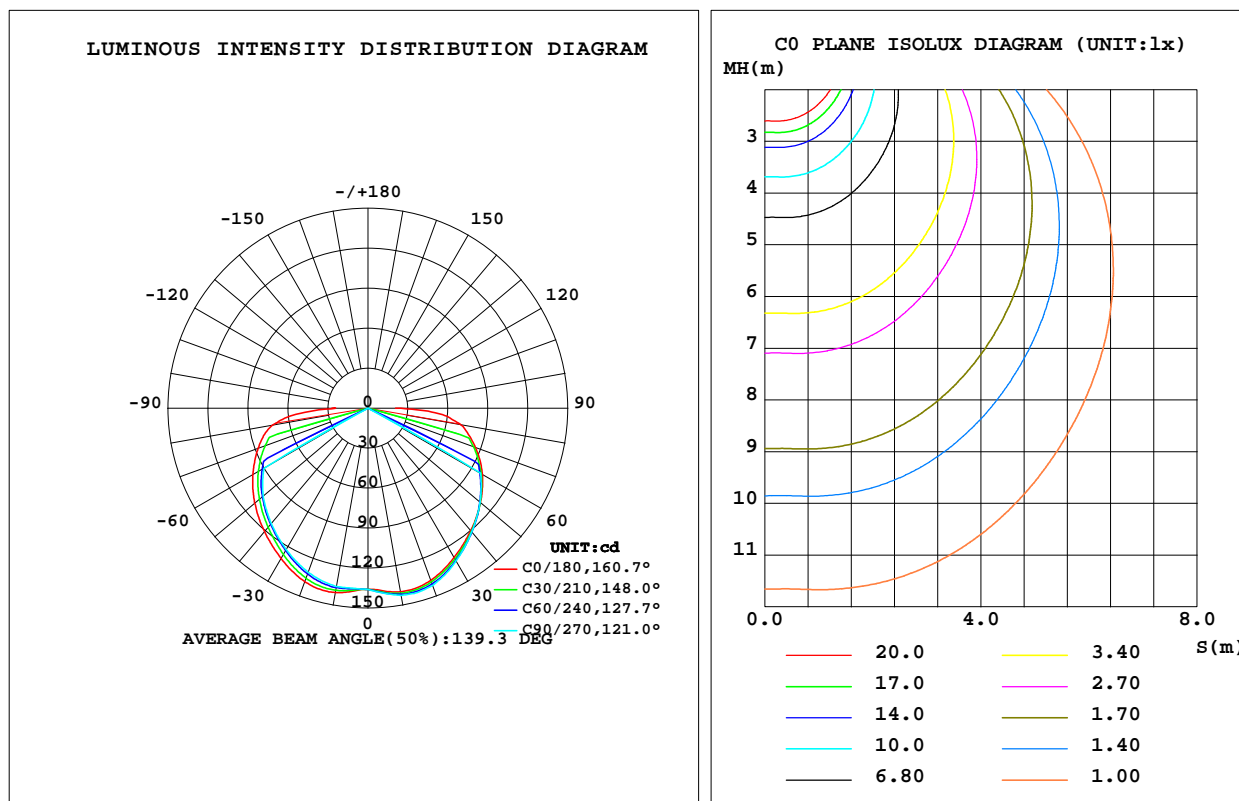


# LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: PT140934	TYPE:LED	WEIGHT:2.98(Kg)
DIM.: D450*70*20	SPEC.:	SERIAL No.:
MFR.:	SUR.:D450*70*20	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 16.90 lm/W			
MODEL		Imax(cd)	143.3	S/MH(C0/180)	1.41
NOMINAL POWER(W)	28	LOR(%)	100.0	S/MH(C90/270)	1.43
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	463.01	h UP,DN(C0-180)	0.0,50.9
NOMINAL FLUX(lm)	463.013	CIE CLASS	DIRECT	h UP,DN(C180-360)	0.0,49.1
LAMPS INSIDE	1	h up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	219.2	h down(%)	100.0	CIBSE SHR MAX	1.35



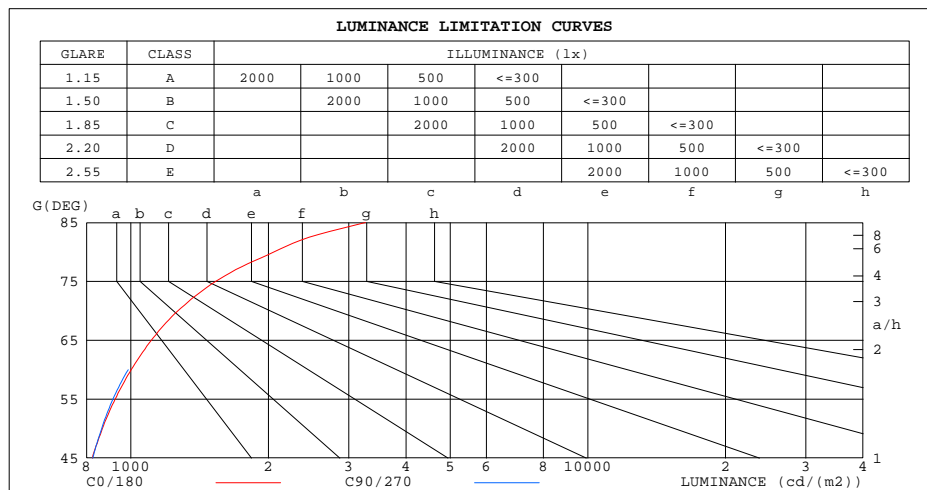
C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:ZENGQG  
 Test Date:2019-11-20

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	137.7	138.9	139.4	139.1	137.9	136.5	135.6	136.6	0- 5	3.275	3.275	0.71,0.71
10	139.8	141.3	142.6	141.9	140.5	137.6	135.9	137.3	5- 10	9.938	13.21	2.85,2.85
15	139.7	141.6	143.1	142.5	140.6	136.9	134.1	136.1	10- 15	16.57	29.78	6.43,6.43
20	137.6	139.6	141.6	140.5	138.6	134.0	131.1	132.7	15- 20	22.78	52.56	11.4,11.4
25	133.9	135.9	137.5	136.6	134.9	129.7	127.1	128.2	20- 25	28.32	80.88	17.5,17.5
30	129.4	131.3	132.4	131.8	130.4	124.8	122.6	123.3	25- 30	33.06	113.9	24.6,24.6
35	124.7	126.4	126.8	126.7	125.6	119.7	117.8	118.3	30- 35	37.03	151.0	32.6,32.6
40	120.0	121.3	121.3	121.5	120.9	114.6	113.1	113.5	35- 40	40.29	191.2	41.3,41.3
45	115.3	115.7	115.5	116.3	116.0	109.8	107.9	108.6	40- 45	42.83	234.1	50.6,50.6
50	110.2	110.1	109.8	110.7	110.9	104.8	102.8	103.8	45- 50	44.62	278.7	60.2,60.2
55	104.9	103.7	103.7	104.8	105.6	99.35	96.52	97.93	50- 55	45.62	324.3	70,70
60	99.14	97.31	97.63	98.90	99.80	93.80	90.28	91.83	55- 60	45.76	370.1	79.9,79.9
65	92.74	90.37	0	92.27	93.78	86.91	0	84.87	60- 65	36.51	406.6	87.8,87.8
70	85.77	0	0	0	87.68	0	0	0	65- 70	24.01	430.6	93,93
75	78.46	0	0	0	81.28	0	0	0	70- 75	16.44	447.0	96.6,96.6
80	70.66	0	0	0	72.38	0	0	0	75- 80	9.998	457.0	98.7,98.7
85	56.19	0	0	0	54.21	0	0	0	80- 85	4.731	461.8	99.7,99.7
90	20.68	0	0	0	27.26	0	0	0	85- 90	1.243	463.0	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	3259	0
80	2057	0
75	1533	0
70	1268	0
65	1109	0
60	1002	987
55	924	914
50	867	864
45	824	826

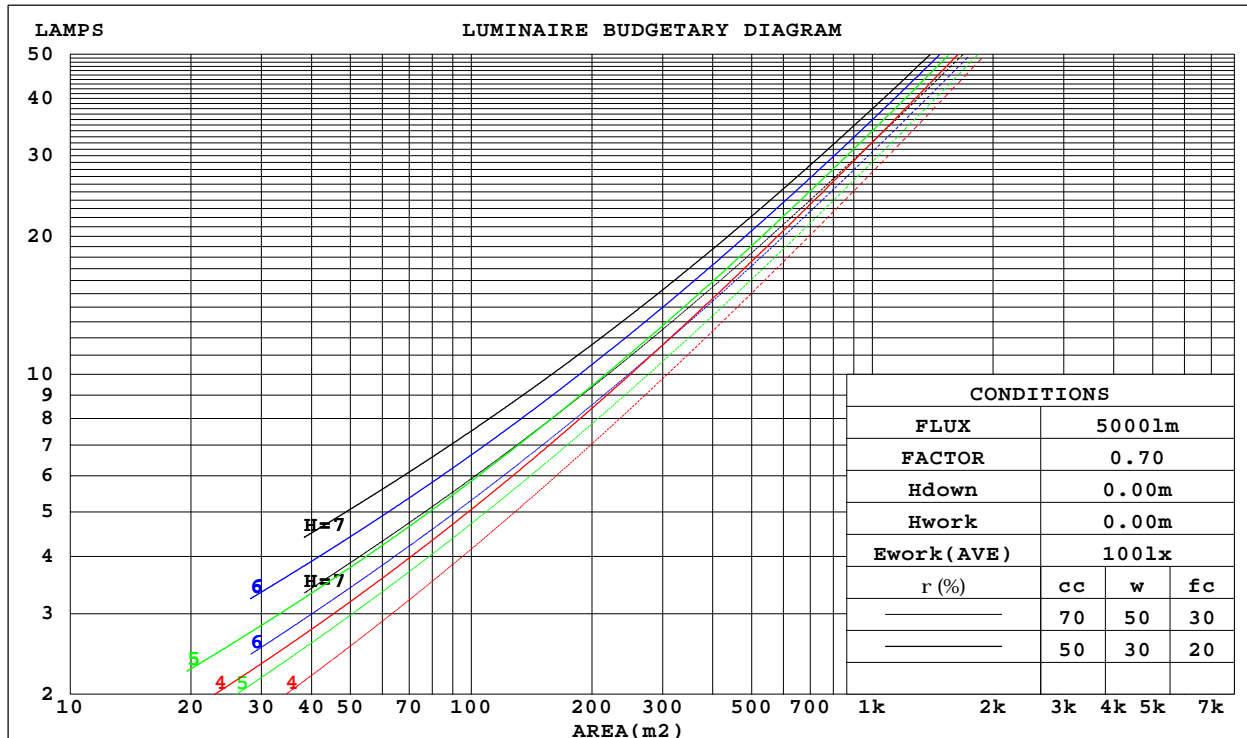
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-20

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: PT140934	TYPE:LED	WEIGHT:2.98 (Kg)
DIM.: D450*70*20	SPEC.:	SERIAL No.:
MFR.:	SUR.:D450*70*20	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	.00	
1.0	1.04	.00	.96	1.02	.98	.95	.98	.94	.92	.94	.91	.89	.90	.88	.86	.84	
2.0	.90	.84	.78	.89	.82	.77	.85	.80	.75	.82	.77	.73	.79	.75	.72	.70	
3.0	.79	.71	.64	.77	.70	.64	.74	.68	.62	.72	.66	.61	.69	.64	.60	.58	
4.0	.70	.61	.54	.68	.60	.53	.66	.58	.53	.63	.57	.52	.61	.56	.51	.49	
5.0	.62	.53	.46	.61	.52	.46	.59	.51	.45	.57	.50	.45	.55	.49	.44	.42	
6.0	.55	.46	.40	.54	.46	.39	.53	.45	.39	.51	.44	.39	.49	.43	.38	.36	
7.0	.50	.41	.35	.49	.41	.35	.48	.40	.34	.46	.39	.34	.45	.38	.34	.32	
8.0	.45	.37	.31	.45	.36	.31	.43	.36	.30	.42	.35	.30	.41	.35	.30	.28	
9.0	.41	.33	.27	.41	.33	.27	.40	.32	.27	.39	.32	.27	.38	.31	.27	.25	
10.0	.38	.30	.25	.38	.30	.25	.37	.29	.25	.36	.29	.24	.35	.29	.24	.22	



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-20

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: PT140934	TYPE:LED	WEIGHT:2.98(Kg)
DIM.: D450*70*20	SPEC.:	SERIAL No.:
MFR.:	SUR.:D450*70*20	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	.305 .173 .055	.298 .170 .054	.284 .163 .052	.272 .157 .050	.261 .151 .049	
2.0	.291 .160 .049	.285 .157 .048	.274 .152 .047	.263 .147 .046	.253 .143 .045	
3.0	.272 .145 .043	.267 .143 .043	.256 .139 .042	.247 .135 .041	.238 .132 .041	
4.0	.252 .131 .039	.247 .130 .038	.238 .126 .038	.230 .123 .037	.222 .120 .037	
5.0	.234 .119 .035	.230 .118 .034	.221 .115 .034	.214 .113 .034	.207 .110 .033	
6.0	.217 .109 .031	.213 .108 .031	.206 .106 .031	.199 .104 .030	.193 .102 .030	
7.0	.202 .100 .028	.199 .099 .028	.192 .097 .028	.186 .095 .028	.180 .094 .028	
8.0	.189 .092 .026	.186 .092 .026	.180 .090 .026	.174 .088 .025	.169 .087 .025	
9.0	.177 .086 .024	.174 .085 .024	.169 .084 .024	.164 .082 .024	.159 .081 .023	
10.0	.166 .080 .022	.164 .079 .022	.159 .078 .022	.155 .077 .022	.150 .076 .022	

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	.180 .156 .135	.154 .134 .116	.105 .092 .080	.061 .053 .047	.019 .017 .015	
2.0	.172 .132 .098	.147 .114 .085	.101 .079 .059	.058 .046 .035	.019 .015 .011	
3.0	.165 .114 .074	.141 .099 .064	.097 .069 .045	.056 .040 .027	.018 .013 .009	
4.0	.158 .101 .058	.135 .087 .050	.093 .061 .035	.054 .036 .021	.017 .012 .007	
5.0	.150 .091 .047	.129 .078 .041	.089 .055 .029	.052 .032 .017	.017 .011 .006	
6.0	.143 .082 .039	.123 .071 .034	.085 .050 .024	.049 .029 .014	.016 .010 .005	
7.0	.137 .076 .033	.118 .066 .029	.081 .046 .020	.047 .027 .012	.015 .009 .004	
8.0	.130 .070 .028	.112 .061 .025	.078 .043 .017	.045 .025 .010	.015 .008 .003	
9.0	.124 .065 .025	.107 .056 .022	.074 .040 .015	.043 .023 .009	.014 .008 .003	
10.0	.118 .061 .022	.102 .053 .019	.071 .037 .014	.041 .022 .008	.013 .007 .003	

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-20

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: PT140934					TYPE:LED			WEIGHT:2.98(Kg)			
DIM.: D450*70*20					SPEC.:			SERIAL No.:			
MFR.:					SUR.:D450*70*20			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	13.6	15.1	13.9	15.4	15.6	12.4	13.9	12.7	14.2	14.4	
	3H	16.2	17.7	16.5	17.9	18.2	12.2	13.6	12.5	13.8	14.1
	4H	17.6	19.0	18.0	19.3	19.5	12.1	13.4	12.4	13.7	13.9
	6H	18.9	20.2	19.2	20.5	20.7	11.9	13.2	12.3	13.5	13.8
	8H	19.4	20.7	19.8	20.9	21.2	11.9	13.1	12.2	13.4	13.7
	12H	20.1	21.3	20.4	21.6	21.9	11.8	13.0	12.2	13.3	13.6
4H	2H	14.3	15.7	14.7	16.0	16.2	13.3	14.7	13.6	14.9	15.2
	3H	17.2	18.4	17.5	18.6	19.0	13.1	14.3	13.4	14.6	14.9
	4H	18.7	19.7	19.0	20.1	20.4	13.0	14.1	13.3	14.4	14.7
	6H	20.0	20.9	20.4	21.3	21.6	12.9	13.8	13.3	14.2	14.6
	8H	20.5	21.4	20.9	21.8	22.1	12.8	13.7	13.2	14.1	14.5
	12H	21.1	22.0	21.6	22.3	22.8	12.8	13.6	13.2	14.0	14.4
8H	4H	18.5	19.4	18.9	19.8	20.2	13.3	14.2	13.7	14.6	14.9
	6H	19.8	20.6	20.3	21.0	21.4	13.2	13.9	13.7	14.4	14.8
	8H	20.4	21.0	20.8	21.5	21.9	13.2	13.8	13.6	14.3	14.7
	12H	21.0	21.6	21.5	22.0	22.5	13.1	13.7	13.6	14.1	14.6
12H	4H	18.5	19.3	18.9	19.7	20.1	13.3	14.1	13.7	14.5	14.9
	6H	19.8	20.4	20.3	20.9	21.3	13.2	13.9	13.7	14.3	14.7
	8H	20.3	20.9	20.8	21.4	21.8	13.2	13.7	13.7	14.2	14.7
Variations with the observer position at spacings:											
S = 1.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4					
1.5H	+ 0.7 / - 0.3					+ 1.6 / - 2.7					
2.0H	+ 0.5 / - 1.0					+ 1.0 / - 1.9					

CIE Pub.117 Corrected 463.0 lm Total Lamp Luminous Flux.(8log(F/F0) = -2.7)

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-20

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: PT140934	TYPE:LED	WEIGHT:2.98(Kg)
DIM.: D450*70*20	SPEC.:	SERIAL No.:
MFR.:	SUR.:D450*70*20	PROTECTION ANGLE:

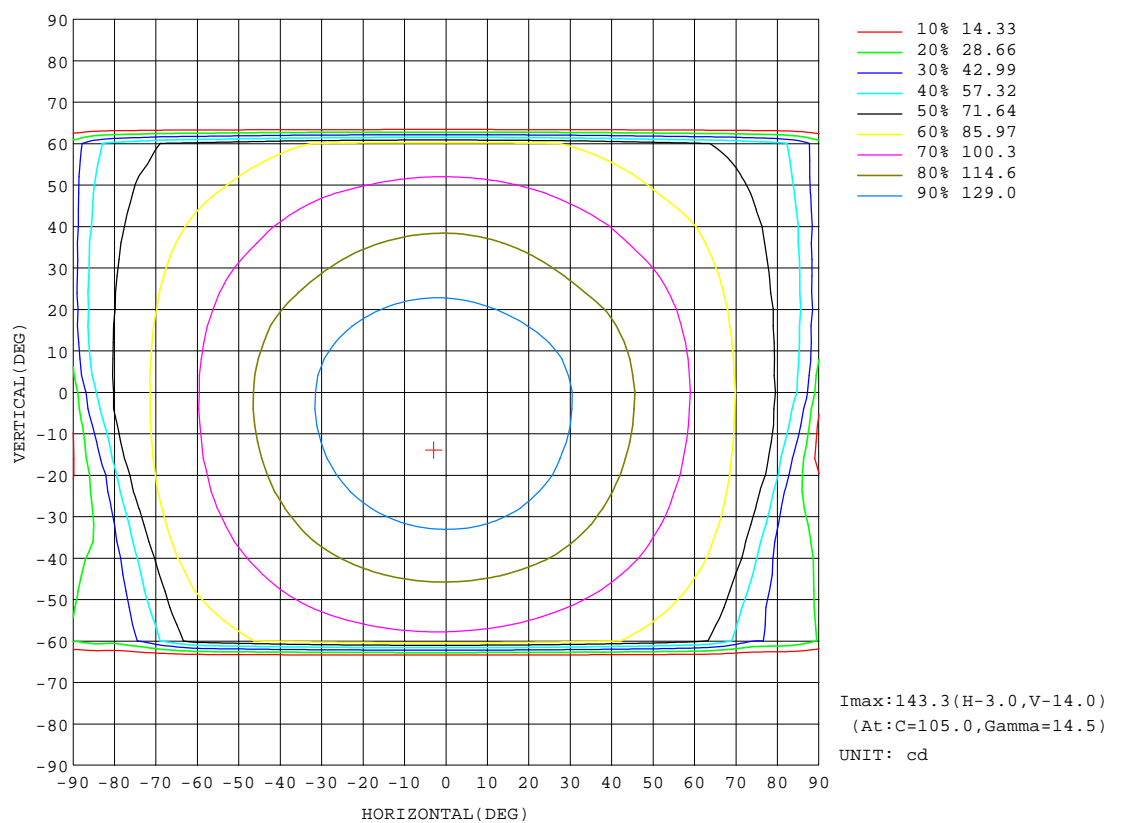
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	55	43	36	54	43	36	53	42	35	29
0.80	66	54	46	65	53	46	63	52	45	38
1.00	75	63	56	73	63	55	71	64	55	48
1.25	82	71	64	81	71	64	78	69	63	56
1.50	87	77	70	86	76	70	83	75	69	61
2.00	95	86	80	93	85	79	89	83	77	69
2.50	99	91	85	97	90	84	93	87	82	74
3.00	102	95	90	100	94	89	96	91	87	78
4.00	106	101	96	104	99	95	100	95	92	83
5.00	109	104	100	106	102	98	102	98	95	86
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:2019-11-20

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: PT140934	TYPE:LED	WEIGHT:2.98(Kg)
DIM.: D450*70*20	SPEC.:	SERIAL No.:
MFR.:	SUR.:D450*70*20	PROTECTION ANGLE:

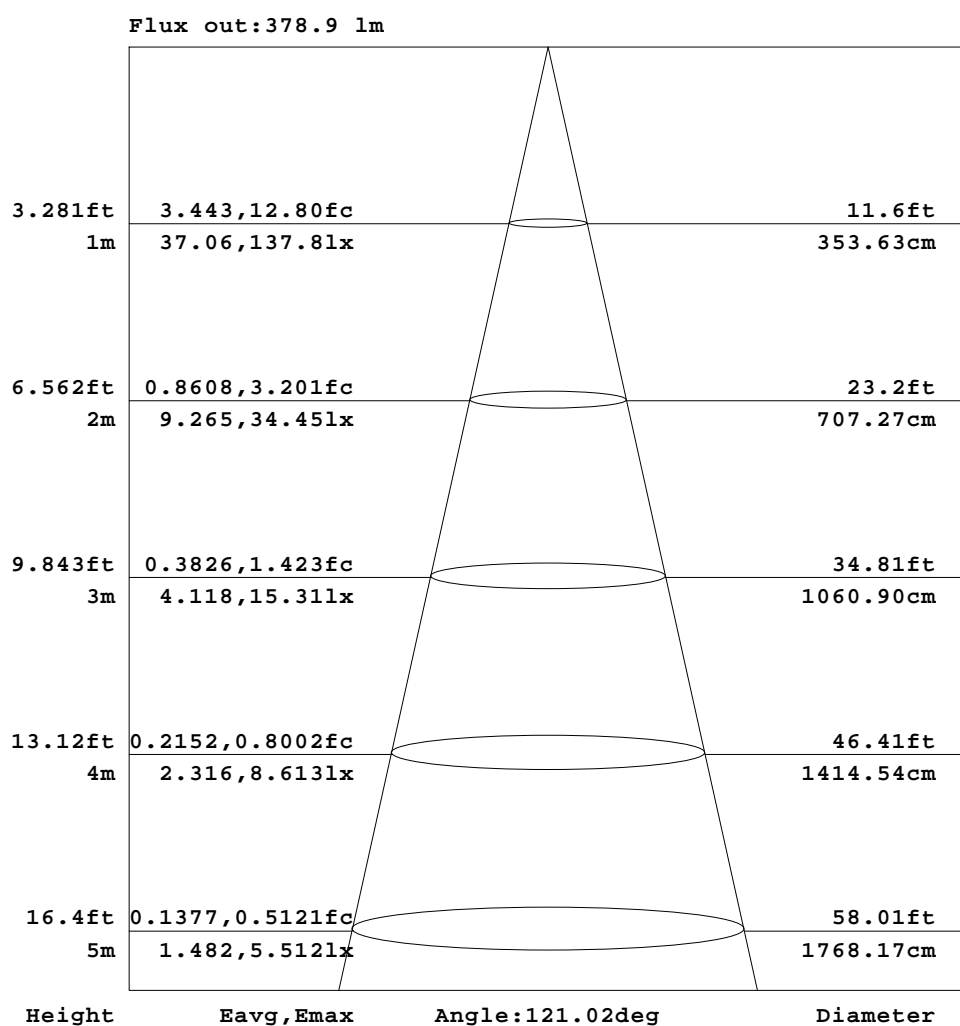


C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-20

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: PT140934	TYPE:LED	WEIGHT:2.98(Kg)
DIM.: D450*70*20	SPEC.:	SERIAL No.:
MFR.:	SUR.:D450*70*20	PROTECTION ANGLE:



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

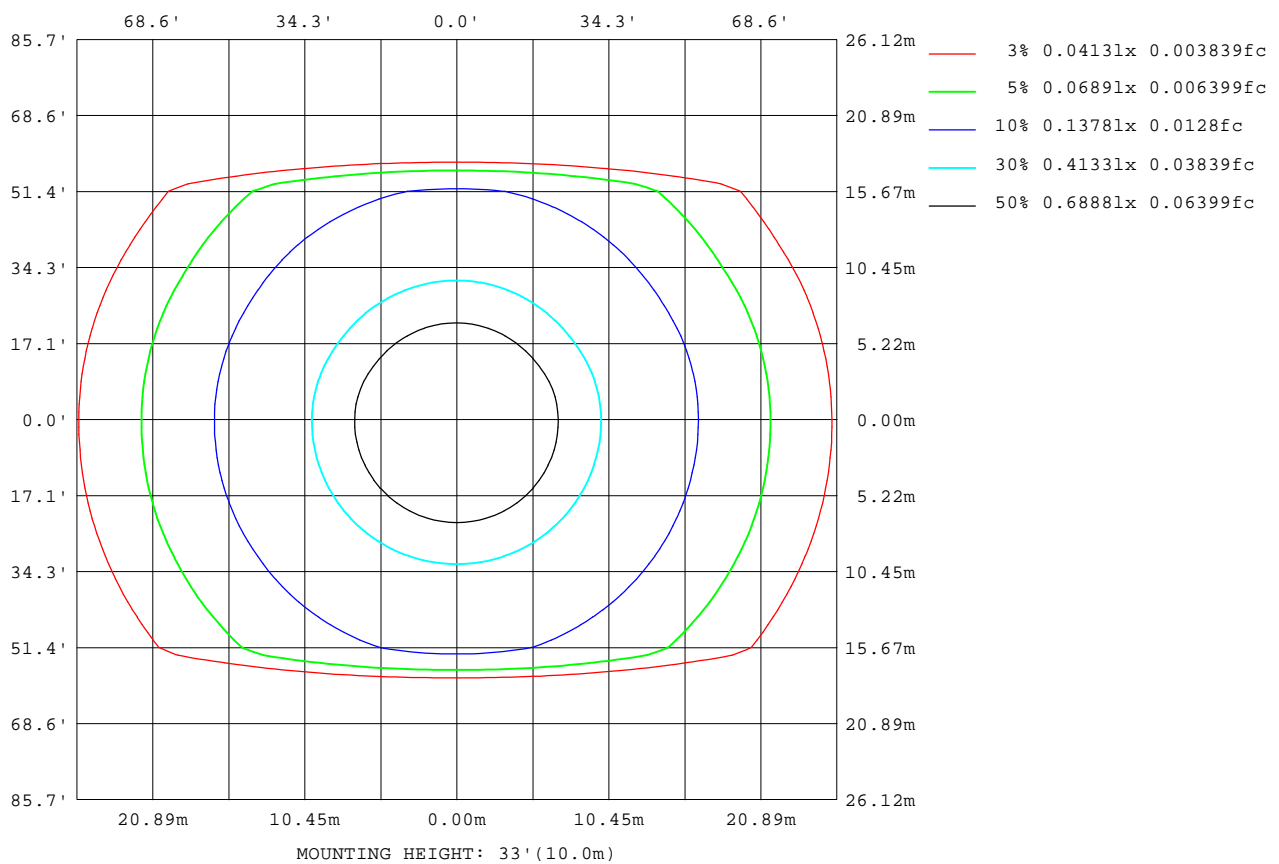
C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-20

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

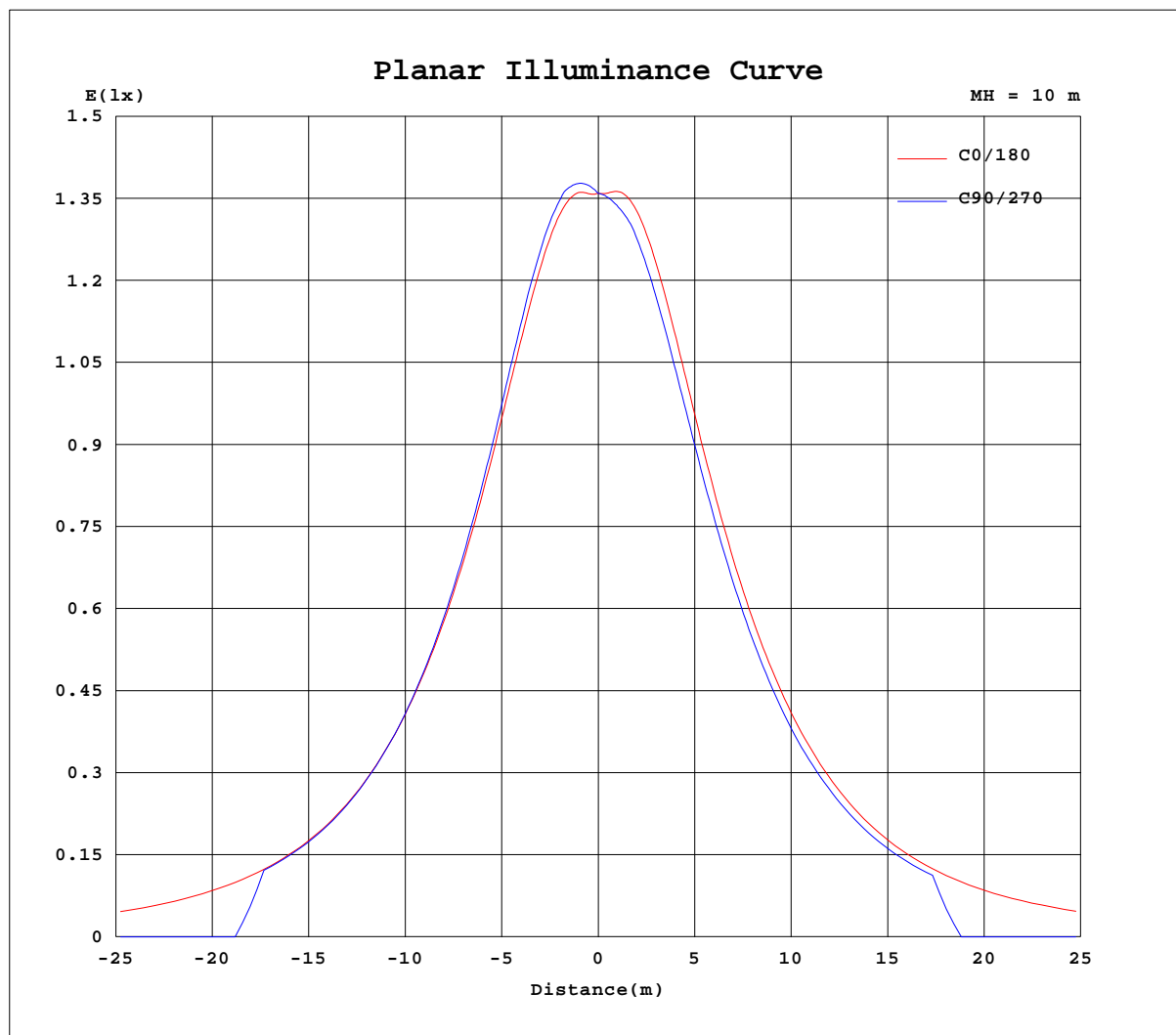
NAME: PT140934	TYPE:LED	WEIGHT:2.98(Kg)
DIM.: D450*70*20	SPEC.:	SERIAL No.:
MFR.:	SUR.:D450*70*20	PROTECTION ANGLE:



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:ZENGQG  
Test Date:2019-11-20

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: 2019-11-20

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: