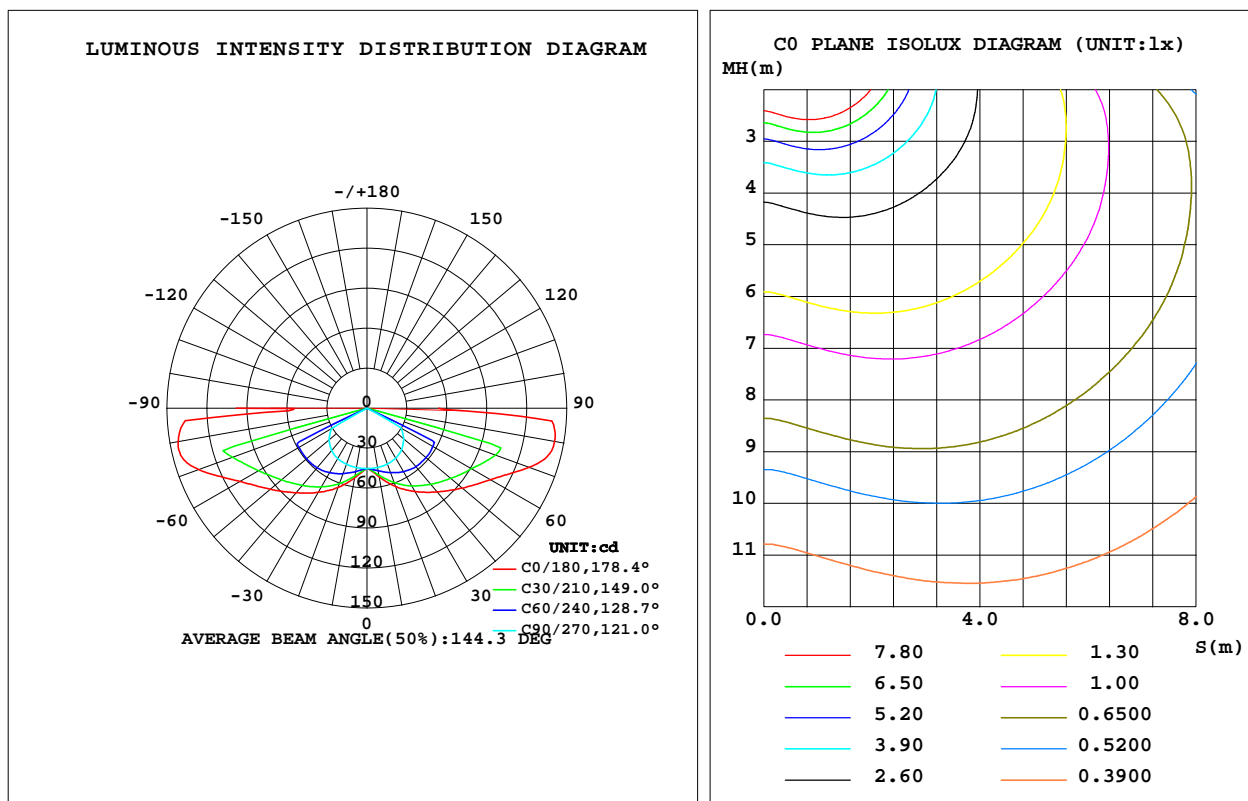


# LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: PW030019-BC	TYPE:LED	WEIGHT:1.354(Kg)
DIM.: 1010*60*70	SPEC.:	SERIAL No.:
MFR.:	SUR.:1010*60	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 16.20 lm/W			
MODEL		I <sub>max</sub> (cd)	144.6	S/MH(C0/180)	2.54
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	1.43
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	320.59	h UP,DN(C0-180)	0.0,49.1
NOMINAL FLUX(lm)	320.594	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.0,50.9
LAMPS INSIDE	1	h up(%)	0.0	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	219.2	h down(%)	100.0	CIBSE SHR MAX	1.50



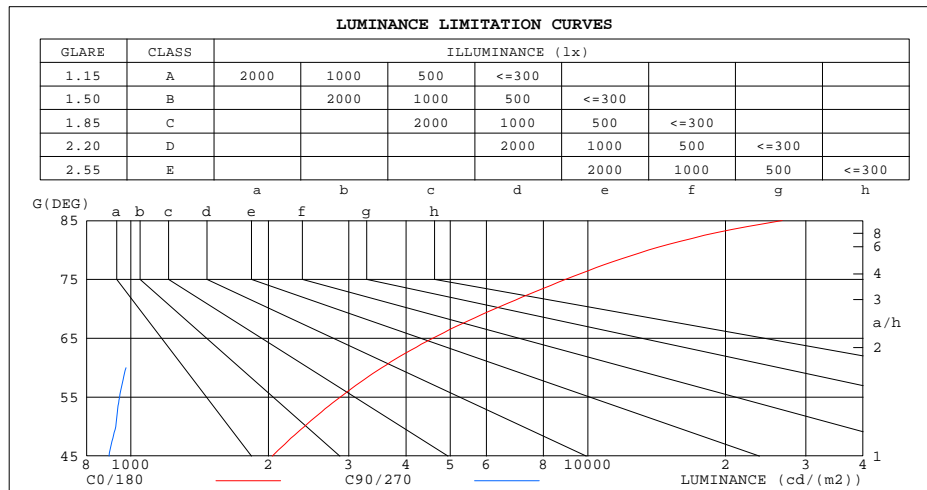
C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:ZENGQG  
 Test Date:2019-11-07

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	47.80	46.83	45.33	47.19	48.43	47.18	45.35	46.89	0- 5	1.106	1.106	0.34,0.34
10	52.22	49.42	45.28	50.04	53.01	50.02	45.33	49.60	5- 10	3.452	4.558	1.42,1.42
15	57.31	52.49	45.05	53.38	58.18	53.38	45.18	52.79	10- 15	6.047	10.61	3.31,3.31
20	62.48	55.91	44.75	56.55	63.21	56.57	44.93	56.38	15- 20	8.885	19.49	6.08,6.08
25	67.46	58.94	44.12	59.80	68.09	59.87	44.47	59.62	20- 25	11.91	31.40	9.79,9.79
30	72.27	61.82	43.36	62.61	72.88	62.75	43.82	62.77	25- 30	15.05	46.45	14.5,14.5
35	77.07	64.43	42.16	65.08	77.75	65.35	42.80	65.67	30- 35	18.24	64.69	20.2,20.2
40	82.02	66.56	40.66	67.51	82.98	67.95	41.44	68.08	35- 40	21.43	86.12	26.9,26.9
45	87.39	68.79	38.39	69.47	88.60	69.94	39.38	70.68	40- 45	24.57	110.7	34.5,34.5
50	93.35	70.59	36.12	71.86	94.72	72.37	37.31	72.84	45- 50	27.67	138.4	43.2,43.2
55	99.86	72.70	32.85	73.93	101.6	74.50	34.15	75.29	50- 55	30.71	169.1	52.7,52.7
60	107.3	74.92	29.58	76.21	110.1	76.89	31.00	77.88	55- 60	33.69	202.8	63.2,63.2
65	117.2	76.91	0	79.08	121.5	79.73	0	80.31	60- 65	33.08	235.8	73.6,73.6
70	129.7	0	0	0	134.7	0	0	0	65- 70	28.96	264.8	82.6,82.6
75	140.1	0	0	0	143.5	0	0	0	70- 75	24.35	289.1	90.2,90.2
80	143.0	0	0	0	143.9	0	0	0	75- 80	17.74	306.9	95.7,95.7
85	140.5	0	0	0	138.7	0	0	0	80- 85	10.60	317.5	99,99
90	53.77	0	0	0	98.21	0	0	0	85- 90	3.107	320.6	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	26607	0
80	13594	0
75	8935	0
70	6258	0
65	4576	0
60	3542	976
55	2873	945
50	2397	927
45	2039	896

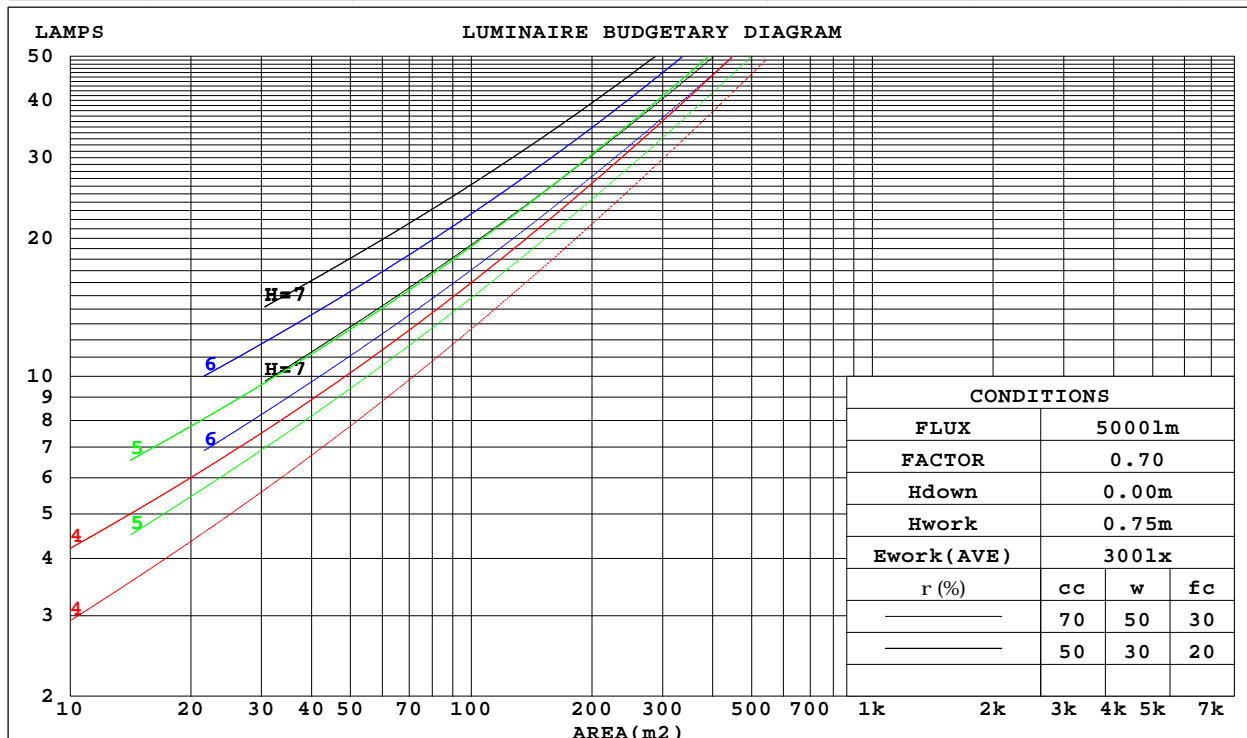
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-07

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: PW030019-BC	TYPE:LED	WEIGHT:1.354(Kg)
DIM.: 1010*60*70	SPEC.:	SERIAL No.:
MFR.:	SUR.:1010*60	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															



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-07

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: PW030019-BC	TYPE:LED	WEIGHT:1.354(Kg)
DIM.: 1010*60*70	SPEC.:	SERIAL No.:
MFR.:	SUR.:1010*60	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	.393	.224	.071	.386	.220	.070	.372	.214	.068	.360	.207	.067	.348	.202	.065	
2.0	.358	.196	.060	.352	.194	.060	.340	.189	.059	.328	.184	.058	.318	.180	.057	
3.0	.324	.172	.052	.318	.170	.051	.307	.166	.051	.297	.163	.050	.287	.159	.049	
4.0	.293	.152	.045	.287	.150	.044	.278	.147	.044	.269	.144	.044	.260	.141	.043	
5.0	.266	.136	.039	.261	.134	.039	.253	.132	.039	.245	.129	.038	.237	.127	.038	
6.0	.243	.122	.035	.239	.121	.035	.231	.119	.034	.224	.116	.034	.217	.114	.034	
7.0	.224	.111	.031	.220	.110	.031	.213	.108	.031	.207	.106	.031	.200	.104	.031	
8.0	.207	.101	.028	.203	.100	.028	.197	.099	.028	.191	.097	.028	.186	.095	.028	
9.0	.192	.093	.026	.189	.092	.026	.184	.091	.026	.178	.089	.026	.173	.088	.025	
10.0	.179	.086	.024	.177	.085	.024	.172	.084	.024	.167	.083	.024	.162	.082	.023	

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	.186	.155	.128	.159	.133	.110	.109	.092	.076	.063	.053	.044	.020	.017	.014	
2.0	.181	.132	.090	.155	.113	.078	.106	.078	.054	.061	.046	.032	.020	.015	.010	
3.0	.175	.115	.067	.150	.099	.058	.103	.069	.041	.059	.040	.024	.019	.013	.008	
4.0	.168	.102	.052	.144	.088	.045	.099	.061	.032	.057	.036	.019	.018	.012	.006	
5.0	.160	.092	.042	.137	.080	.036	.095	.056	.026	.055	.033	.015	.018	.011	.005	
6.0	.152	.084	.035	.131	.073	.030	.090	.051	.021	.052	.030	.013	.017	.010	.004	
7.0	.145	.077	.030	.125	.067	.026	.086	.047	.018	.050	.028	.011	.016	.009	.004	
8.0	.138	.071	.026	.118	.062	.023	.082	.044	.016	.048	.026	.010	.015	.008	.003	
9.0	.131	.067	.023	.113	.058	.020	.078	.041	.014	.045	.024	.009	.015	.008	.003	
10.0	.124	.062	.021	.107	.054	.018	.074	.038	.013	.043	.022	.008	.014	.007	.003	

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-07

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: PW030019-BC					TYPE:LED		WEIGHT:1.354(Kg)				
DIM.: 1010*60*70					SPEC.:		SERIAL No.:				
MFR.:					SUR.:1010*60		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	18.6	20.4	18.9	20.6	20.9	12.6	14.3	12.8	14.6	14.8	
	3H	22.9	24.5	23.2	24.8	25.1	12.3	14.0	12.6	14.2	14.5
	4H	25.1	26.7	25.5	27.0	27.3	12.2	13.8	12.5	14.0	14.3
	6H	27.4	28.8	27.7	29.1	29.4	12.1	13.6	12.4	13.8	14.1
	8H	28.5	30.0	28.9	30.3	30.6	12.0	13.5	12.4	13.8	14.1
	12H	29.9	31.3	30.3	31.6	31.9	12.0	13.3	12.3	13.7	14.0
4H	2H	19.2	20.8	19.5	21.1	21.3	15.1	16.7	15.5	17.0	17.3
	3H	23.7	25.1	24.0	25.4	25.7	14.9	16.3	15.3	16.6	16.9
	4H	26.0	27.3	26.4	27.6	28.0	14.8	16.1	15.2	16.4	16.8
	6H	28.4	29.5	28.8	29.9	30.3	14.7	15.8	15.1	16.2	16.6
	8H	29.6	30.7	30.0	31.1	31.5	14.6	15.7	15.1	16.1	16.5
	12H	31.0	32.0	31.4	32.4	32.8	14.6	15.6	15.0	16.0	16.4
8H	4H	25.8	26.9	26.3	27.3	27.7	16.4	17.5	16.8	17.8	18.2
	6H	28.2	29.1	28.7	29.6	30.0	16.3	17.2	16.7	17.6	18.0
	8H	29.5	30.3	30.0	30.7	31.2	16.3	17.1	16.7	17.5	18.0
	12H	30.9	31.6	31.4	32.1	32.5	16.2	16.9	16.7	17.4	17.9
12H	4H	25.8	26.8	26.2	27.2	27.6	16.5	17.5	17.0	17.9	18.3
	6H	28.2	29.0	28.7	29.4	29.9	16.5	17.3	16.9	17.7	18.2
	8H	29.5	30.2	30.0	30.6	31.1	16.4	17.1	16.9	17.6	18.1
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.2					+ 0.4 / - 0.2					
1.5H	+ 0.8 / - 0.4					+ 2.1 / - 3.4					
2.0H	+ 0.5 / - 0.8					+ 1.4 / - 2.5					

CIE Pub.117 Corrected 320.6 lm Total Lamp Luminous Flux.(8log(F/F0) = -4.0)

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-07

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: PW030019-BC	TYPE:LED	WEIGHT:1.354(Kg)
DIM.: 1010*60*70	SPEC.:	SERIAL No.:
MFR.:	SUR.:1010*60	PROTECTION ANGLE:

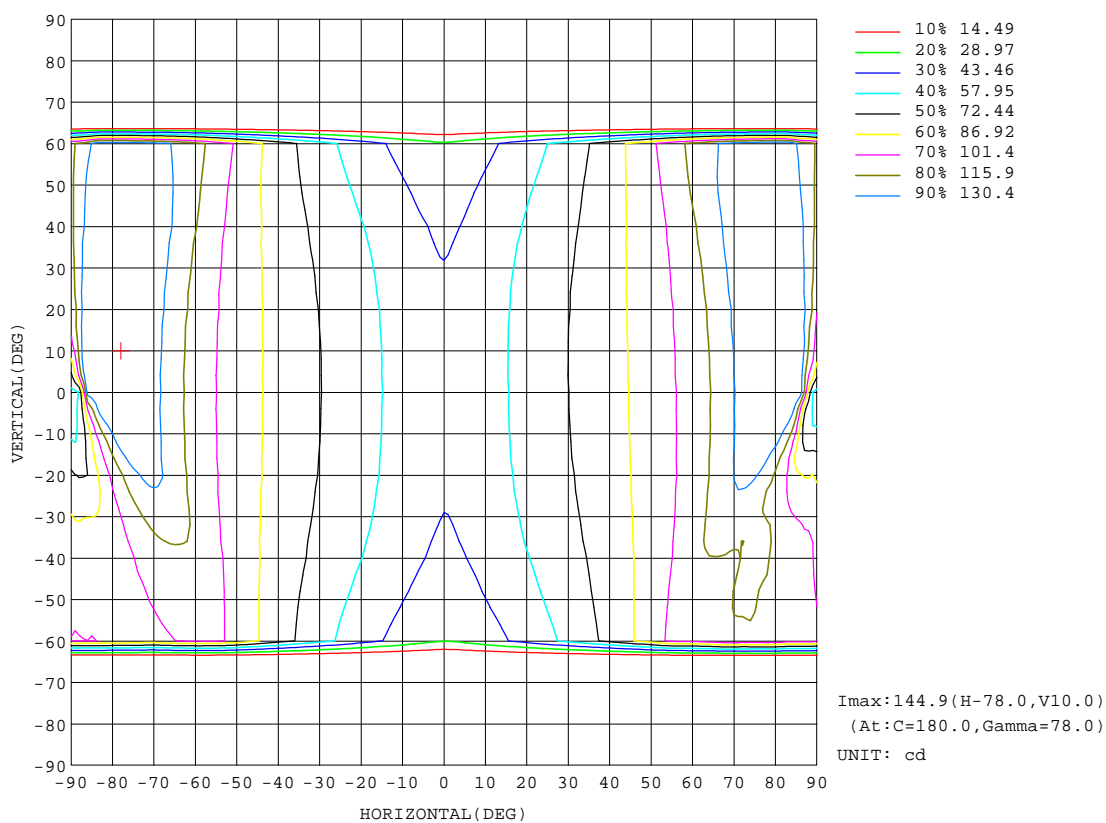
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	48	34	26	47	34	26	45	33	26	18
0.80	57	44	35	56	43	35	54	42	34	26
1.00	66	53	44	65	52	44	62	54	43	34
1.25	74	61	52	72	60	52	69	59	51	42
1.50	80	67	58	78	66	58	74	64	57	48
2.00	88	77	69	86	76	68	82	73	67	57
2.50	93	83	75	91	82	74	86	79	73	63
3.00	97	88	81	95	87	80	90	84	78	68
4.00	102	95	89	100	93	87	95	90	85	75
5.00	105	99	94	103	97	92	98	93	89	79
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:2019-11-07

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: PW030019-BC	TYPE:LED	WEIGHT:1.354(Kg)
DIM.: 1010*60*70	SPEC.:	SERIAL No.:
MFR.:	SUR.:1010*60	PROTECTION ANGLE:

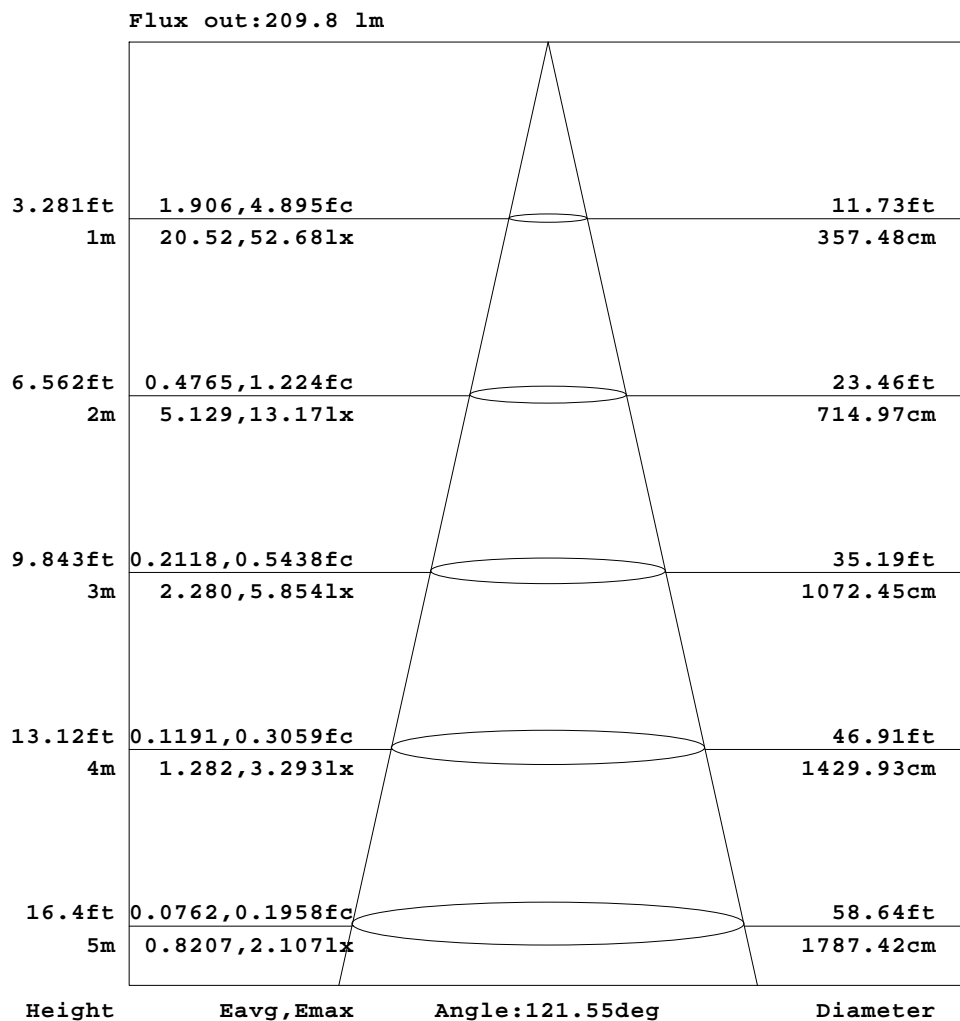


C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-07

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: PW030019-BC	TYPE:LED	WEIGHT:1.354(Kg)
DIM.: 1010*60*70	SPEC.:	SERIAL No.:
MFR.:	SUR.:1010*60	PROTECTION ANGLE:



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

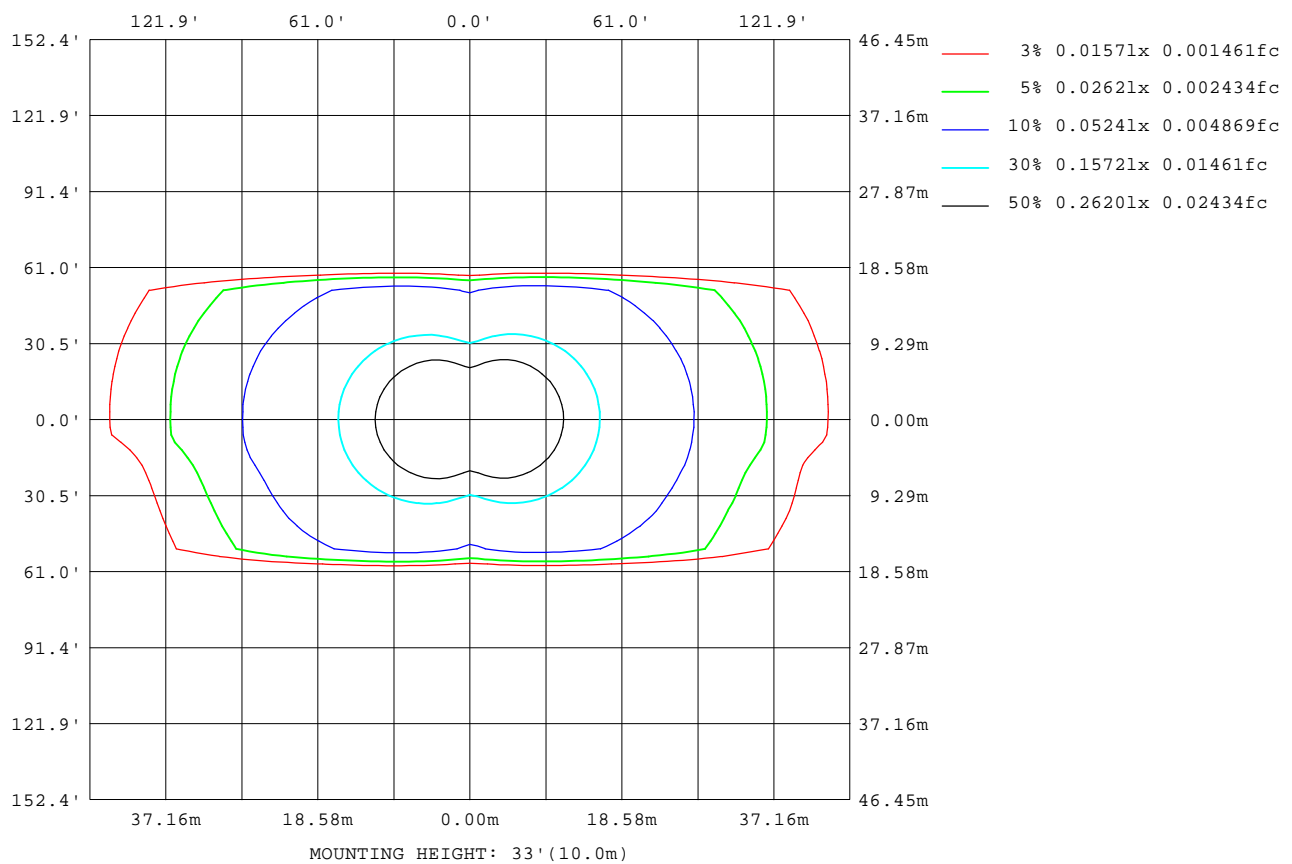
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-07

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

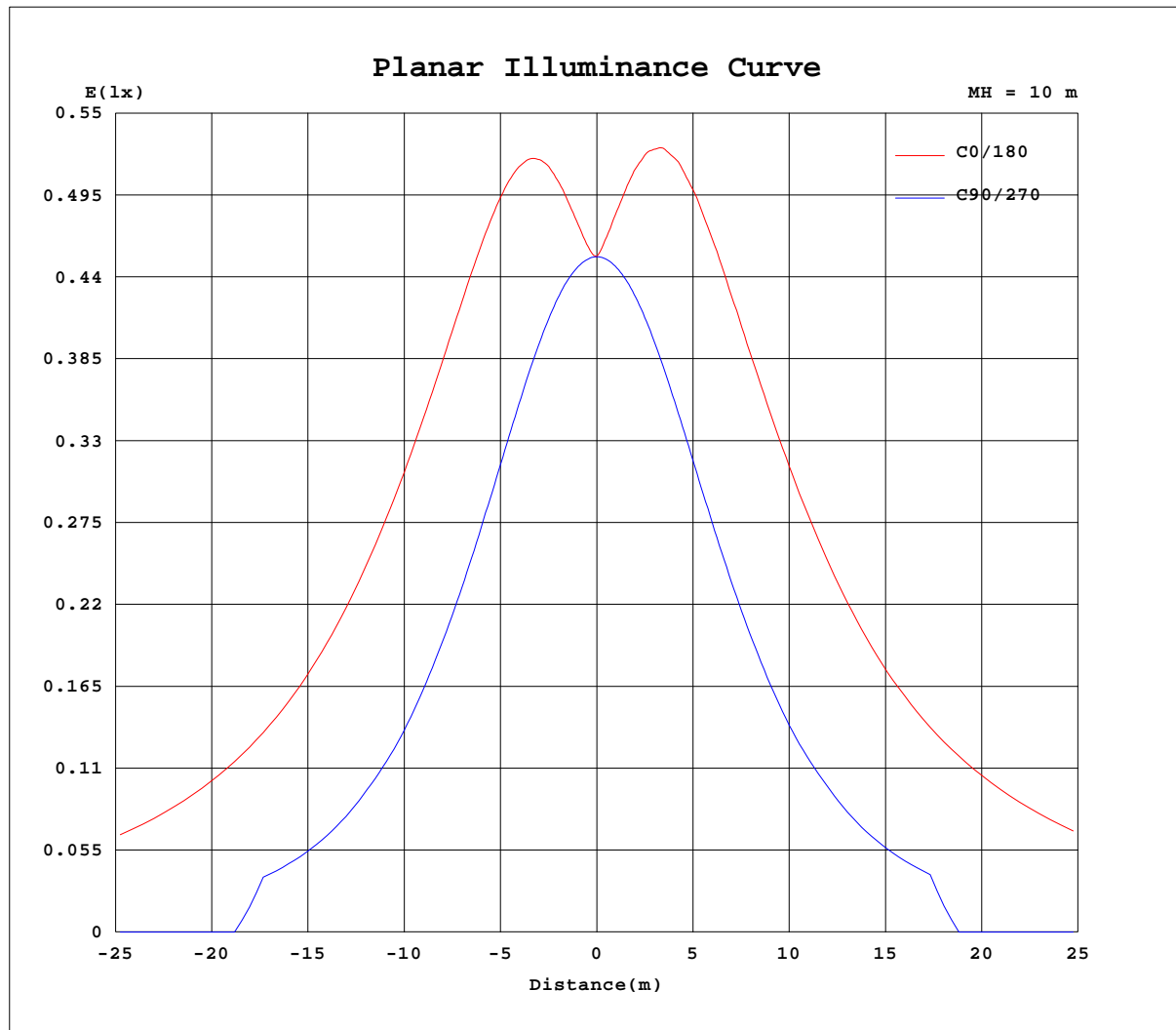
NAME: PW030019-BC	TYPE:LED	WEIGHT:1.354(Kg)
DIM.: 1010*60*70	SPEC.:	SERIAL No.:
MFR.:	SUR.:1010*60	PROTECTION ANGLE:



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-07

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: 2019-11-07

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: