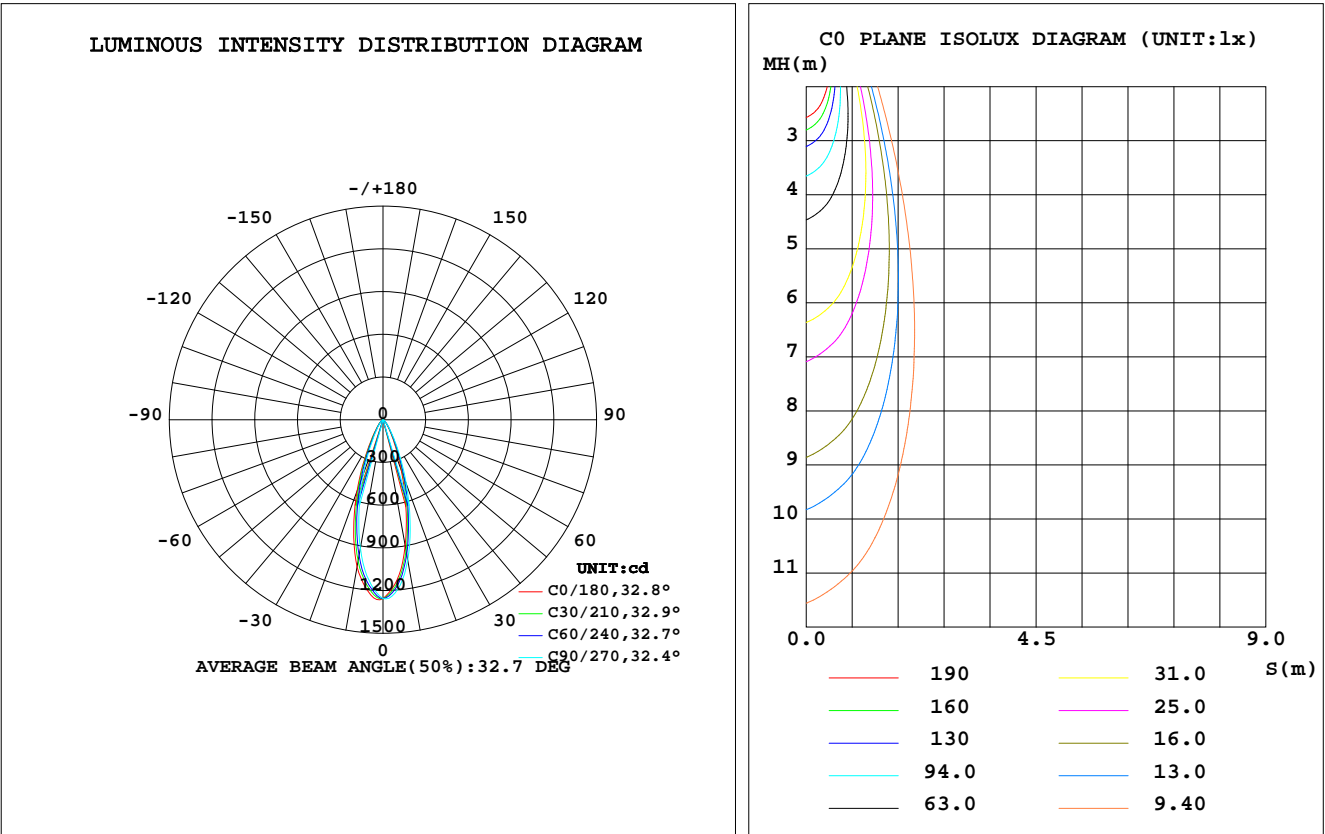


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME:	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: Rayconn	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 67.92 lm/W
MODEL	M012-8W-827-S-38	Imax(cd)	1268	S/MH(C0/180)	0.49	
NOMINAL POWER(W)	8	LOR(%)	100.0	S/MH(C90/270)	0.56	
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	521.66	η UP,DN(C0-180)	1.2,49.8	
NOMINAL FLUX(lm)	521.657	CIE CLASS	DIRECT	η UP,DN(C180-360)	1.3,47.7	
LAMPS INSIDE	1	η up(%)	2.5	CIBSE SHR NOM	0.50	
TEST VOLTAGE(V)	226.4	η down(%)	97.5	CIBSE SHR MAX	0.55	



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:QiuMing  
Test Date:2016-06-29

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:6.250m [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	898.7	946.7	1001	1038	1049	987.9	916.0	892.7	0- 10	105.0	105.0	20.1,20.1
20	376.6	425.9	478.0	519.1	533.7	476.0	403.2	378.5	10- 20	191.7	296.7	56.9,56.9
30	114.7	132.8	152.9	163.7	166.0	142.0	115.0	111.7	20- 30	119.8	416.5	79.8,79.8
40	42.68	47.87	51.85	54.93	55.88	48.67	41.62	39.51	30- 40	51.06	467.5	89.6,89.6
50	14.59	17.43	20.08	21.45	21.47	18.35	14.63	14.70	40- 50	23.54	491.1	94.1,94.1
60	5.677	6.590	8.077	8.910	8.627	7.258	5.716	5.405	50- 60	10.30	501.4	96.1,96.1
70	2.110	2.274	2.418	2.638	2.654	2.375	2.096	1.963	60- 70	4.142	505.5	96.9,96.9
80	1.229	1.312	1.431	1.550	1.543	1.438	1.327	1.249	70- 80	1.913	507.4	97.3,97.3
90	1.037	0.8467	0.8364	0.8805	1.363	1.014	0.9962	1.044	80- 90	1.193	508.6	97.5,97.5
100	1.096	0.8467	0.8028	0.8447	1.378	1.118	1.101	1.163	90-100	1.092	509.7	97.7,97.7
110	1.256	1.025	0.9502	0.9728	1.483	1.275	1.267	1.343	100-110	1.152	510.9	97.9,97.9
120	1.694	1.514	1.398	1.390	1.779	1.638	1.662	1.758	110-120	1.350	512.2	98.2,98.2
130	2.465	2.287	2.144	2.115	2.334	2.307	2.372	2.483	120-130	1.721	513.9	98.5,98.5
140	3.757	3.151	3.019	3.001	3.247	3.131	3.194	3.315	130-140	2.118	516.0	98.9,98.9
150	4.175	3.781	3.703	3.707	4.219	3.776	3.791	3.875	140-150	2.236	518.3	99.4,99.4
160	4.075	4.057	4.029	4.059	4.339	4.062	4.041	4.074	150-160	1.848	520.1	99.7,99.7
170	3.976	4.002	4.012	4.010	4.022	4.023	4.004	3.970	160-170	1.151	521.3	99.9,99.9
180	4.064	4.073	4.071	4.056	4.077	4.074	4.065	4.059	170-180	0.3823	521.7	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

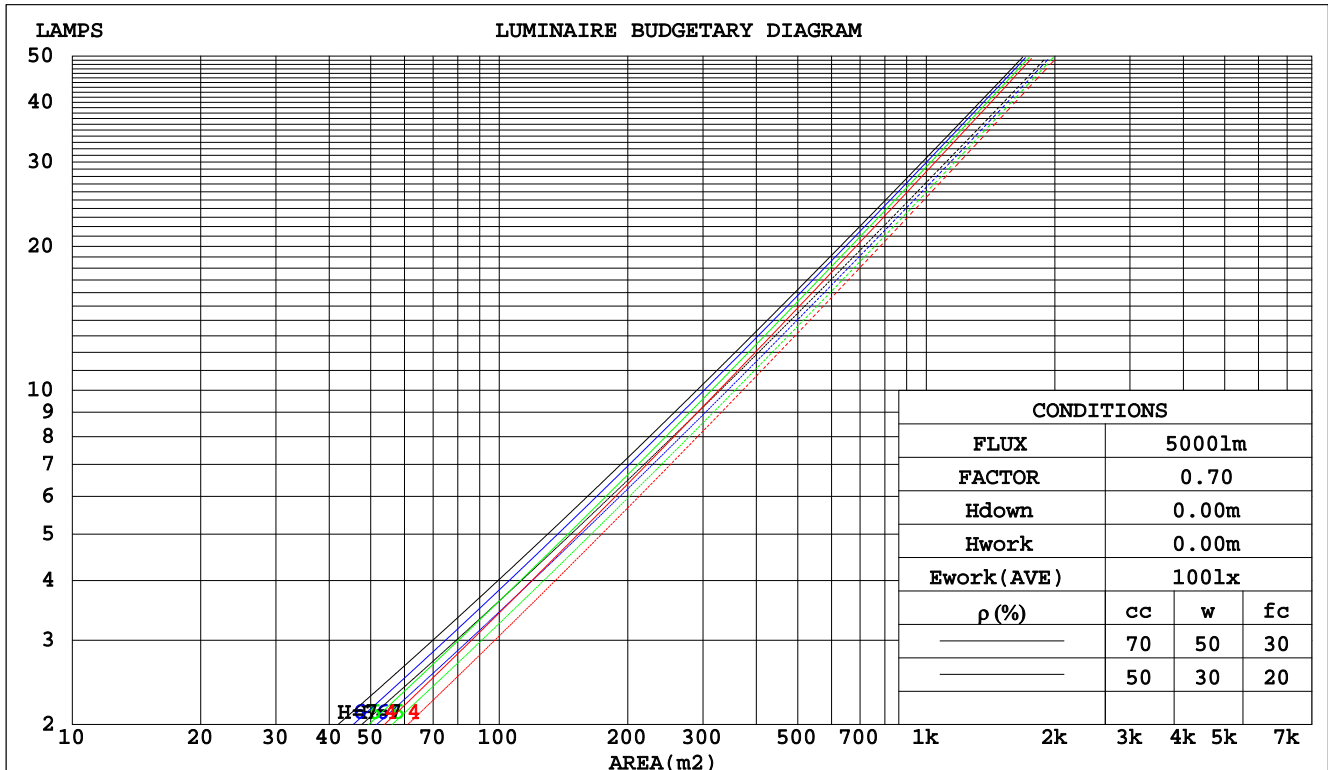
C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:QiuMing  
Test Date:2016-06-29

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:6.250m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME:	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: Rayconn	SUR.:	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.18	1.18	1.18	1.15	1.15	1.15	1.10	1.10	1.10	1.05	1.05	1.05	.00	.00	.00	.97
1.0	1.11	1.08	1.06	1.08	1.06	1.04	1.04	1.02	1.01	.00	.98	.97	.96	.95	.94	.92
2.0	1.04	.00	.97	1.02	.98	.96	.98	.95	.93	.95	.93	.91	.92	.90	.89	.87
3.0	.98	.93	.89	.96	.92	.89	.93	.90	.87	.90	.88	.85	.88	.86	.84	.82
4.0	.92	.87	.83	.91	.86	.83	.88	.85	.82	.86	.83	.80	.84	.81	.79	.78
5.0	.87	.82	.78	.86	.81	.78	.84	.80	.77	.82	.79	.76	.81	.78	.75	.74
6.0	.83	.78	.74	.82	.77	.74	.80	.76	.73	.79	.75	.72	.77	.74	.72	.70
7.0	.79	.74	.70	.78	.73	.70	.77	.72	.69	.76	.72	.69	.74	.71	.68	.67
8.0	.76	.70	.67	.75	.70	.66	.74	.69	.66	.72	.69	.66	.71	.68	.65	.64
9.0	.72	.67	.64	.72	.67	.63	.71	.66	.63	.70	.66	.63	.69	.65	.62	.61
10.0	.69	.64	.61	.69	.64	.61	.68	.63	.60	.67	.63	.60	.66	.63	.60	.59



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: QiuMing  
Test Date: 2016-06-29

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity: 65.0%  
Test Distance: 6.250m [K=1.0000]  
Remarks:

WEC AND CCEC

NAME:	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: Rayconn	SUR.:	PROTECTION ANGLE:

pcc	80%	70%	50%	30%	10%	0
pw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
pfc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio Wall Exitance Coefficients(WEC)					
0.0						
1.0	.169 .096 .030	.161 .092 .029	.147 .084 .027	.134 .077 .025	.122 .071 .023	
2.0	.159 .087 .027	.152 .084 .026	.140 .078 .024	.130 .073 .023	.120 .068 .021	
3.0	.149 .079 .024	.144 .077 .023	.134 .072 .022	.124 .068 .021	.116 .064 .020	
4.0	.141 .073 .021	.136 .071 .021	.127 .068 .020	.119 .064 .019	.112 .061 .018	
5.0	.133 .068 .020	.129 .066 .019	.121 .063 .019	.114 .060 .018	.108 .058 .017	
6.0	.126 .063 .018	.123 .062 .018	.116 .059 .017	.110 .057 .017	.104 .055 .016	
7.0	.120 .059 .017	.117 .058 .017	.111 .056 .016	.105 .054 .016	.100 .052 .015	
8.0	.114 .056 .016	.112 .055 .016	.106 .053 .015	.101 .051 .015	.096 .050 .014	
9.0	.109 .053 .015	.107 .052 .015	.102 .050 .014	.097 .049 .014	.093 .047 .014	
10.0	.105 .050 .014	.102 .049 .014	.098 .048 .014	.094 .047 .013	.090 .045 .013	

pcc	80%	70%	50%	30%	10%	0
pw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
pfc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio Ceiling Cavity Exitance Coefficients(CCEC)					
0.0	.210 .210 .210	.179 .179 .179	.122 .122 .122	.070 .070 .070	.022 .022 .022	
1.0	.190 .177 .165	.162 .152 .142	.111 .104 .098	.064 .060 .057	.020 .019 .018	
2.0	.174 .152 .133	.149 .131 .115	.102 .090 .080	.059 .053 .047	.019 .017 .015	
3.0	.161 .133 .111	.138 .115 .096	.095 .080 .067	.055 .047 .040	.018 .015 .013	
4.0	.150 .118 .094	.128 .102 .082	.088 .071 .058	.051 .042 .034	.016 .014 .011	
5.0	.140 .106 .081	.121 .092 .071	.083 .064 .050	.048 .038 .030	.015 .012 .010	
6.0	.132 .097 .071	.114 .084 .062	.078 .059 .044	.046 .035 .026	.015 .011 .009	
7.0	.125 .089 .064	.108 .077 .055	.075 .054 .039	.043 .032 .023	.014 .010 .008	
8.0	.119 .083 .058	.103 .072 .050	.071 .050 .036	.041 .030 .021	.013 .010 .007	
9.0	.114 .077 .053	.098 .067 .046	.068 .047 .033	.040 .028 .019	.013 .009 .006	
10.0	.109 .073 .049	.094 .063 .042	.065 .044 .030	.038 .026 .018	.012 .009 .006	

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:QiuMing  
Test Date:2016-06-29

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:6.250m [K=1.0000]  
Remarks:

### Uncorrected UGR Table

NAME:					TYPE:					WEIGHT:				
DIM.:					SPEC.:					SERIAL No.:				
MFR.: Rayconn					SUR.:					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					17.0	17.8	17.2	18.0	18.2	17.9	18.7	18.1	18.9	19.1
3H					16.9	17.7	17.2	17.9	18.2	17.9	18.6	18.2	18.9	19.1
4H					16.9	17.7	17.2	17.9	18.2	17.9	18.6	18.2	18.9	19.1
6H					17.0	17.6	17.3	17.9	18.2	17.9	18.6	18.2	18.9	19.1
8H					17.0	17.6	17.3	17.9	18.2	17.9	18.6	18.3	18.9	19.2
12H					17.0	17.6	17.4	17.9	18.3	17.9	18.6	18.3	18.9	19.2
4H 2H					16.9	17.6	17.2	17.9	18.1	17.8	18.5	18.1	18.7	19.0
3H					16.9	17.5	17.3	17.8	18.2	17.8	18.4	18.1	18.7	19.0
4H					17.0	17.5	17.3	17.9	18.2	17.8	18.4	18.2	18.7	19.1
6H					17.0	17.5	17.4	17.9	18.3	17.9	18.4	18.3	18.8	19.2
8H					17.1	17.6	17.5	18.0	18.4	18.0	18.4	18.4	18.8	19.2
12H					17.2	17.6	17.6	18.0	18.5	18.0	18.5	18.5	18.9	19.3
8H 4H					16.9	17.4	17.3	17.8	18.2	17.7	18.2	18.2	18.6	19.0
6H					17.0	17.4	17.5	17.9	18.3	17.9	18.3	18.4	18.7	19.2
8H					17.2	17.5	17.6	18.0	18.5	18.0	18.3	18.5	18.8	19.3
12H					17.3	17.6	17.8	18.1	18.6	18.1	18.4	18.7	18.9	19.4
12H 4H					16.9	17.3	17.3	17.7	18.1	17.7	18.1	18.2	18.5	19.0
6H					17.0	17.4	17.5	17.8	18.3	17.9	18.2	18.4	18.7	19.2
8H					17.2	17.5	17.7	18.0	18.5	18.0	18.3	18.5	18.8	19.3
Variations with the observer position at spacings:														
S = 1.0H					+ 1.6 / - 2.8					+ 1.8 / - 2.6				
1.5H					+ 2.3 / - 2.1					+ 2.9 / - 2.1				
2.0H					+ 2.8 / - 2.2					+ 3.3 / - 2.3				

CIE Pub.117 Corrected 521.7 lm Total Lamp Luminous Flux.(8log(F/F0) = -2.3)

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:QiuMing  
Test Date:2016-06-29

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:6.250m [K=1.0000]  
Remarks:

## UTILIZATION FACTORS TABLE

NAME:	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: Rayconn	SUR.:	PROTECTION ANGLE:

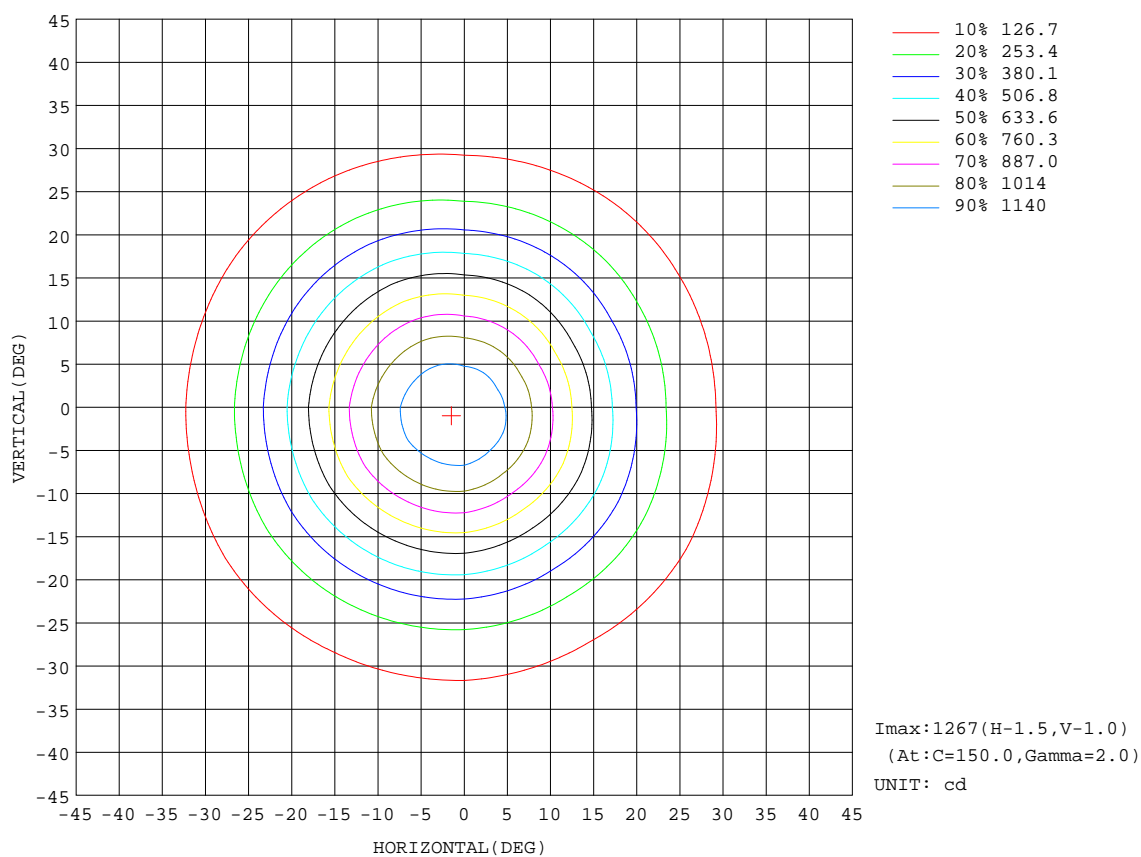
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	85	78	75	84	78	74	83	78	74	70
0.80	93	86	83	92	86	82	90	85	82	78
1.00	97	91	88	96	91	87	94	90	87	82
1.25	101	96	92	100	95	92	98	94	91	86
1.50	104	99	96	103	98	95	100	97	94	89
2.00	107	103	99	105	101	98	102	99	97	91
2.50	109	105	102	107	103	101	104	101	98	92
3.00	111	107	104	109	105	103	105	102	100	93
4.00	113	110	107	110	108	106	106	104	103	95
5.00	114	112	110	112	110	108	107	106	104	96
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: QiuMing  
Test Date: 2016-06-29

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 $\gamma$  Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity: 65.0%  
Test Distance: 6.250m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

NAME:	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: Rayconn	SUR.:	PROTECTION ANGLE:



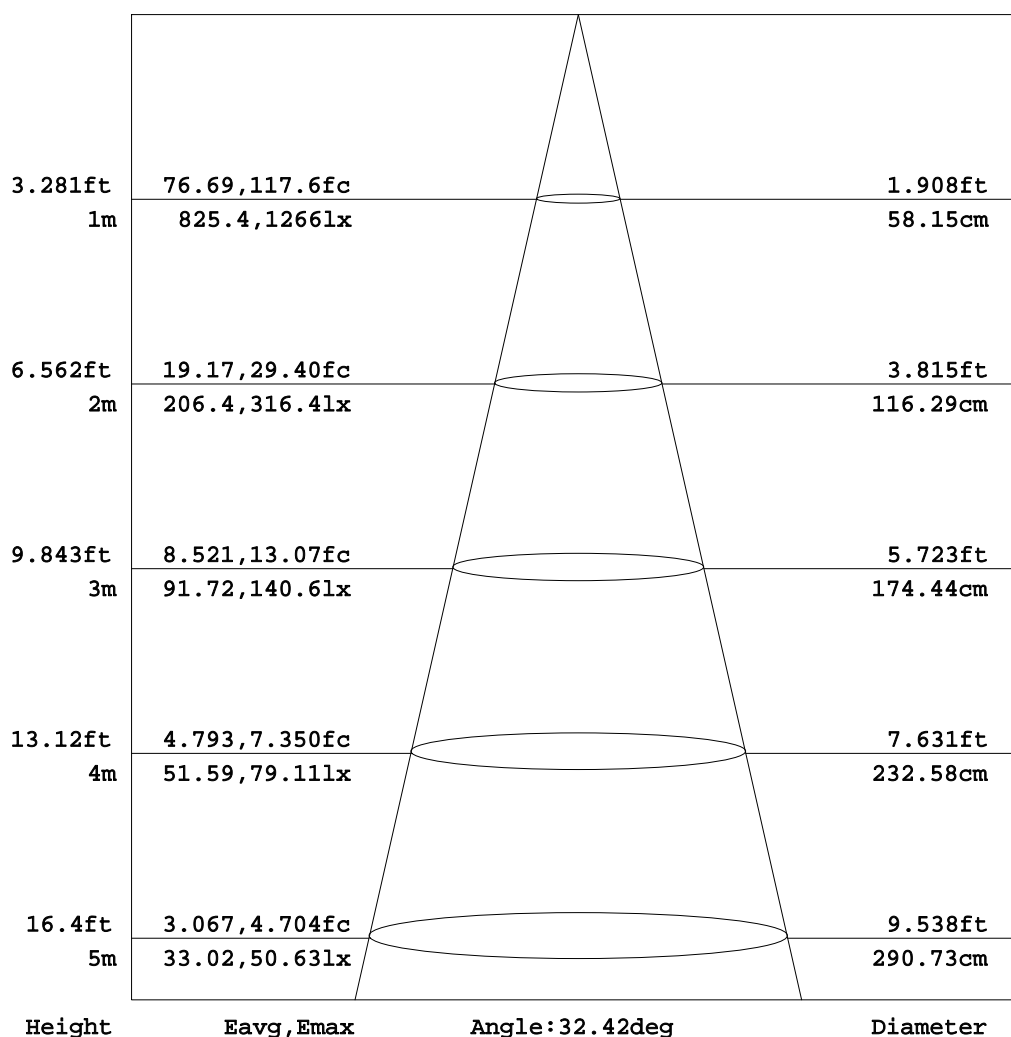
C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:QiuMing  
Test Date:2016-06-29

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:6.250m [K=1.0000]  
Remarks:

### AAI Figure

NAME:	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: Rayconn	SUR.:	PROTECTION ANGLE:

Flux out:242.4 lm



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

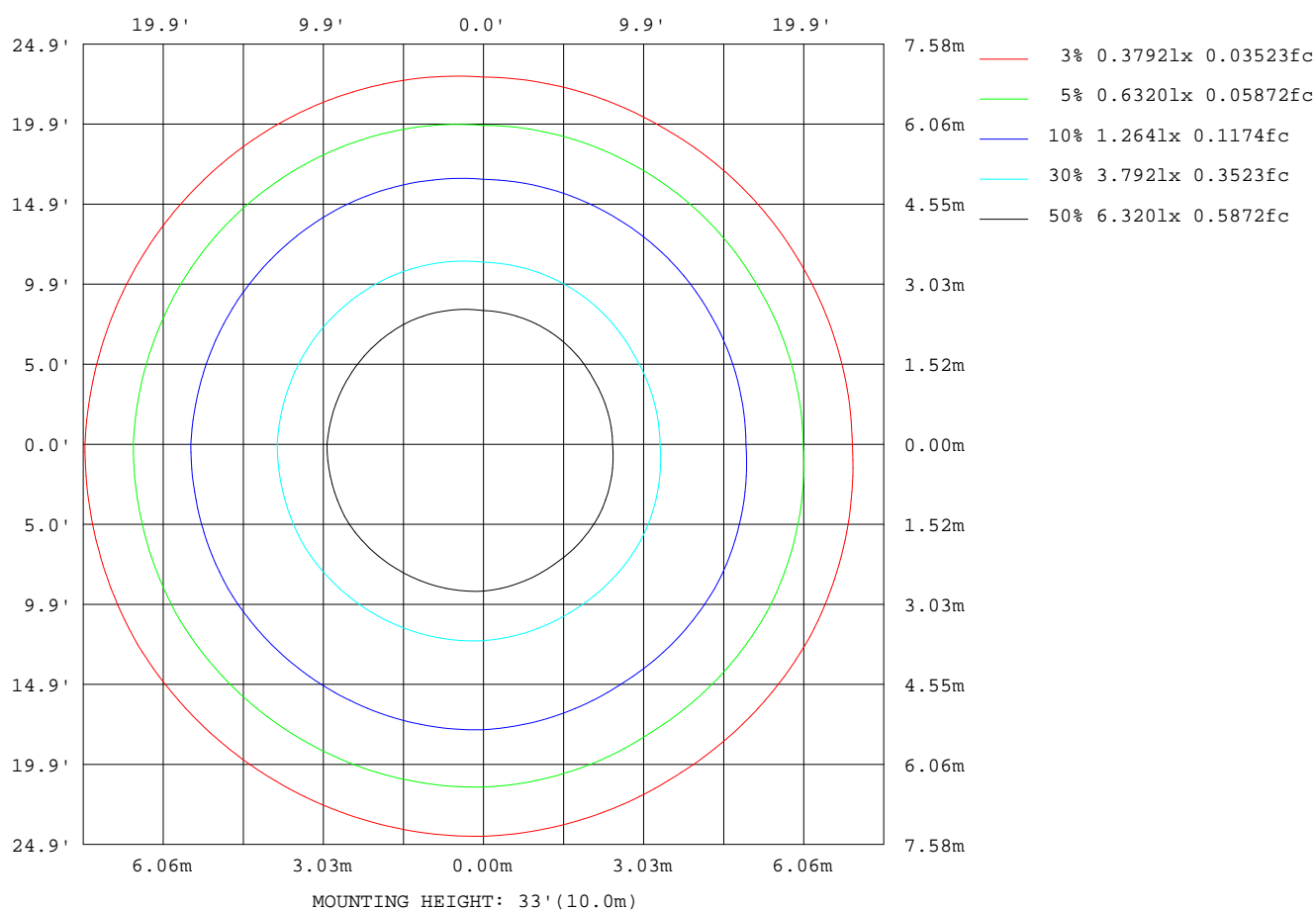
C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: QiuMing  
Test Date: 2016-06-29

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity: 65.0%  
Test Distance: 6.250m [K=1.0000]  
Remarks:



## ISOLUX DIAGRAM

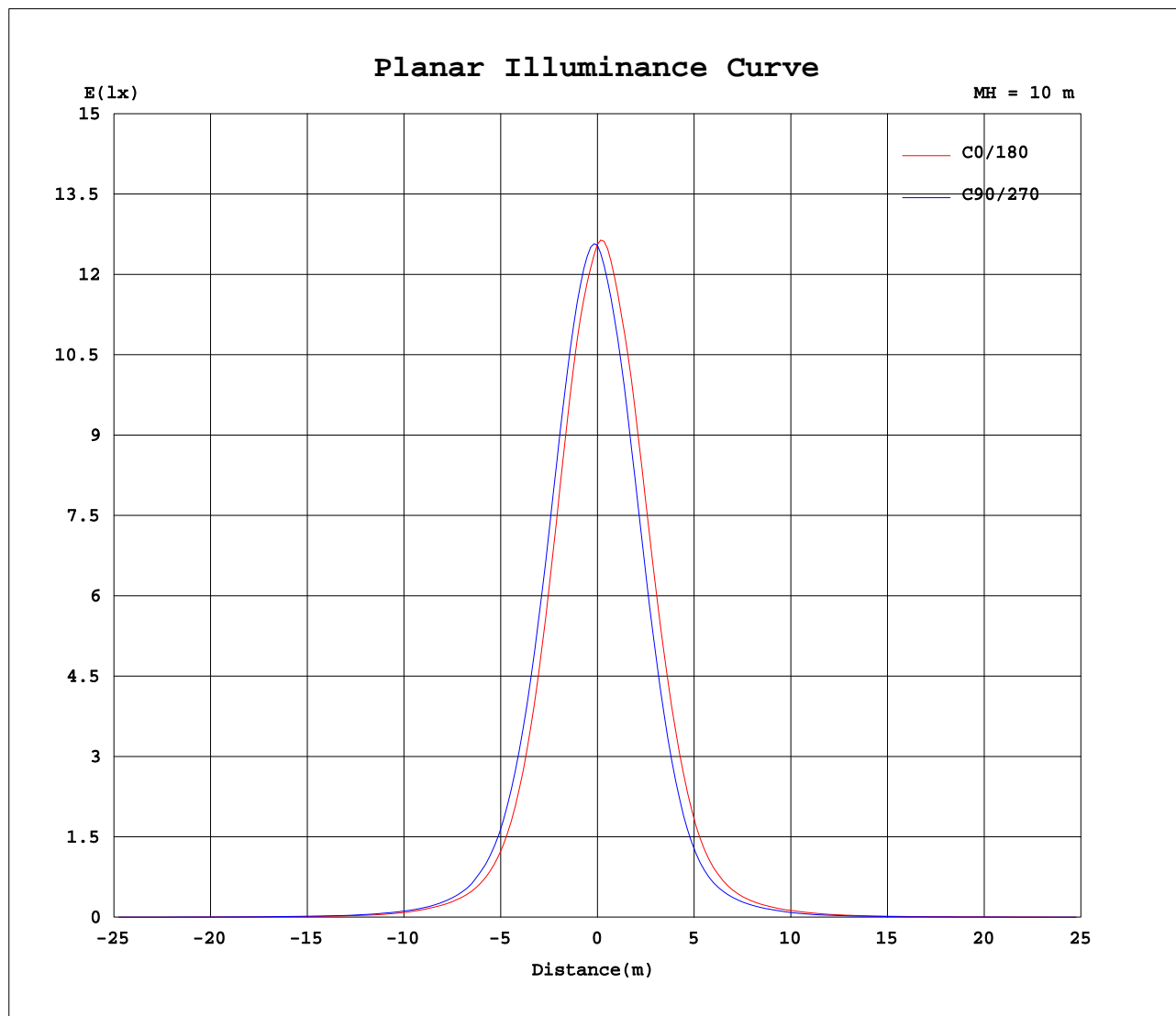
NAME:	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: Rayconn	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: QiuMing  
Test Date: 2016-06-29

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity: 65.0%  
Test Distance: 6.250m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: QiuMing  
Test Date: 2016-06-29

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity: 65.0%  
Test Distance: 6.250m [K=1.0000]  
Remarks:

# LUMINOUS DISTRIBUTION INTENSITY DATA

NAME:	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: Rayconn	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEC)	0	30	60	90	120	150	180	210	240	270	300	330							
γ (DEC)																			
0	1255	1255	1255	1255	1255	1255	1255	1255	1255	1255	1255	1255							
5	1131	1151	1169	1194	1207	1217	1210	1182	1161	1132	1126	1120							
10	899	933	961	1001	1025	1052	1049	1006	970	916	901	885							
15	619	661	688	735	762	798	799	754	713	651	635	611							
20	377	414	437	478	505	533	534	497	455	403	387	370							
25	208	233	248	279	295	313	311	285	256	219	210	207							
30	115	130	135	153	159	168	166	150	134	115	112	112							
35	68.2	75.1	78.6	85.9	88.9	93.2	92.1	84.0	76.0	67.2	64.8	65.8							
40	42.7	46.9	48.9	51.8	53.2	56.6	55.9	51.3	46.0	41.6	38.8	40.2							
45	25.4	29.0	30.5	32.9	32.9	35.2	35.8	33.5	29.5	25.4	23.9	24.2							
50	14.6	16.9	18.0	20.1	20.8	22.1	21.5	19.6	17.1	14.6	14.6	14.8							
55	9.31	10.5	11.5	12.4	13.1	14.3	12.7	11.7	10.8	9.21	9.19	9.28							
60	5.68	6.35	6.83	8.08	8.52	9.30	8.63	7.75	6.77	5.72	5.49	5.32							
65	3.00	3.39	3.79	4.36	4.79	5.27	5.25	4.82	4.27	3.21	2.85	2.73							
70	2.11	2.24	2.31	2.42	2.56	2.72	2.65	2.47	2.28	2.10	1.97	1.95							
75	1.62	1.70	1.82	1.92	1.99	2.03	1.99	1.91	1.79	1.68	1.59	1.57							
80	1.23	1.27	1.35	1.43	1.53	1.57	1.54	1.49	1.39	1.33	1.26	1.24							
85	0.95	0.92	0.96	1.00	1.06	1.10	1.23	1.12	1.06	1.03	1.00	1.03							
90	1.04	0.84	0.86	0.84	0.86	0.90	1.36	1.01	1.02	1.00	1.03	1.06							
95	1.10	0.84	0.83	0.80	0.82	0.88	1.35	1.06	1.07	1.04	1.08	1.12							
100	1.10	0.86	0.84	0.80	0.81	0.88	1.38	1.11	1.13	1.10	1.13	1.20							
105	1.13	0.92	0.88	0.84	0.83	0.92	1.43	1.18	1.19	1.17	1.20	1.27							
110	1.26	1.05	1.00	0.95	0.93	1.02	1.48	1.27	1.28	1.27	1.31	1.37							
115	1.45	1.26	1.20	1.14	1.10	1.18	1.57	1.41	1.43	1.43	1.47	1.54							
120	1.69	1.55	1.48	1.40	1.36	1.42	1.78	1.62	1.65	1.66	1.72	1.80							
125	2.03	1.92	1.83	1.74	1.69	1.75	1.97	1.91	1.96	1.98	2.04	2.13							
130	2.46	2.33	2.24	2.14	2.09	2.14	2.33	2.28	2.33	2.37	2.44	2.53							
135	2.98	2.77	2.69	2.58	2.52	2.58	2.76	2.70	2.75	2.80	2.86	2.95							
140	3.76	3.19	3.11	3.02	2.97	3.03	3.25	3.11	3.15	3.19	3.26	3.37							
145	4.06	3.55	3.47	3.40	3.35	3.47	4.20	3.48	3.51	3.54	3.59	3.68							
150	4.17	3.81	3.75	3.70	3.66	3.76	4.22	3.77	3.78	3.79	3.84	3.91							
155	4.29	3.99	3.96	3.92	3.88	3.98	4.32	3.96	3.97	3.96	3.99	4.05							
160	4.07	4.06	4.05	4.03	4.00	4.12	4.34	4.07	4.06	4.04	4.03	4.11							
165	4.03	4.02	4.05	4.03	4.03	4.06	4.32	4.11	4.05	4.05	4.01	4.01							
170	3.98	3.99	4.02	4.01	4.02	4.00	4.02	4.03	4.01	4.00	3.98	3.96							
175	3.98	4.01	4.01	4.02	4.01	4.00	4.03	4.02	4.02	3.99	3.99	3.96							
180	4.06	4.08	4.07	4.07	4.06	4.06	4.08	4.07	4.08	4.06	4.06	4.06							

C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:QiuMing  
Test Date:2016-06-29

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.265  
Humidity:65.0%  
Test Distance:6.250m [K=1.0000]  
Remarks: