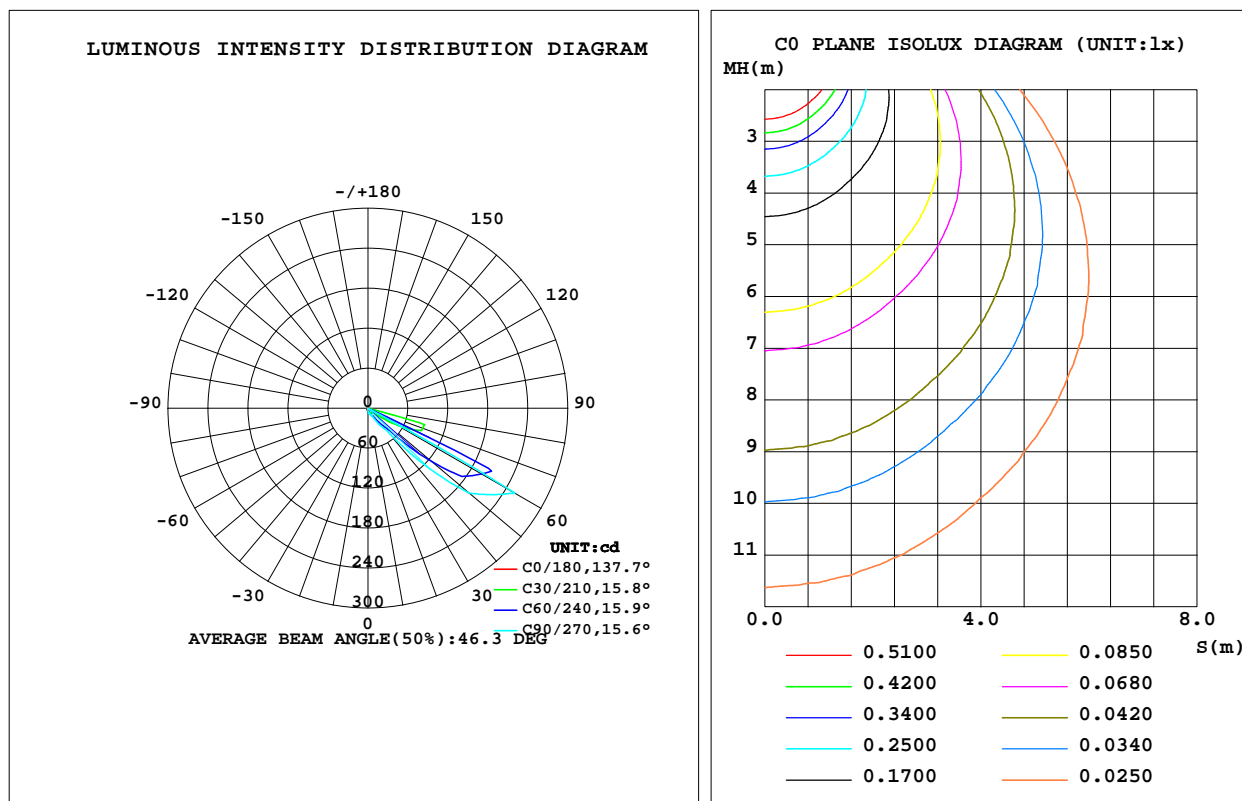


# LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: PW131233-SDG	TYPE:LED	WEIGHT:2.60 (Kg)
DIM.: D50*910	SPEC.:	SERIAL No.:
MFR.:	SUR.:770X8	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 7.38 lm/W
MODEL		Imax(cd)	254.4	S/MH(C0/180)	1.29	
NOMINAL POWER(W)	16	LOR(%)	100.0	S/MH(C90/270)	2.66	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	111.76	h UP,DN(C0-180)	0.0,98.7	
NOMINAL FLUX(lm)	111.755	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.0,1.3	
LAMPS INSIDE	1	h up(%)	0.0	CIBSE SHR NOM	0.00	
TEST VOLTAGE(V)	219.2	h down(%)	100.0	CIBSE SHR MAX	1.00	



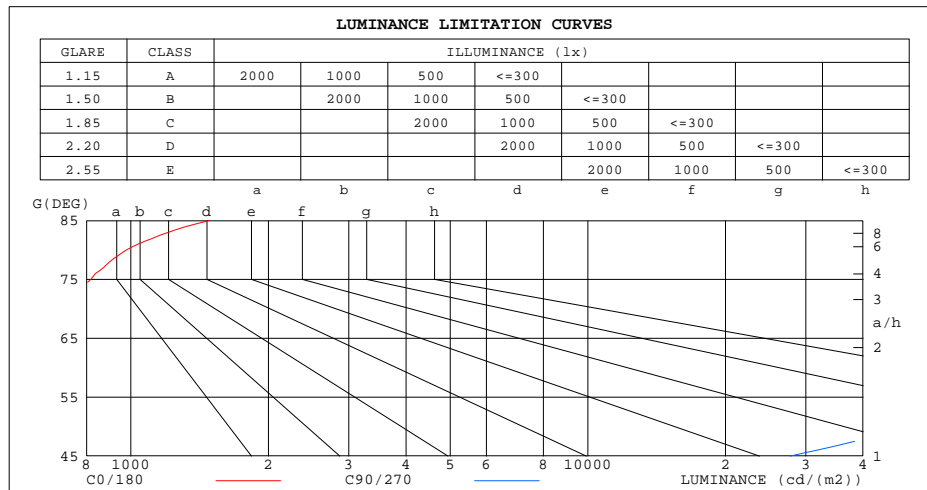
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-17

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	3.361	4.713	5.218	4.728	3.371	1.385	0.8445	1.377	0- 5	0.0762	0.0762	0.07,0.07
10	3.304	5.748	6.517	5.775	3.361	0.5594	0.5585	0.5574	5- 10	0.2259	0.3021	0.27,0.27
15	3.223	6.636	8.211	6.673	3.308	0.5531	0.5524	0.5453	10- 15	0.4088	0.7109	0.64,0.64
20	3.118	7.735	10.09	7.800	3.232	0.5454	0.5729	0.5403	15- 20	0.6391	1.350	1.21,1.21
25	3.017	8.970	12.34	9.041	3.151	0.5450	0.6135	0.5437	20- 25	0.9214	2.271	2.03,2.03
30	2.917	10.32	15.67	10.41	3.055	0.5474	0.6350	0.5412	25- 30	1.278	3.549	3.18,3.18
35	2.798	12.09	30.02	12.26	2.946	0.5503	0.6726	0.5527	30- 35	1.909	5.459	4.88,4.88
40	2.678	15.91	43.18	16.25	2.841	0.5473	0.7065	0.5499	35- 40	3.123	8.582	7.68,7.68
45	2.530	28.38	120.7	28.80	2.702	0.5472	0.7328	0.5409	40- 45	6.041	14.62	13.1,13.1
50	2.358	51.03	198.2	52.35	2.540	0.5495	0.7590	0.5369	45- 50	12.68	27.31	24.4,24.4
55	2.158	101.2	226.3	102.8	2.372	0.5594	0.8044	0.5353	50- 55	20.65	47.96	42.9,42.9
60	1.962	140.6	254.4	143.1	2.158	0.5695	0.8498	0.5513	55- 60	27.33	75.29	67.4,67.4
65	1.757	150.1	0	151.6	1.962	0.6037	0	0.5860	60- 65	20.81	96.10	86,86
70	1.542	0	0	0	1.756	0	0	0	65- 70	9.121	105.2	94.2,94.2
75	1.303	0	0	0	1.513	0	0	0	70- 75	4.294	109.5	98,98
80	1.046	0	0	0	1.251	0	0	0	75- 80	1.708	111.2	99.5,99.5
85	0.7976	0	0	0	0.9786	0	0	0	80- 85	0.4827	111.7	100,100
90	0.2674	0	0	0	0.4405	0	0	0	85- 90	0.0521	111.8	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(°)	C0/180	C90/270
85	1486	0
80	978	0
75	818	0
70	732	0
65	675	0
60	637	82605
55	611	64052
50	596	50055
45	581	27707

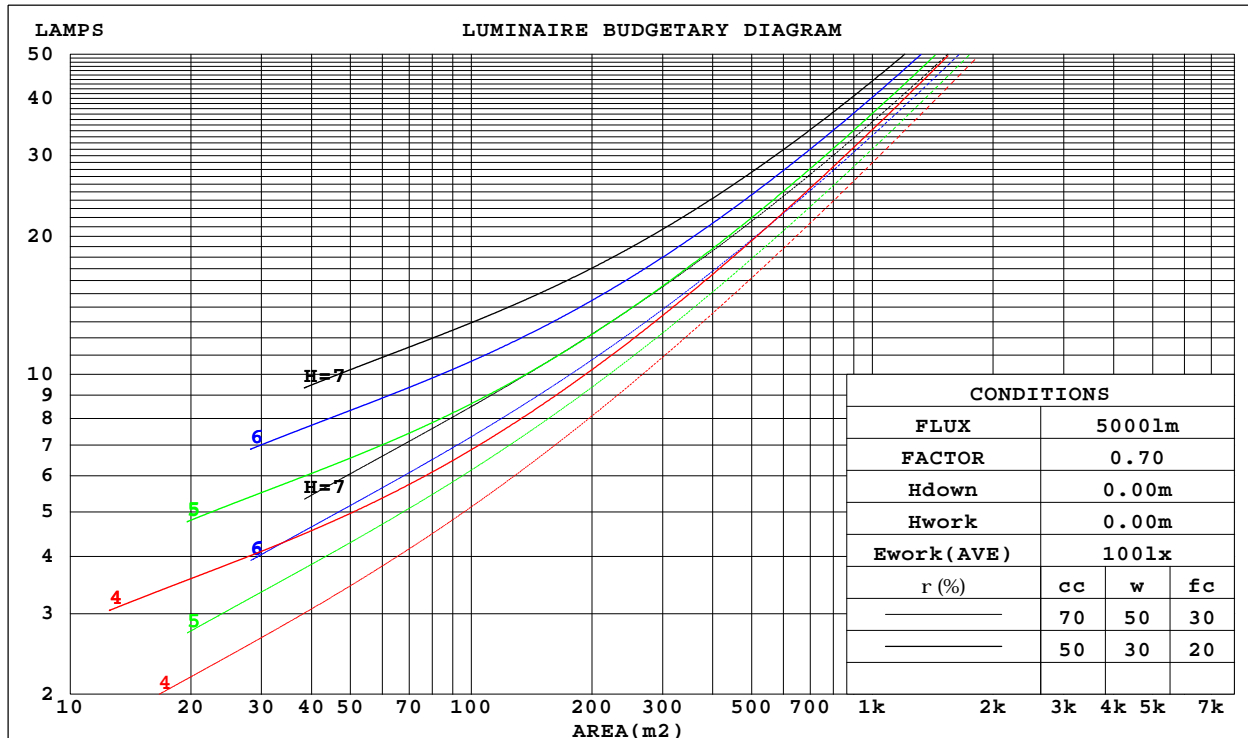
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-17

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: PW131233-SDG	TYPE:LED	WEIGHT:2.60 (Kg)
DIM.: D50*910	SPEC.:	SERIAL No.:
MFR.:	SUR.:770X8	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	1.01	.96	.92	.99	.94	.90	.94	.91	.87	.90	.87	.84	.87	.84	.82	.80
2.0	.84	.75	.68	.82	.74	.67	.78	.71	.66	.74	.69	.64	.71	.67	.62	.60
3.0	.69	.59	.51	.67	.58	.50	.64	.56	.49	.61	.54	.48	.58	.52	.47	.45
4.0	.57	.46	.38	.56	.46	.38	.53	.44	.37	.51	.43	.36	.48	.41	.36	.33
5.0	.48	.37	.29	.47	.37	.29	.45	.35	.28	.43	.34	.28	.40	.33	.27	.25
6.0	.41	.30	.22	.40	.30	.22	.38	.29	.22	.36	.28	.21	.34	.27	.21	.19
7.0	.36	.25	.17	.35	.25	.17	.33	.24	.17	.31	.23	.17	.30	.22	.17	.14
8.0	.31	.21	.14	.30	.21	.14	.29	.20	.14	.28	.19	.13	.26	.19	.13	.11
9.0	.28	.18	.11	.27	.18	.11	.26	.17	.11	.25	.17	.11	.23	.16	.11	.09
10.0	.25	.16	.09	.24	.15	.09	.23	.15	.09	.22	.14	.09	.21	.14	.09	.07



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-17

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:PW131233-SDG	TYPE:LED	WEIGHT:2.60 (Kg)
DIM.: D50*910	SPEC.:	SERIAL No.:
MFR.:	SUR.:770X8	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	.363	.206	.065	.355	.203	.064	.342	.196	.063	.329	.190	.061	.318	.184	.059	
2.0	.358	.196	.060	.351	.193	.060	.339	.188	.059	.327	.184	.057	.317	.179	.057	
3.0	.336	.179	.054	.330	.177	.053	.319	.173	.053	.309	.169	.052	.299	.166	.051	
4.0	.311	.162	.047	.306	.160	.047	.295	.157	.047	.286	.154	.046	.277	.151	.046	
5.0	.286	.146	.042	.281	.144	.042	.272	.142	.042	.264	.139	.041	.256	.137	.041	
6.0	.263	.132	.038	.258	.131	.038	.250	.128	.037	.243	.126	.037	.236	.124	.037	
7.0	.242	.120	.034	.238	.119	.034	.231	.117	.034	.224	.115	.033	.218	.113	.033	
8.0	.223	.109	.031	.220	.108	.031	.213	.107	.030	.207	.105	.030	.201	.103	.030	
9.0	.207	.100	.028	.204	.099	.028	.198	.098	.028	.192	.096	.028	.187	.095	.027	
10.0	.192	.092	.026	.189	.091	.026	.184	.090	.025	.179	.089	.025	.175	.088	.025	

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	.184	.156	.130	.157	.134	.112	.108	.092	.077	.062	.053	.045	.020	.017	.015	
2.0	.181	.132	.090	.155	.113	.078	.106	.078	.054	.061	.046	.032	.020	.015	.010	
3.0	.177	.115	.065	.152	.099	.056	.104	.069	.039	.060	.040	.023	.019	.013	.008	
4.0	.172	.102	.049	.148	.088	.043	.102	.062	.030	.059	.036	.018	.019	.012	.006	
5.0	.166	.093	.039	.142	.080	.034	.098	.056	.024	.057	.033	.014	.018	.011	.005	
6.0	.159	.085	.032	.137	.074	.028	.094	.052	.020	.055	.030	.012	.018	.010	.004	
7.0	.152	.079	.027	.130	.068	.024	.090	.048	.017	.052	.028	.010	.017	.009	.003	
8.0	.144	.073	.024	.124	.063	.021	.086	.044	.015	.050	.026	.009	.016	.009	.003	
9.0	.137	.068	.021	.118	.059	.019	.082	.042	.013	.048	.025	.008	.015	.008	.003	
10.0	.131	.064	.019	.113	.055	.017	.078	.039	.012	.046	.023	.007	.015	.008	.002	

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-17

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: PW131233-SDG					TYPE:LED			WEIGHT:2.60 (Kg)			
DIM.: D50*910					SPEC.:			SERIAL No.:			
MFR.:					SUR.:770X8			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	2H	21.2	23.2	21.5	23.4	23.6	33.7	35.6	34.0	35.9	36.1
	3H	23.1	24.9	23.4	25.1	25.4	33.4	35.2	33.7	35.5	35.7
	4H	23.8	25.5	24.2	25.8	26.1	33.3	35.0	33.6	35.3	35.6
	6H	24.3	25.9	24.7	26.2	26.5	33.2	34.8	33.5	35.1	35.4
	8H	24.5	26.0	24.8	26.3	26.6	33.1	34.7	33.5	35.0	35.3
	12H	24.6	26.1	25.0	26.4	26.7	33.1	34.5	33.4	34.8	35.2
4H	2H	29.5	31.2	29.8	31.5	31.8	34.1	35.8	34.5	36.1	36.4
	3H	31.3	32.8	31.7	33.1	33.4	33.9	35.4	34.3	35.7	36.0
	4H	32.0	33.3	32.4	33.7	34.0	33.8	35.1	34.2	35.5	35.8
	6H	32.4	33.6	32.8	33.9	34.3	33.7	34.9	34.1	35.2	35.6
	8H	32.5	33.6	32.9	34.0	34.4	33.7	34.8	34.1	35.1	35.5
	12H	32.6	33.6	33.0	34.0	34.4	33.6	34.6	34.1	35.0	35.4
8H	4H	31.8	32.9	32.3	33.3	33.7	33.8	34.9	34.2	35.3	35.7
	6H	32.3	33.2	32.7	33.6	34.0	33.8	34.6	34.2	35.1	35.5
	8H	32.4	33.2	32.9	33.6	34.1	33.7	34.5	34.2	34.9	35.4
	12H	32.5	33.2	33.0	33.6	34.1	33.7	34.4	34.2	34.8	35.3
12H	4H	31.8	32.8	32.2	33.2	33.6	33.8	34.8	34.2	35.2	35.6
	6H	32.2	33.0	32.7	33.5	33.9	33.7	34.5	34.2	34.9	35.4
	8H	32.4	33.1	32.9	33.5	34.0	33.7	34.4	34.2	34.8	35.3
Variations with the observer position at spacings:											
S = 1.0H	+ 1.3 / - 2.3					+ 0.4 / - 0.5					
1.5H	+ 2.7 / - 5.7					+ 3.2 / -12.9					
2.0H	+ 1.3 / -24.5					+ 2.0 / - 6.7					

CIE Pub.117 Corrected 111.8 lm Total Lamp Luminous Flux.(8log(F/F0) = -7.6)

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-17

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: PW131233-SDG	TYPE:LED	WEIGHT:2.60 (Kg)
DIM.: D50*910	SPEC.:	SERIAL No.:
MFR.:	SUR.:770X8	PROTECTION ANGLE:

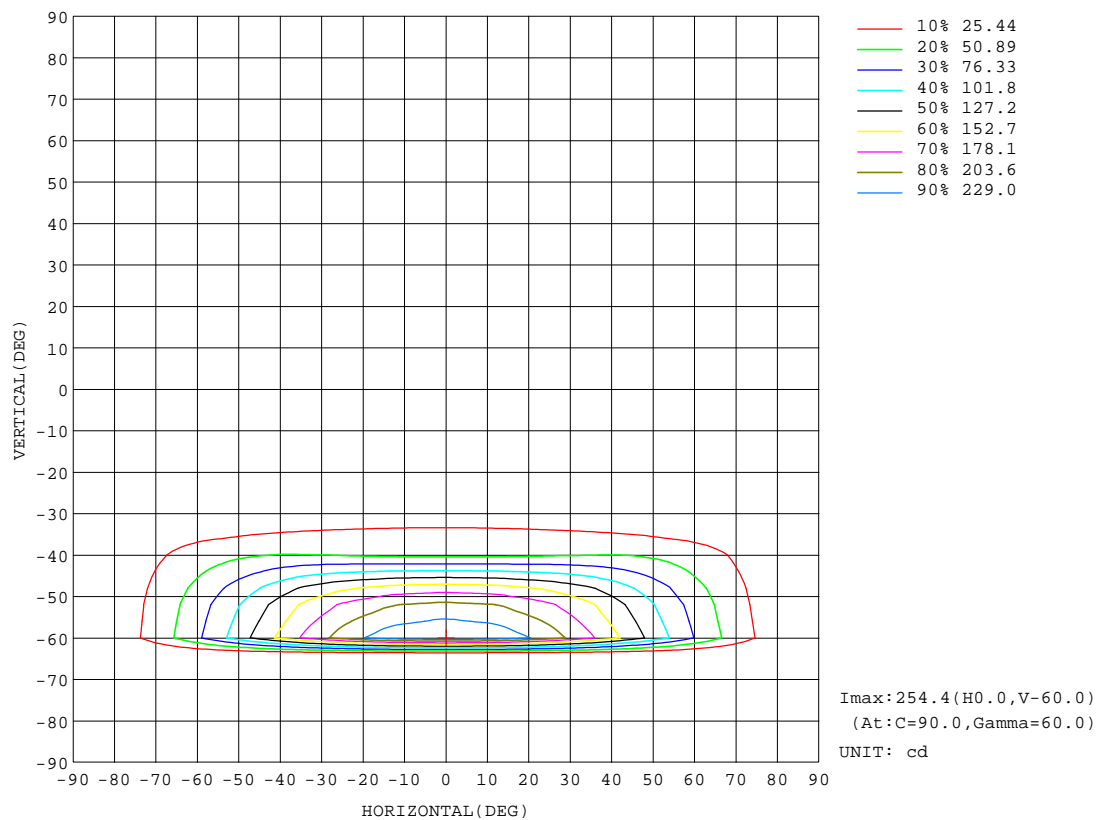
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	33	17	8	32	17	8	31	17	8	-1
0.80	46	30	20	45	29	19	42	28	19	9
1.00	58	43	33	57	42	32	54	45	32	22
1.25	68	54	44	67	53	44	63	51	43	33
1.50	75	62	52	73	61	52	70	59	51	41
2.00	86	75	66	84	73	65	80	71	64	54
2.50	92	82	74	90	80	73	85	77	71	61
3.00	97	88	81	94	86	80	90	83	78	68
4.00	102	95	89	100	93	88	95	90	85	75
5.00	106	100	94	103	98	93	98	94	90	80
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:2019-11-17

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: PW131233-SDG	TYPE:LED	WEIGHT:2.60 (Kg)
DIM.: D50*910	SPEC.:	SERIAL No.:
MFR.:	SUR.:770X8	PROTECTION ANGLE:

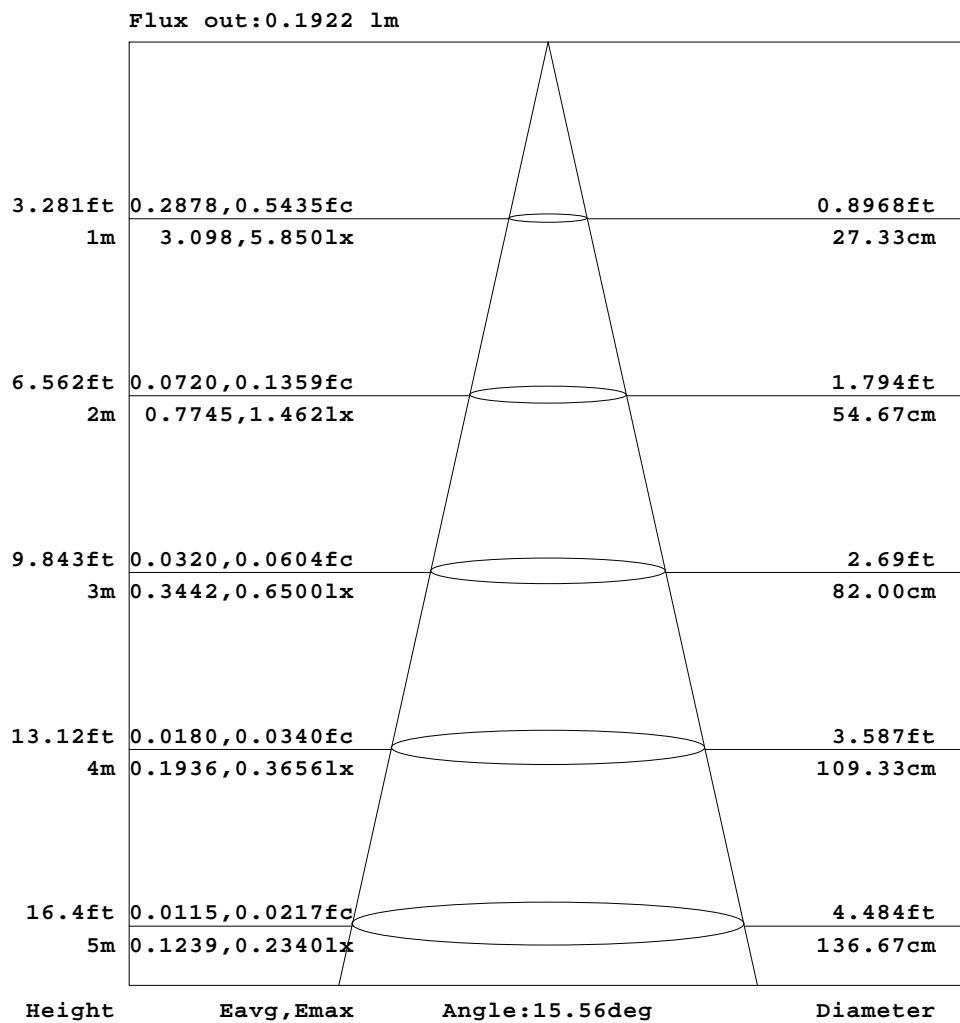


C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-17

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: PW131233-SDG	TYPE:LED	WEIGHT:2.60 (Kg)
DIM.: D50*910	SPEC.:	SERIAL No.:
MFR.:	SUR.:770X8	PROTECTION ANGLE:



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

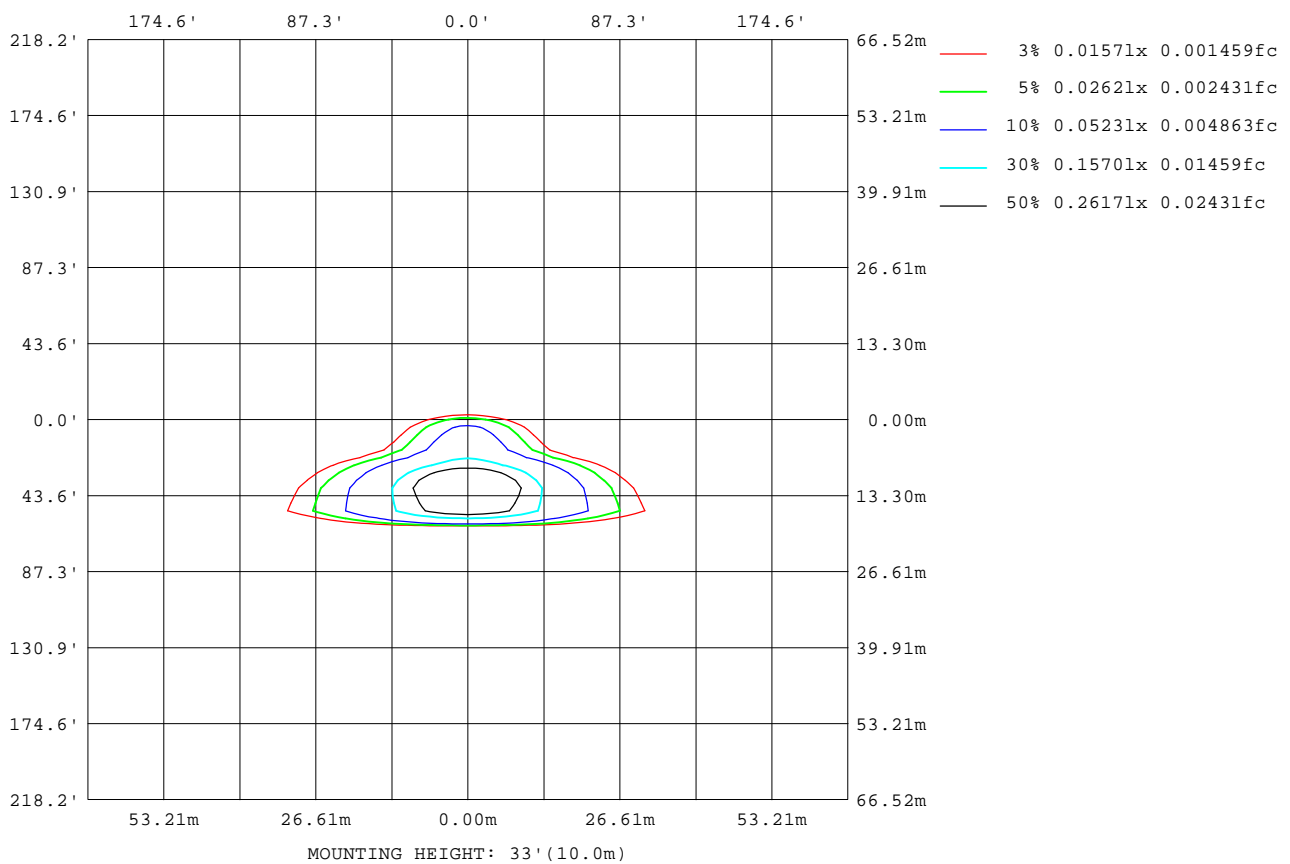
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-17

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

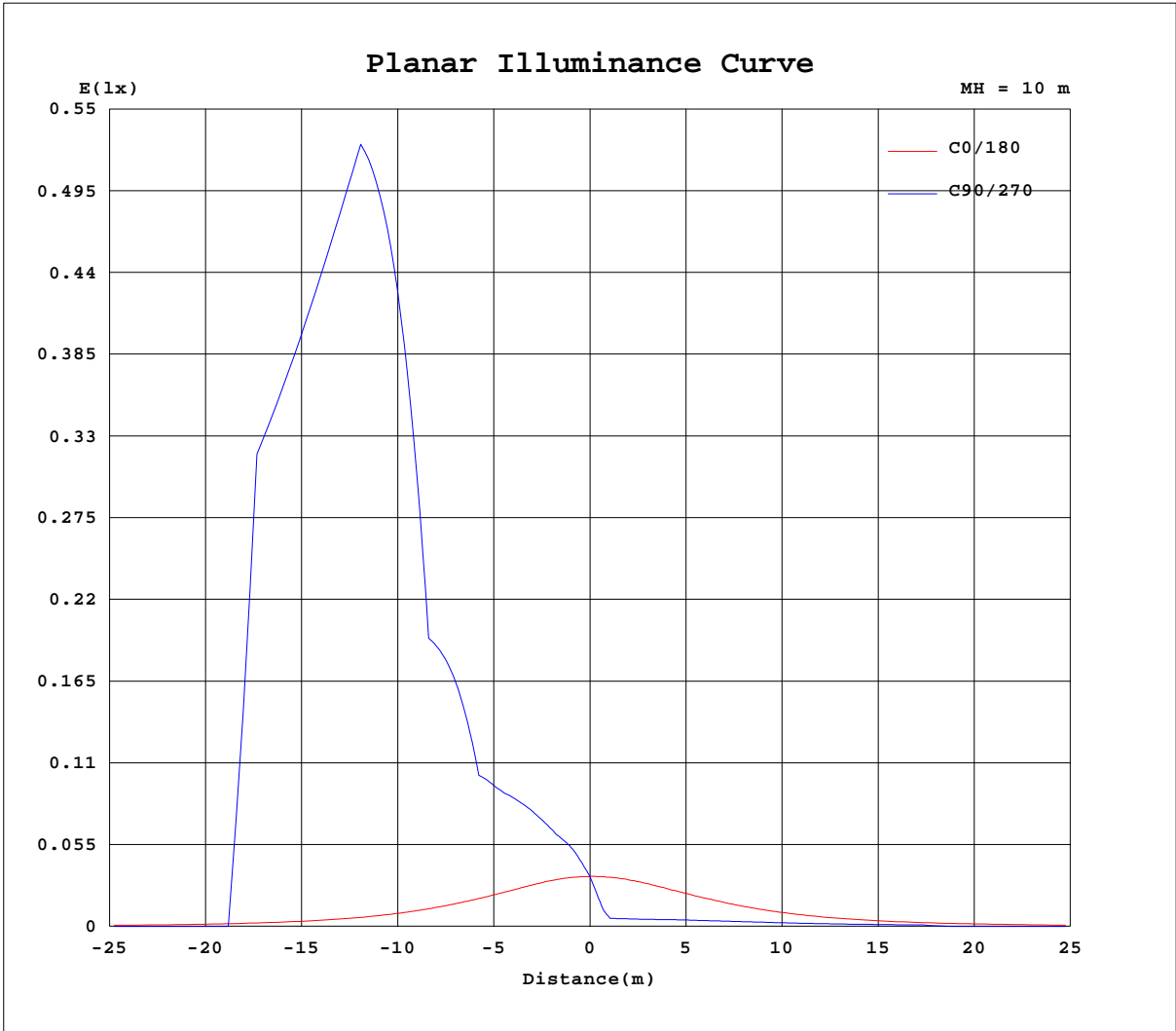
NAME: PW131233-SDG	TYPE:LED	WEIGHT:2.60 (Kg)
DIM.: D50*910	SPEC.:	SERIAL No.:
MFR.:	SUR.:770X8	PROTECTION ANGLE:



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-17

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:2019-11-17

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: