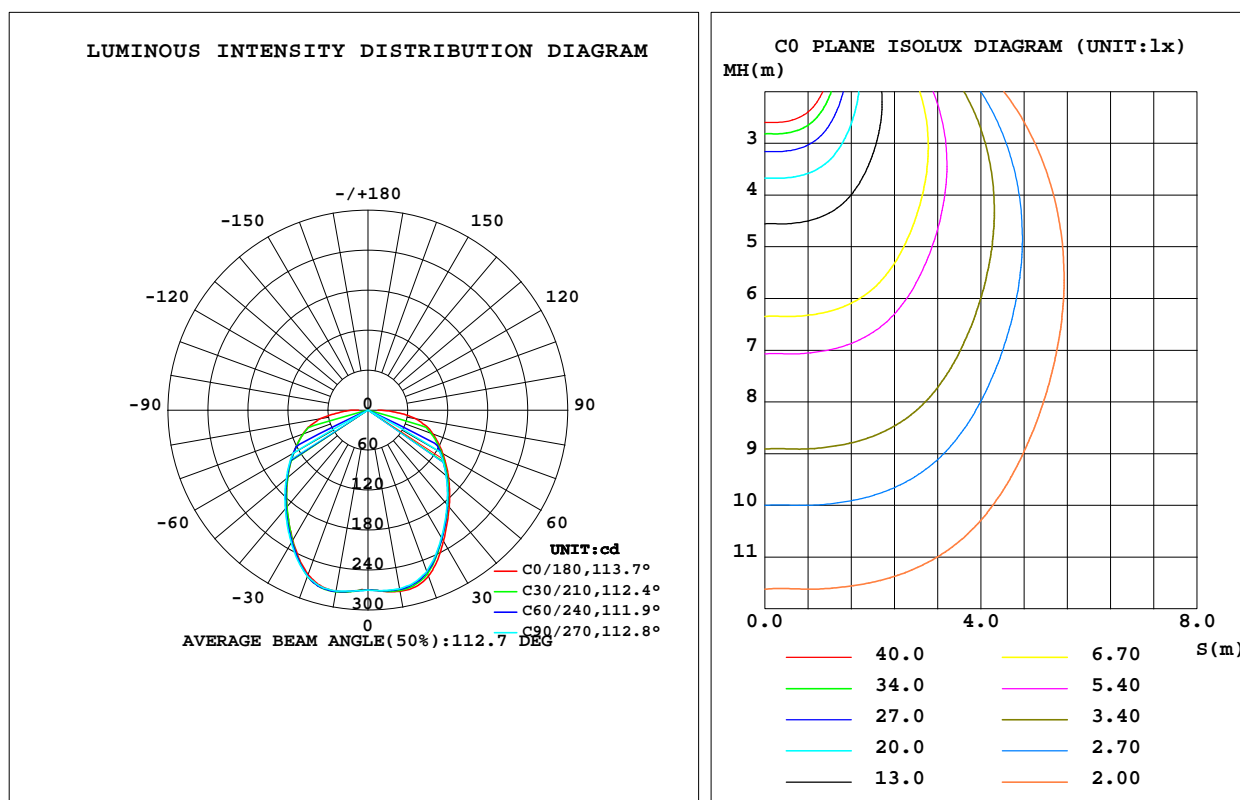


# LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: PP020113	TYPE:LED	WEIGHT:1.617(Kg)
DIM.: D600*60	SPEC.:	SERIAL No.:
MFR.:	SUR.:f600	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 19.96 lm/W			
MODEL		Imax(cd)	277.2	S/MH(C0/180)	1.24
NOMINAL POWER(W)	36	LOR(%)	100.0	S/MH(C90/270)	1.22
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	718.62	h UP,DN(C0-180)	0.0,49.3
NOMINAL FLUX(lm)	718.619	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.0,50.7
LAMPS INSIDE	1	h up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	219.2	h down(%)	100.0	CIBSE SHR MAX	1.25



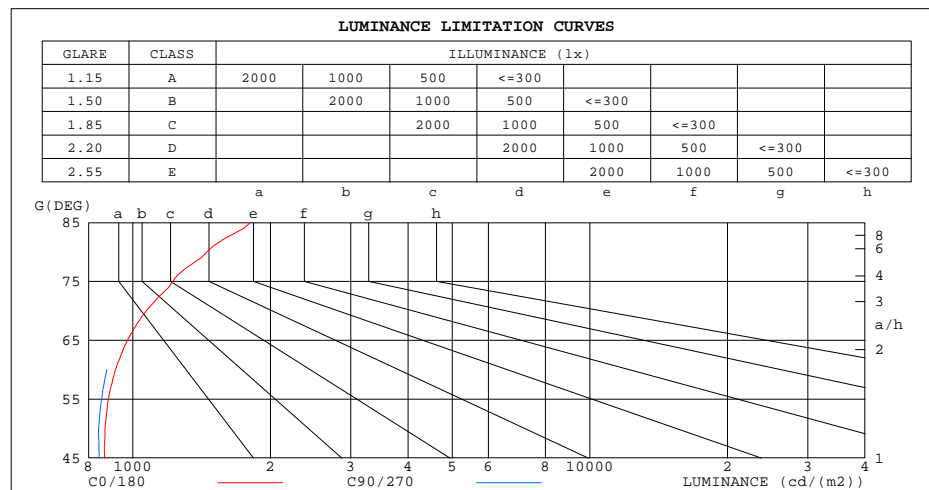
C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:ZENGQG  
 Test Date:2019-11-12

g Range: 0 - 90DEG  
 g Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
 Humidity:65.0%  
 Test Distance:9.650m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM AND LUMINANCE LIMITATION CURVES

### ZONAL FLUX DIAGRAM:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%lum,lamp
5	273.0	272.3	271.7	272.1	272.7	273.0	272.4	272.8	0- 5	6.487	6.487	0.90,0.90
10	275.9	273.7	272.2	272.5	275.6	276.5	275.7	275.6	5- 10	19.60	26.09	3.63,3.63
15	274.5	270.5	267.8	267.9	273.2	275.6	274.0	274.6	10- 15	32.50	58.58	8.15,8.15
20	265.2	259.5	258.0	256.8	262.7	265.6	265.6	265.8	15- 20	44.10	102.7	14.3,14.3
25	247.6	241.8	240.2	239.6	245.5	247.3	249.1	249.7	20- 25	53.21	155.9	21.7,21.7
30	226.9	222.3	220.7	221.0	225.9	227.1	230.1	229.7	25- 30	59.47	215.4	30,30
35	207.3	203.6	202.2	203.0	207.3	207.9	211.1	210.1	30- 35	63.50	278.9	38.8,38.8
40	189.8	186.6	184.8	185.6	189.6	189.8	193.0	192.5	35- 40	65.90	344.8	48,48
45	173.5	169.9	168.9	169.5	173.0	173.4	176.4	175.5	40- 45	66.86	411.6	57.3,57.3
50	158.1	154.6	153.0	153.7	157.5	157.4	159.9	159.7	45- 50	66.47	478.1	66.5,66.5
55	143.4	139.8	138.6	139.0	142.9	142.7	145.2	144.4	50- 55	64.89	543.0	75.6,75.6
60	129.7	125.7	124.1	125.0	129.3	128.9	130.5	130.0	55- 60	62.33	605.3	84.2,84.2
65	116.3	112.5	0	111.4	116.2	115.4	0	116.5	60- 65	47.62	652.9	90.9,90.9
70	103.6	0	0	0	103.6	0	0	0	65- 70	29.84	682.8	95,95
75	89.50	0	0	0	89.65	0	0	0	70- 75	19.38	702.1	97.7,97.7
80	71.26	0	0	0	71.18	0	0	0	75- 80	10.83	713.0	99.2,99.2
85	44.59	0	0	0	44.18	0	0	0	80- 85	4.650	717.6	99.9,99.9
90	15.18	0	0	0	14.08	0	0	0	85- 90	0.9909	718.6	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		



LUMINANCE cd/(m2)		
G( DEG)	C0/180	C90/270
85	1809	0
80	1451	0
75	1223	0
70	1071	0
65	974	0
60	917	878
55	884	854
50	870	842
45	868	845

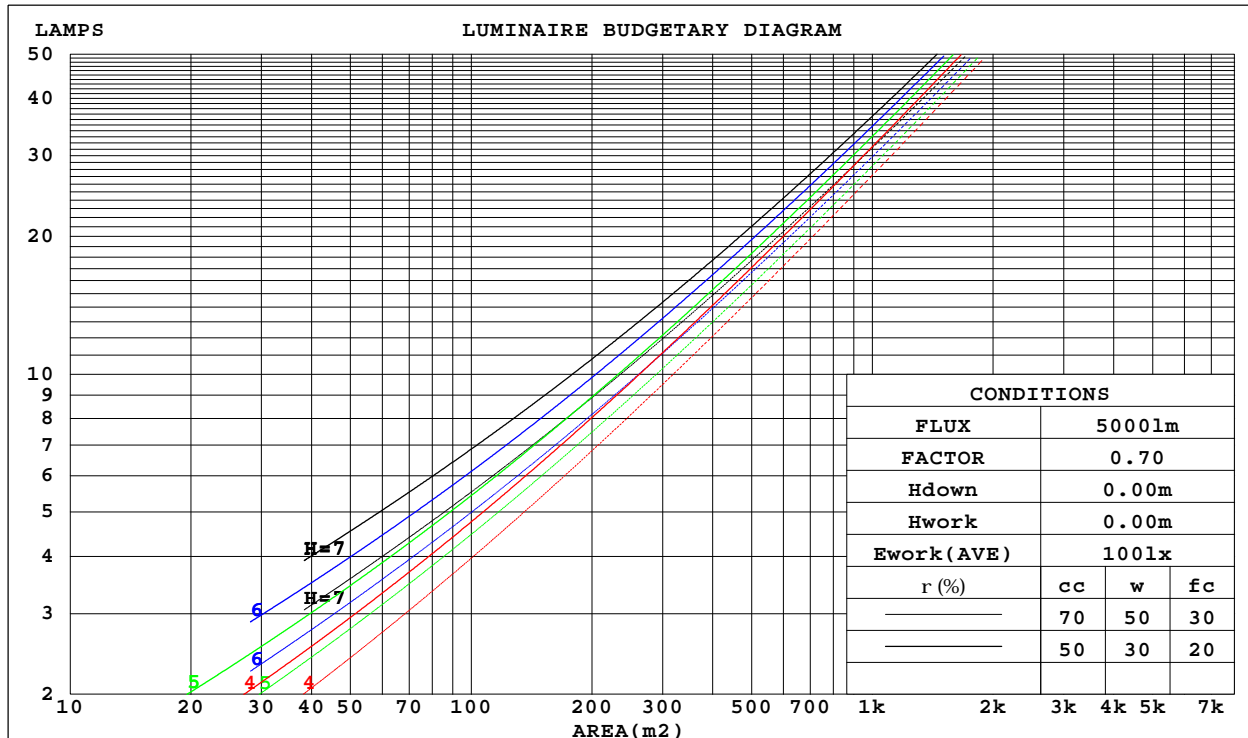
**C Range:** 0 - 360DEG  
**C Interval:** 5.0DEG  
**Test Speed:** HIGH  
**Temperature:**25.3DEG  
**Operators:**ZENGQG  
**Test Date:**2019-11-12

**g Range:** 0 - 90DEG  
**g Interval:** 0.5DEG  
**Test System:**EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
**Humidity:**65.0%  
**Test Distance:**9.650m [K=1.0000]  
**Remarks:**

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: PP020113	TYPE:LED	WEIGHT:1.617(Kg)
DIM.: D600*60	SPEC.:	SERIAL No.:
MFR.:	SUR.:f600	PROTECTION ANGLE:

r <sub>cc</sub>	80%			70%			50%			30%			10%			0
r <sub>w</sub>	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r <sub>fc</sub>	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	1.05	1.01	.98	1.03	.90	.96	.99	.96	.93	.95	.93	.90	.91	.90	.88	.86
2.0	.93	.86	.81	.91	.85	.80	.87	.82	.78	.84	.80	.76	.81	.78	.75	.73
3.0	.82	.74	.68	.80	.73	.67	.77	.71	.66	.75	.69	.65	.72	.68	.64	.62
4.0	.73	.64	.58	.71	.63	.57	.69	.62	.57	.67	.61	.56	.64	.59	.55	.53
5.0	.65	.56	.50	.64	.56	.50	.62	.55	.49	.60	.54	.49	.58	.52	.48	.46
6.0	.59	.50	.44	.58	.49	.43	.56	.49	.43	.54	.48	.43	.53	.47	.42	.40
7.0	.53	.45	.39	.52	.44	.38	.51	.44	.38	.49	.43	.38	.48	.42	.38	.36
8.0	.49	.40	.34	.48	.40	.34	.47	.39	.34	.45	.39	.34	.44	.38	.34	.32
9.0	.45	.37	.31	.44	.36	.31	.43	.36	.31	.42	.35	.31	.41	.35	.31	.29
10.0	.41	.33	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.38	.32	.28	.26



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-12

g Range: 0 - 90DEG  
g Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:9.650m [K=1.0000]  
Remarks:

WEC AND CCEC

NAME: PP020113	TYPE:LED	WEIGHT:1.617(Kg)
DIM.: D600*60	SPEC.:	SERIAL No.:
MFR.:	SUR.:f600	PROTECTION ANGLE:

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.281	.160	.051	.274	.156	.050	.261	.150	.048	.249	.143	.046	.238	.138	.044	
2.0	.271	.149	.046	.265	.146	.045	.253	.141	.044	.243	.136	.043	.233	.132	.042	
3.0	.255	.136	.041	.249	.134	.040	.239	.130	.039	.230	.126	.039	.221	.122	.038	
4.0	.238	.124	.036	.233	.122	.036	.224	.119	.035	.216	.116	.035	.208	.113	.034	
5.0	.222	.113	.033	.217	.112	.033	.209	.109	.032	.202	.107	.032	.195	.104	.031	
6.0	.207	.104	.030	.203	.103	.030	.196	.100	.029	.189	.098	.029	.183	.096	.029	
7.0	.193	.096	.027	.190	.095	.027	.184	.093	.027	.178	.091	.026	.172	.089	.026	
8.0	.181	.089	.025	.178	.088	.025	.172	.086	.025	.167	.085	.024	.162	.083	.024	
9.0	.170	.082	.023	.168	.082	.023	.162	.080	.023	.158	.079	.023	.153	.078	.022	
10.0	.160	.077	.021	.158	.076	.021	.153	.075	.021	.149	.074	.021	.145	.073	.021	

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	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	.153	.134	.118	.104	.092	.081	.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	.162	.114	.076	.139	.099	.066	.095	.068	.046	.055	.040	.027	.018	.013	.009	
4.0	.154	.101	.060	.132	.087	.052	.091	.061	.037	.053	.036	.022	.017	.012	.007	
5.0	.147	.090	.048	.126	.078	.042	.087	.055	.030	.050	.032	.018	.016	.010	.006	
6.0	.140	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005	
7.0	.133	.075	.034	.115	.065	.030	.079	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.127	.069	.029	.109	.060	.026	.076	.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	.116	.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:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-12

g Range: 0 - 90DEG  
g Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:9.650m [K=1.0000]  
Remarks:

### Uncorrected UGR Table

NAME: PP020113					TYPE:LED		WEIGHT:1.617(Kg)				
DIM.: D600*60					SPEC.:		SERIAL No.:				
MFR.:					SUR.:f600		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	12.9	14.4	13.2	14.6	14.8	11.8	13.2	12.0	13.4	13.6	
	3H	15.2	16.5	15.5	16.8	17.0	11.5	12.9	11.8	13.1	13.4
	4H	16.3	17.6	16.6	17.9	18.1	11.4	12.7	11.7	13.0	13.2
	6H	17.3	18.5	17.7	18.8	19.1	11.3	12.5	11.7	12.8	13.1
	8H	17.7	18.9	18.1	19.2	19.5	11.3	12.4	11.6	12.7	13.0
	12H	18.1	19.3	18.5	19.5	19.8	11.2	12.3	11.6	12.6	12.9
4H	2H	13.5	14.8	13.9	15.1	15.3	12.5	13.8	12.8	14.1	14.3
	3H	16.0	17.1	16.4	17.4	17.7	12.3	13.4	12.7	13.7	14.0
	4H	17.3	18.3	17.6	18.6	18.9	12.2	13.2	12.6	13.6	13.9
	6H	18.3	19.2	18.7	19.6	19.9	12.1	13.0	12.5	13.4	13.7
	8H	18.8	19.6	19.2	20.0	20.4	12.1	12.9	12.5	13.3	13.7
	12H	19.2	20.0	19.6	20.3	20.7	12.0	12.8	12.5	13.2	13.6
8H	4H	17.1	18.0	17.5	18.3	18.7	12.5	13.3	12.9	13.6	14.0
	6H	18.2	18.9	18.6	19.3	19.7	12.4	13.0	12.8	13.5	13.9
	8H	18.7	19.3	19.1	19.7	20.1	12.3	12.9	12.8	13.4	13.8
	12H	19.1	19.6	19.6	20.0	20.5	12.3	12.8	12.8	13.3	13.7
12H	4H	17.1	17.8	17.5	18.2	18.6	12.4	13.2	12.9	13.6	14.0
	6H	18.2	18.8	18.6	19.2	19.6	12.4	13.0	12.8	13.4	13.8
	8H	18.6	19.1	19.1	19.6	20.1	12.3	12.8	12.8	13.3	13.8
Variations with the observer position at spacings:											
S = 1.0H	+ 0.4 / - 0.4					+ 0.3 / - 0.4					
1.5H	+ 0.5 / - 0.3					+ 1.4 / - 2.2					
2.0H	+ 0.4 / - 1.0					+ 0.9 / - 1.5					

CIE Pub.117 Corrected 718.6 lm Total Lamp Luminous Flux.(8log(F/F0) = -1.1)

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-12

g Range: 0 - 90DEG  
g Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:9.650m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

NAME: PP020113	TYPE:LED	WEIGHT:1.617(Kg)
DIM.: D600*60	SPEC.:	SERIAL No.:
MFR.:	SUR.:f600	PROTECTION ANGLE:

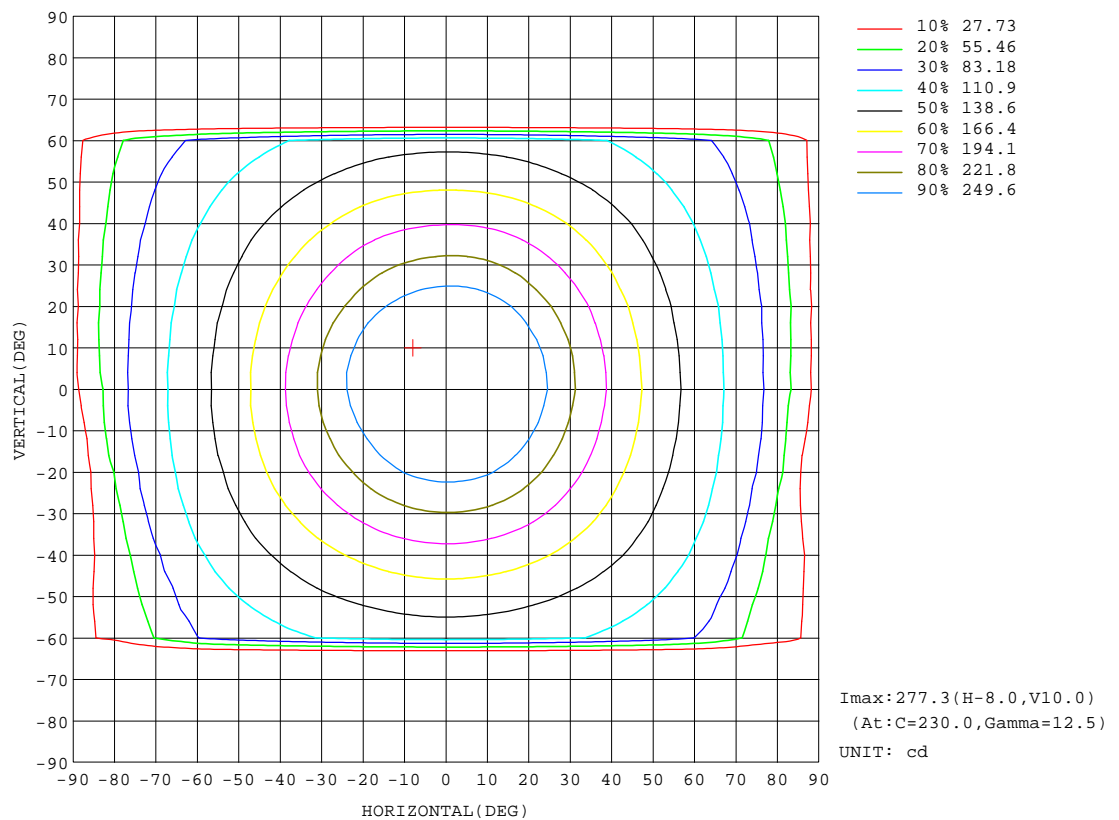
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	59	48	41	58	47	41	57	47	40	34
0.80	69	58	51	68	58	51	67	57	50	44
1.00	78	68	61	77	67	60	75	68	60	53
1.25	85	75	69	84	75	68	81	73	67	61
1.50	90	81	74	89	80	74	86	78	73	66
2.00	97	89	83	95	88	82	92	86	81	73
2.50	101	93	88	99	92	87	95	89	85	77
3.00	104	98	92	102	96	91	98	93	89	81
4.00	108	102	98	105	101	97	101	97	94	85
5.00	110	105	102	107	103	100	103	100	97	88
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:ZENGQG  
Test Date:2019-11-12

g Range: 0 - 90DEG  
g Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:9.650m [K=1.0000]  
Remarks:

### ISOCANDELA DIAGRAM

NAME: PP020113	TYPE:LED	WEIGHT:1.617(Kg)
DIM.: D600*60	SPEC.:	SERIAL No.:
MFR.:	SUR.:f600	PROTECTION ANGLE:

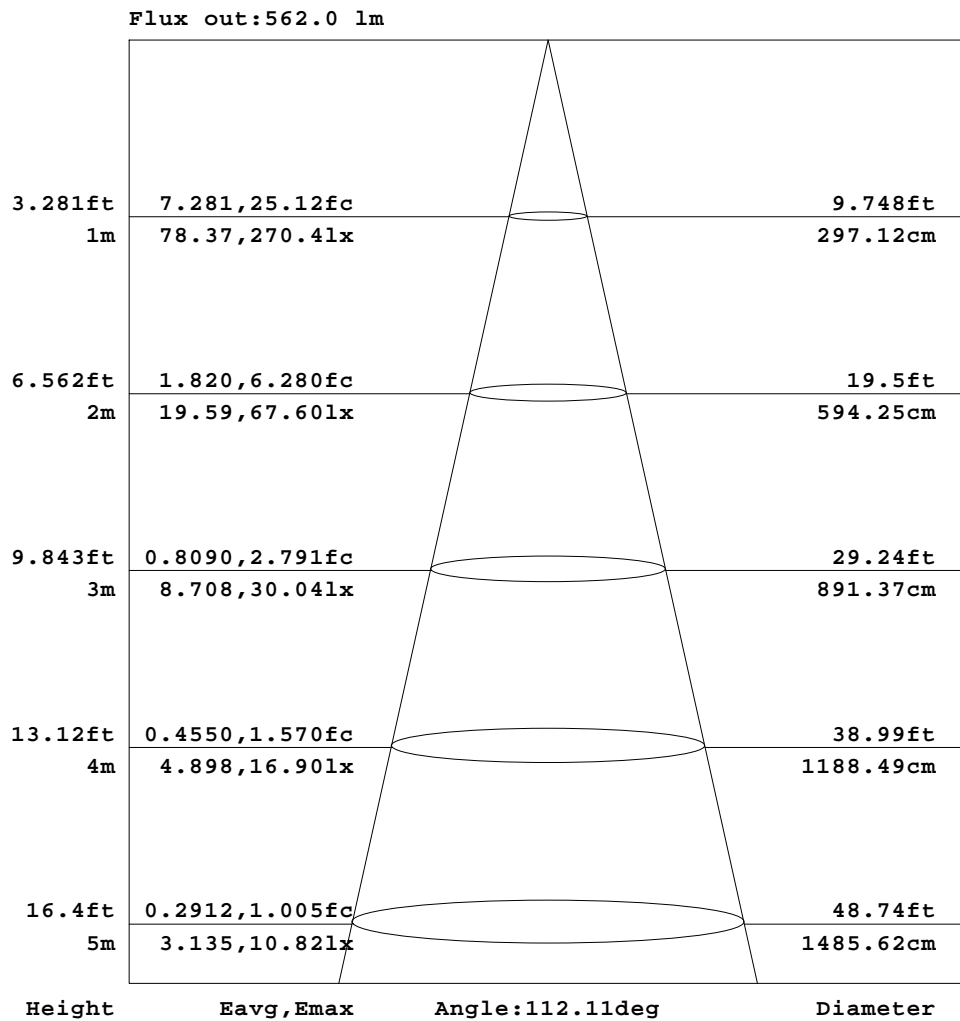


C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-12

g Range: 0 - 90DEG  
g Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:9.650m [K=1.0000]  
Remarks:

AAI Figure

NAME: PP020113	TYPE:LED	WEIGHT:1.617(Kg)
DIM.: D600*60	SPEC.:	SERIAL No.:
MFR.:	SUR.:f600	PROTECTION ANGLE:



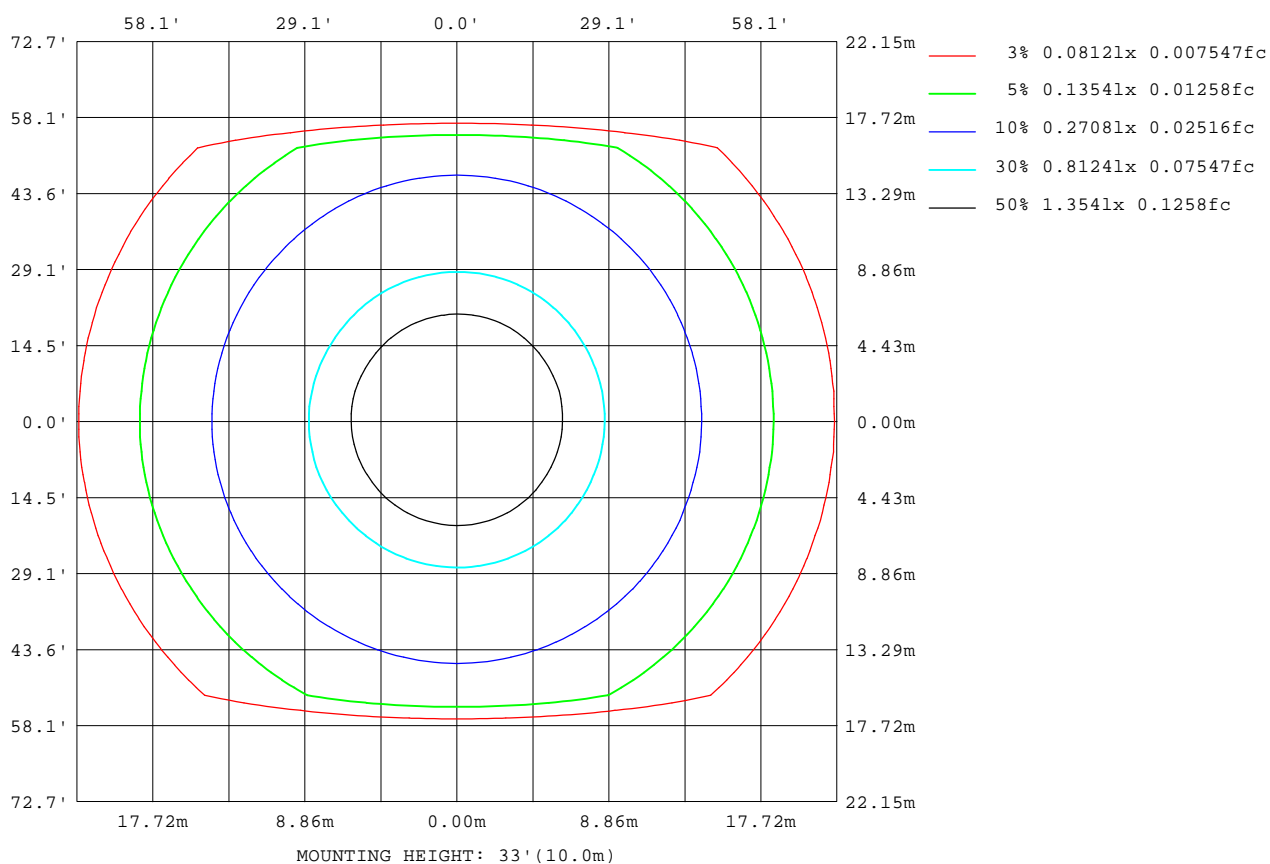
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-12

g Range: 0 - 90DEG  
g Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:9.650m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

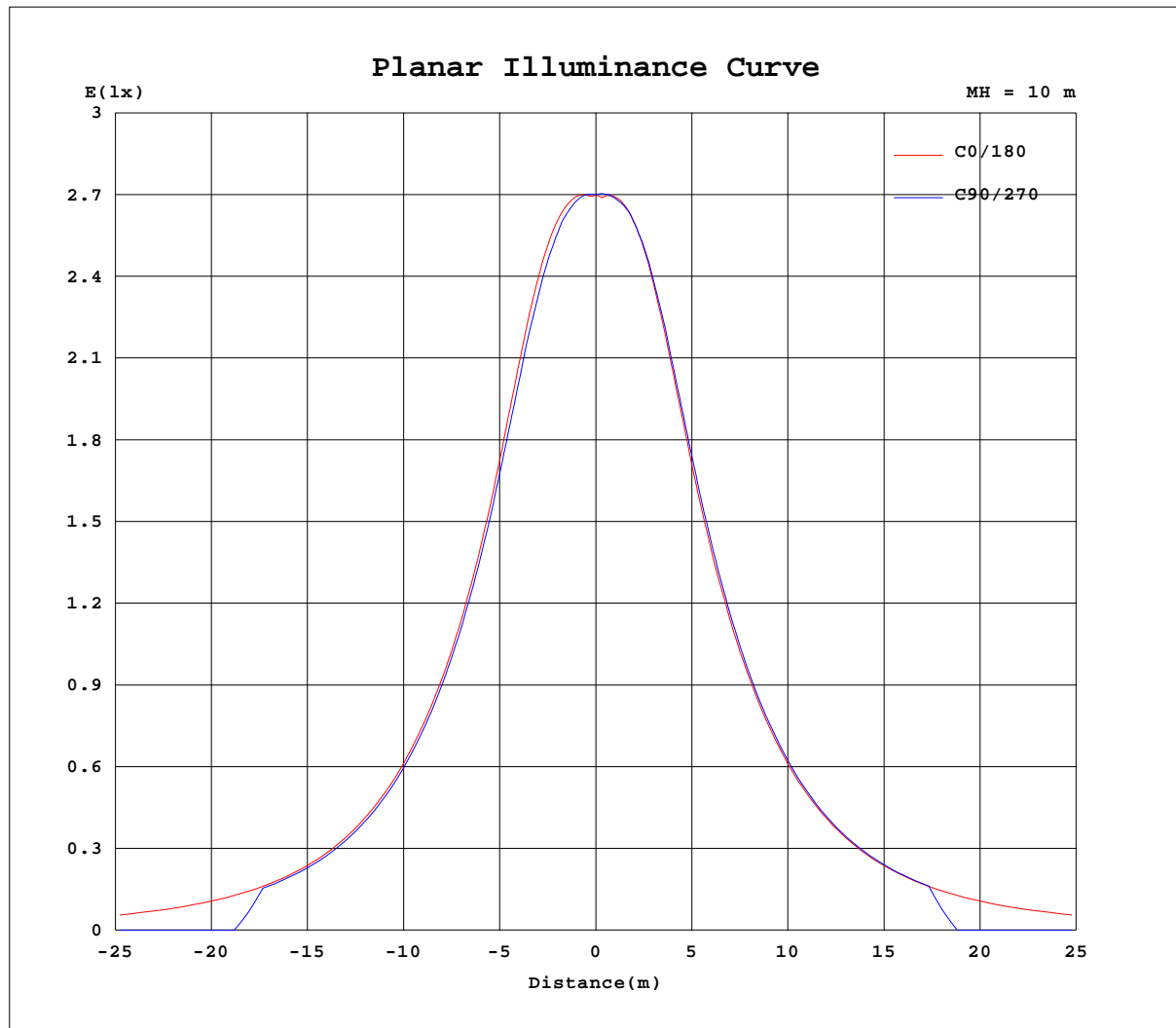
NAME: PP020113	TYPE:LED	WEIGHT:1.617(Kg)
DIM.: D600*60	SPEC.:	SERIAL No.:
MFR.:	SUR.:f600	PROTECTION ANGLE:



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-12

g Range: 0 - 90DEG  
g Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:9.650m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: ZENGQG  
Test Date: 2019-11-12

g Range: 0 - 90DEG  
g Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity: 65.0%  
Test Distance: 9.650m [K=1.0000]  
Remarks: