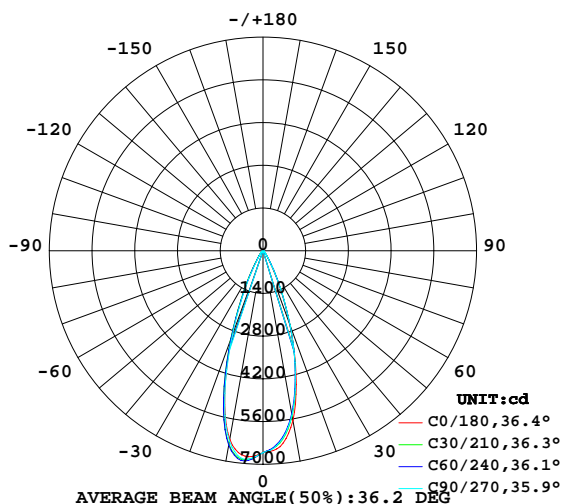


LUMINAIRE PHOTOMETRIC TEST REPORT

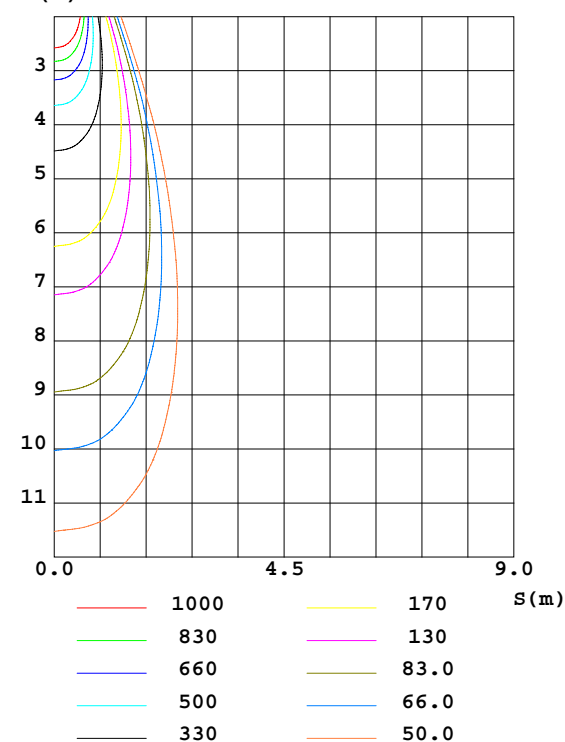
Test:U:225.6V I:0.1250A P:27.20W PF:0.9610 Lamp Flux:2876.22x1 lm		
NAME:	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: Rayconn	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 105.74 lm/W			
MODEL	TL44-30W-830-B-36-L	Imax(cd)	6915	S/MH(C0/180)	0.57
NOMINAL POWER(W)	28	LOR(%)	100.0	S/MH(C90/270)	0.57
RATED VOLTAGE(V)	226	TOTAL FLUX(lm)	2876.2	η UP,DN(C0-180)	0.0,48.3
NOMINAL FLUX(lm)	2876.22	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.7
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	225.6	η down(%)	100.0	CIBSE SHR MAX	0.60

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WuXing
Test Date:2018-11-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [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	5651	5468	5477	5778	6275	6421	6340	5904	0- 10	607.6	607.6	21.1,21.1
20	2589	2650	2612	2795	3023	3018	2943	2663	10- 20	1209	1817	63.2,63.2
30	552.3	629.3	589.3	620.7	661.5	655.5	593.4	569.0	20- 30	668.5	2485	86.4,86.4
40	153.3	160.0	164.3	167.9	174.0	168.2	155.7	151.8	30- 40	194.1	2680	93.2,93.2
50	71.51	73.57	75.06	77.44	78.12	76.41	75.92	73.04	40- 50	83.96	2764	96.1,96.1
60	46.90	47.84	48.49	49.25	49.08	47.96	48.45	47.58	50- 60	53.49	2817	97.9,97.9
70	27.23	26.96	27.31	28.31	28.45	28.05	29.06	28.88	60- 70	37.30	2854	99.2,99.2
80	6.269	6.722	6.714	7.397	7.167	7.087	6.792	6.474	70- 80	18.47	2873	99.9,99.9
90	2.996	3.003	2.938	2.897	1.985	1.996	2.005	2.003	80- 90	3.423	2876	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

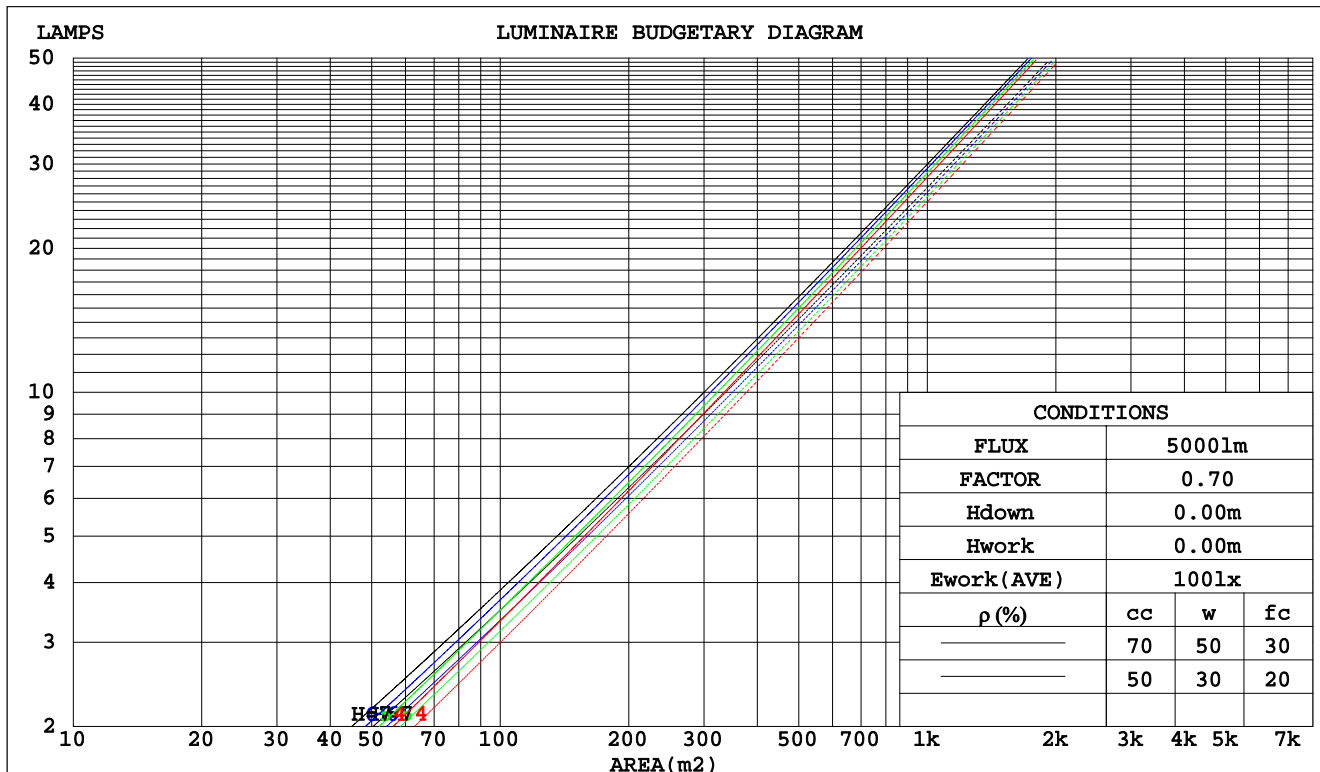
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WuXing
Test Date:2018-11-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:225.6V I:0.1250A P:27.20W PF:0.9610 Lamp Flux:2876.22x1 lm		
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	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	1.12	1.09	1.07	1.09	1.07	1.06	1.05	1.04	1.02	1.02	1.00	.99	.98	.97	.96	.95
2.0	1.05	1.01	.98	1.03	.99	.97	1.00	.97	.95	.97	.95	.93	.94	.93	.91	.90
3.0	.99	.95	.91	.98	.94	.90	.95	.92	.89	.93	.90	.88	.91	.88	.86	.85
4.0	.94	.89	.85	.93	.88	.85	.91	.87	.84	.89	.86	.83	.87	.84	.82	.81
5.0	.89	.84	.81	.88	.84	.80	.87	.83	.80	.85	.82	.79	.84	.81	.78	.77
6.0	.85	.80	.77	.85	.80	.76	.83	.79	.76	.82	.78	.75	.81	.77	.75	.74
7.0	.82	.76	.73	.81	.76	.73	.80	.75	.72	.79	.75	.72	.78	.74	.72	.70
8.0	.78	.73	.70	.78	.73	.70	.77	.72	.69	.76	.72	.69	.75	.71	.69	.68
9.0	.75	.70	.67	.75	.70	.67	.74	.69	.66	.73	.69	.66	.72	.69	.66	.65
10.0	.72	.67	.64	.72	.67	.64	.71	.67	.64	.70	.66	.64	.70	.66	.64	.62



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WuXing
Test Date:2018-11-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:225.6V I:0.1250A P:27.20W PF:0.9610 Lamp Flux:2876.22x1 lm		
NAME:	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: Rayconn	SUR.:	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0	
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρfc	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.163	.093	.029	.156	.089	.028	.144	.082	.026	.132	.076	.024	.122	.070	.023		
2.0	.153	.084	.026	.148	.081	.025	.137	.076	.024	.127	.071	.022	.119	.067	.021		
3.0	.144	.076	.023	.139	.074	.022	.130	.071	.021	.122	.067	.020	.114	.063	.020		
4.0	.135	.070	.021	.131	.069	.020	.124	.066	.020	.117	.063	.019	.110	.060	.018		
5.0	.128	.065	.019	.124	.064	.019	.118	.061	.018	.112	.059	.018	.106	.057	.017		
6.0	.121	.061	.017	.118	.060	.017	.112	.058	.017	.107	.056	.016	.102	.054	.016		
7.0	.115	.057	.016	.112	.056	.016	.107	.054	.016	.103	.053	.015	.098	.051	.015		
8.0	.109	.053	.015	.107	.053	.015	.103	.051	.015	.099	.050	.014	.095	.049	.014		
9.0	.105	.051	.014	.103	.050	.014	.099	.049	.014	.095	.048	.014	.092	.046	.013		
10.0	.100	.048	.013	.098	.048	.013	.095	.046	.013	.092	.045	.013	.088	.044	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.170	.157	.146	.146	.135	.126	.100	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.154	.133	.115	.132	.114	.099	.090	.079	.069	.052	.046	.041	.017	.015	.013	
3.0	.140	.113	.092	.120	.098	.080	.082	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.129	.098	.075	.110	.085	.065	.076	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.119	.087	.062	.102	.075	.054	.070	.052	.038	.041	.031	.023	.013	.010	.008	
6.0	.111	.077	.052	.095	.067	.046	.066	.047	.032	.038	.027	.019	.012	.009	.006	
7.0	.104	.069	.045	.089	.060	.039	.062	.042	.028	.036	.025	.016	.012	.008	.005	
8.0	.098	.062	.038	.084	.054	.033	.058	.038	.024	.034	.022	.014	.011	.007	.005	
9.0	.092	.057	.033	.079	.050	.029	.055	.035	.021	.032	.021	.012	.010	.007	.004	
10.0	.087	.052	.029	.075	.046	.026	.052	.032	.018	.030	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WuXing
Test Date:2018-11-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

Uncorrected UGR Table

Test:U:225.6V I:0.1250A P:27.20W PF:0.9610 Lamp Flux:2876.22x1 lm											
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	15.9	16.7	16.1	16.9	17.0	16.1	16.9	16.3	17.1	17.3	
	3H	16.7	17.5	17.0	17.7	17.9	16.9	17.7	17.2	17.8	18.0
	4H	17.1	17.8	17.3	18.0	18.2	17.2	17.9	17.5	18.2	18.4
	6H	17.1	17.8	17.4	18.0	18.3	17.3	18.0	17.6	18.2	18.5
	8H	17.1	17.8	17.4	18.0	18.3	17.3	17.9	17.6	18.2	18.5
	12H	17.1	17.7	17.4	18.0	18.3	17.3	17.9	17.6	18.2	18.4
4H	2H	16.2	16.9	16.5	17.2	17.4	16.4	17.1	16.7	17.3	17.5
	3H	17.2	17.9	17.6	18.1	18.4	17.4	18.0	17.7	18.3	18.5
	4H	17.7	18.2	18.0	18.5	18.8	17.8	18.4	18.1	18.7	19.0
	6H	17.8	18.3	18.1	18.6	18.9	17.9	18.4	18.3	18.7	19.1
	8H	17.8	18.2	18.1	18.6	18.9	17.9	18.4	18.3	18.7	19.1
	12H	17.7	18.2	18.1	18.5	18.9	17.9	18.3	18.3	18.7	19.1
8H	4H	17.7	18.2	18.1	18.6	18.9	17.9	18.3	18.3	18.7	19.0
	6H	17.9	18.3	18.3	18.7	19.1	18.0	18.4	18.5	18.8	19.2
	8H	17.9	18.2	18.3	18.6	19.1	18.0	18.4	18.5	18.8	19.2
	12H	17.9	18.2	18.3	18.6	19.1	18.0	18.3	18.5	18.8	19.2
12H	4H	17.7	18.1	18.1	18.5	18.9	17.8	18.3	18.2	18.6	19.0
	6H	17.9	18.2	18.3	18.6	19.1	18.0	18.3	18.4	18.8	19.2
	8H	17.9	18.2	18.3	18.6	19.1	18.0	18.3	18.5	18.7	19.2
Variations with the observer position at spacings:											
S = 1.0H	+ 0.6 / - 0.8					+ 0.6 / - 0.8					
1.5H	+ 1.2 / - 0.6					+ 1.3 / - 0.7					
2.0H	+ 0.8 / - 0.6					+ 0.9 / - 0.6					

CIE Pub.117 Corrected 2876 lm Total Lamp Luminous Flux.(8log(F/F0) = 3.7)

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WuXing
Test Date:2018-11-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:225.6V I:0.1250A P:27.20W PF:0.9610 Lamp Flux:2876.22x1 lm		
NAME:	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: Rayconn	SUR.:	PROTECTION ANGLE:

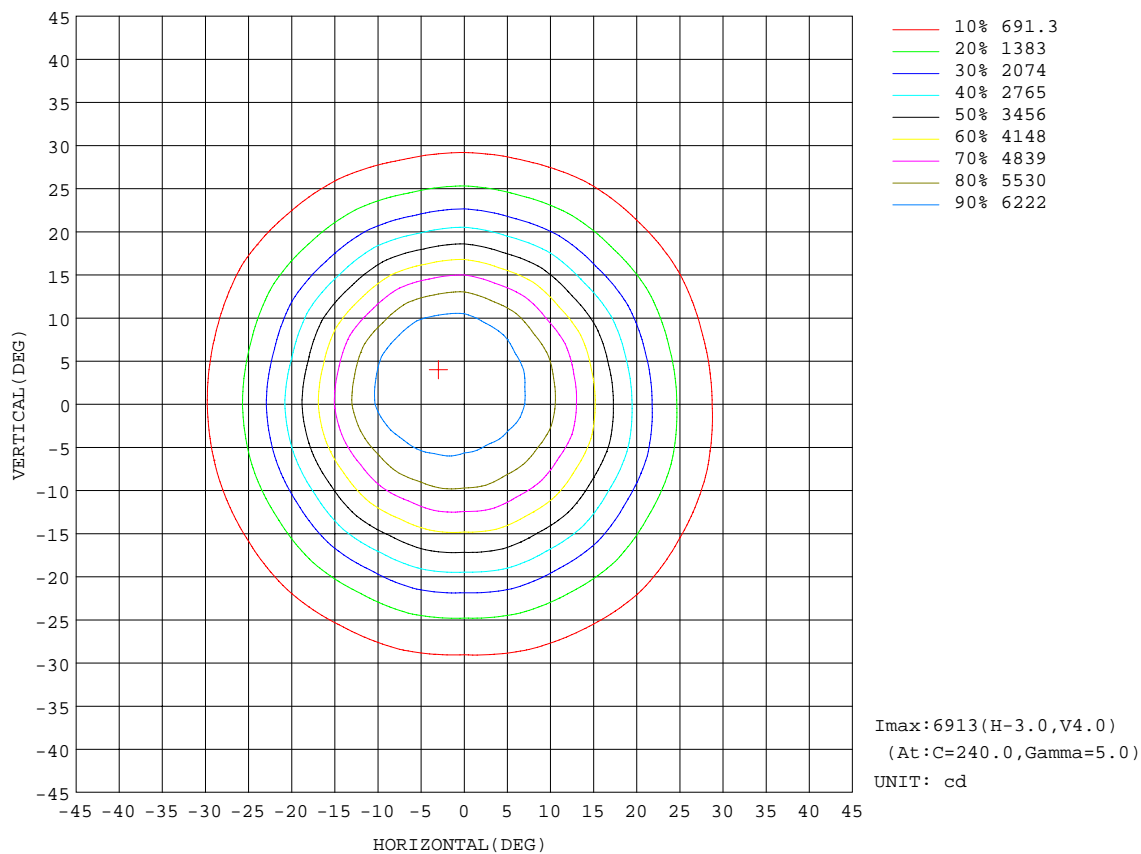
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	87	81	77	87	81	77	86	80	77	73
0.80	95	89	85	94	88	85	93	88	85	81
1.00	99	93	90	98	93	89	97	93	89	85
1.25	103	98	94	102	97	94	100	96	93	89
1.50	106	101	97	104	100	97	102	99	96	91
2.00	108	104	101	107	103	100	104	101	99	93
2.50	110	106	103	108	105	102	105	103	100	94
3.00	112	108	105	110	107	104	106	104	102	96
4.00	114	111	109	112	109	107	108	106	105	97
5.00	115	113	111	113	111	109	109	107	106	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WuXing
Test Date:2018-11-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 γ Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:225.6V I:0.1250A P:27.20W PF:0.9610 Lamp Flux:2876.22x1 lm		
NAME:	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: Rayconn	SUR.:	PROTECTION ANGLE:



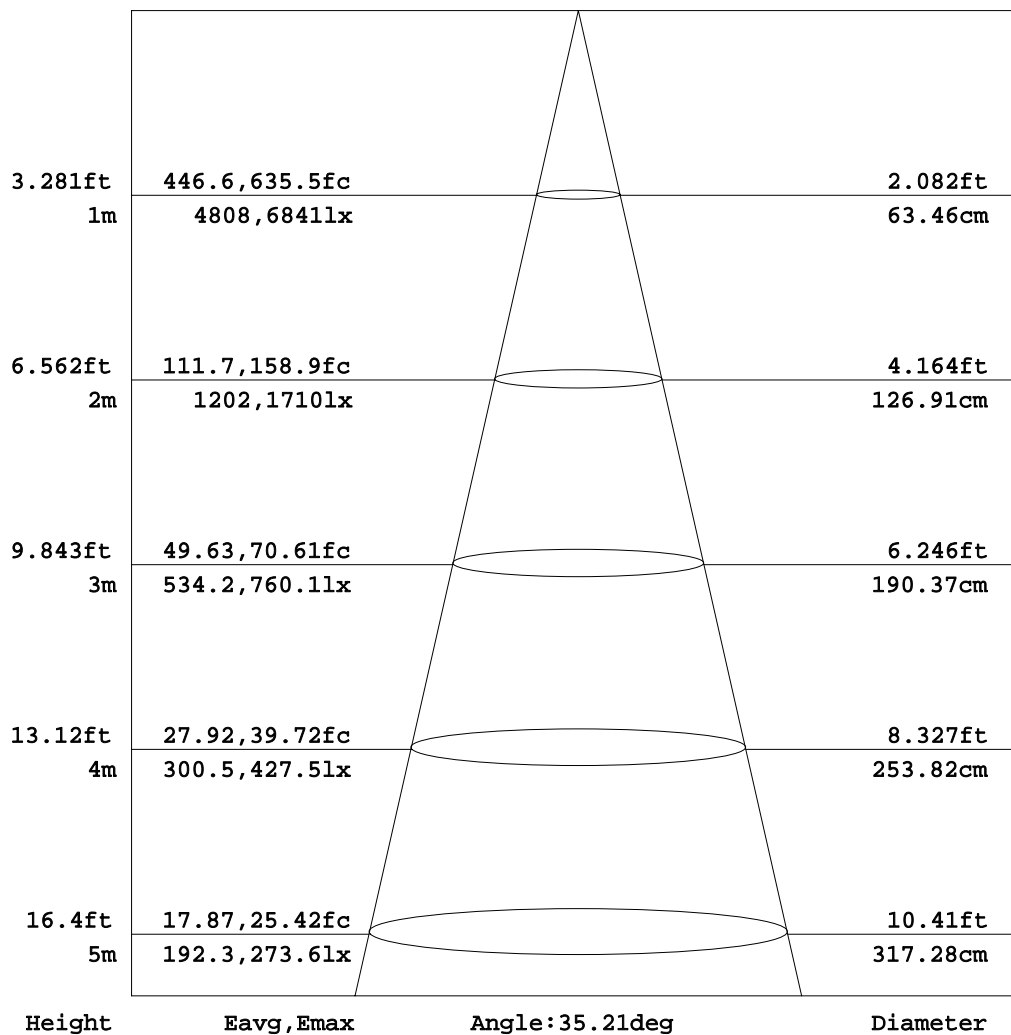
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:WuXing
Test Date:2018-11-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

AAI Figure

Test:U:225.6V I:0.1250A P:27.20W PF:0.9610 Lamp Flux:2876.22x1 lm		
NAME:	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: Rayconn	SUR.:	PROTECTION ANGLE:

Flux out:1595 lm



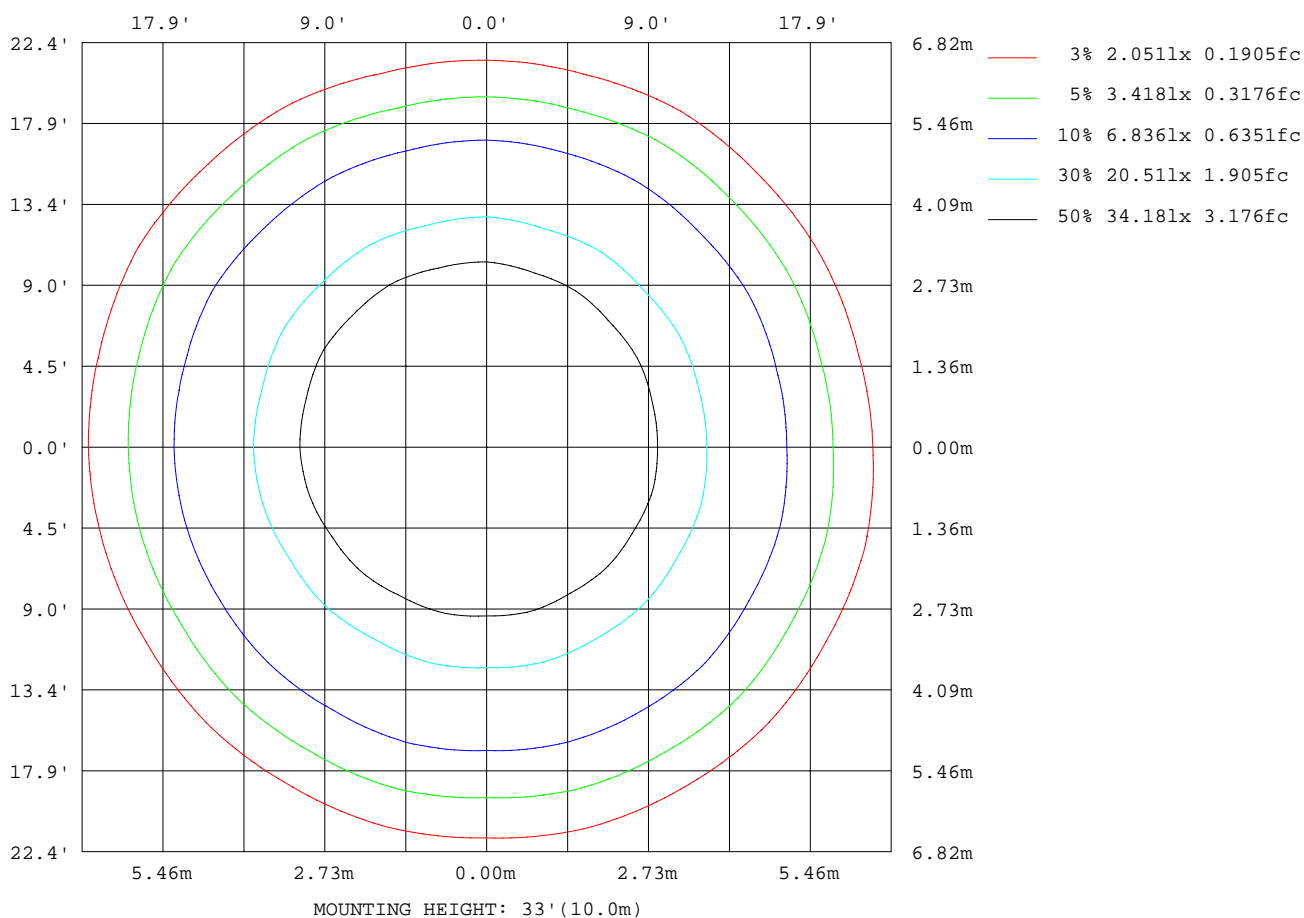
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: WuXing
Test Date: 2018-11-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity: 65.0%
Test Distance: 7.240m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

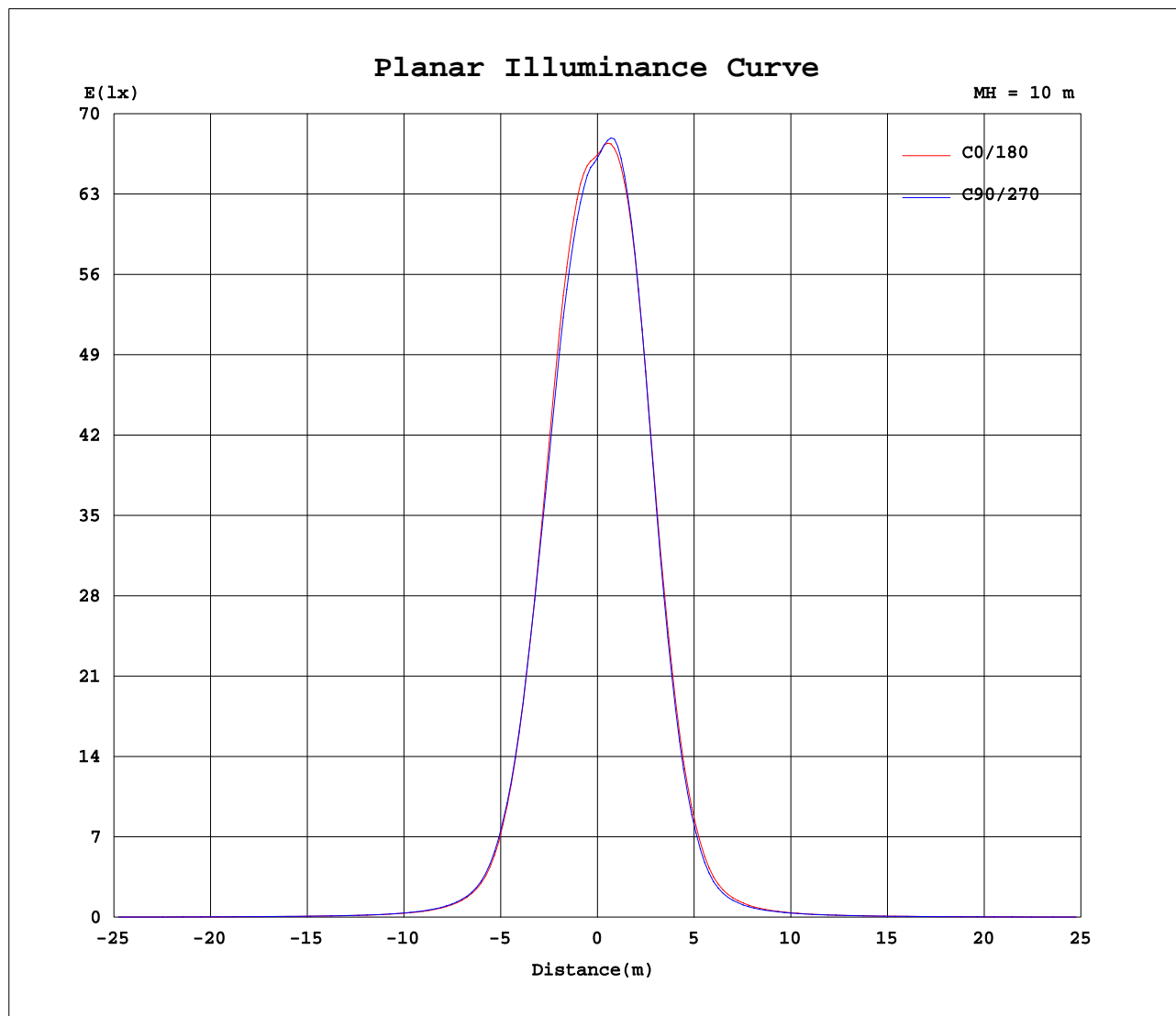
Test:U:225.6V I:0.1250A P:27.20W PF:0.9610 Lamp Flux:2876.22x1 lm		
NAME:	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.: Rayconn	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: WuXing
Test Date: 2018-11-12

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity: 65.0%
Test Distance: 7.240m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: WuXing
Test Date: 2018-11-12

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity: 65.0%
Test Distance: 7.240m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

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γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.265
Humidity:65.0%
Test Distance:7.240m [K=1.0000]
Remarks:

```