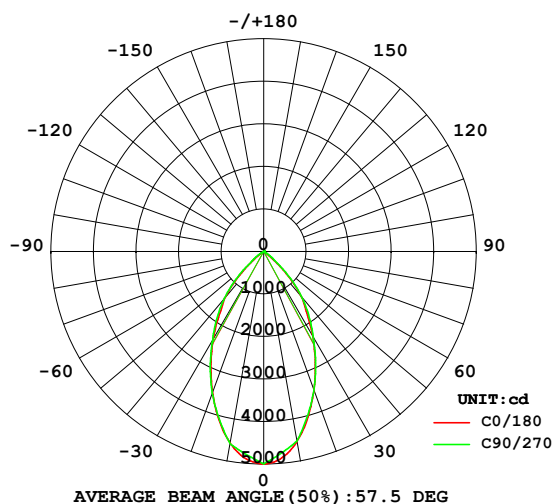


## LUMINAIRE PHOTOMETRIC TEST REPORT

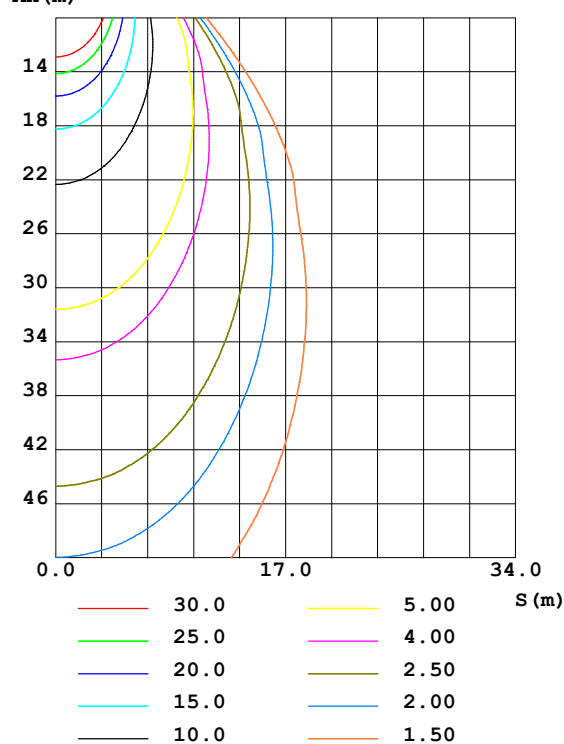
Test:U:240.4V I:0.1950A P:45.03W PF:0.9612 Lamp Flux:5250x1 lm		
NAME: Coaste	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:1#
MFR.: ELEKO	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 106.79 lm/W			
MODEL		I <sub>max</sub> (cd)	4993	S/MH (C0/180)	0.84
NOMINAL POWER (W)	46	LOR (%)	91.6	S/MH (C90/270)	0.85
RATED VOLTAGE (V)	240	TOTAL FLUX (lm)	4809.1	η UP, DN (C0-180)	0.0, 46.2
NOMINAL FLUX (lm)	5250	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 45.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE (V)	240.3	η down (%)	91.6	CIBSE SHR MAX	0.90

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: SU  
 Test Date: 2016-07-19

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V1.0.257  
 Humidity: 65.0%  
 Test Distance: 8.750m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

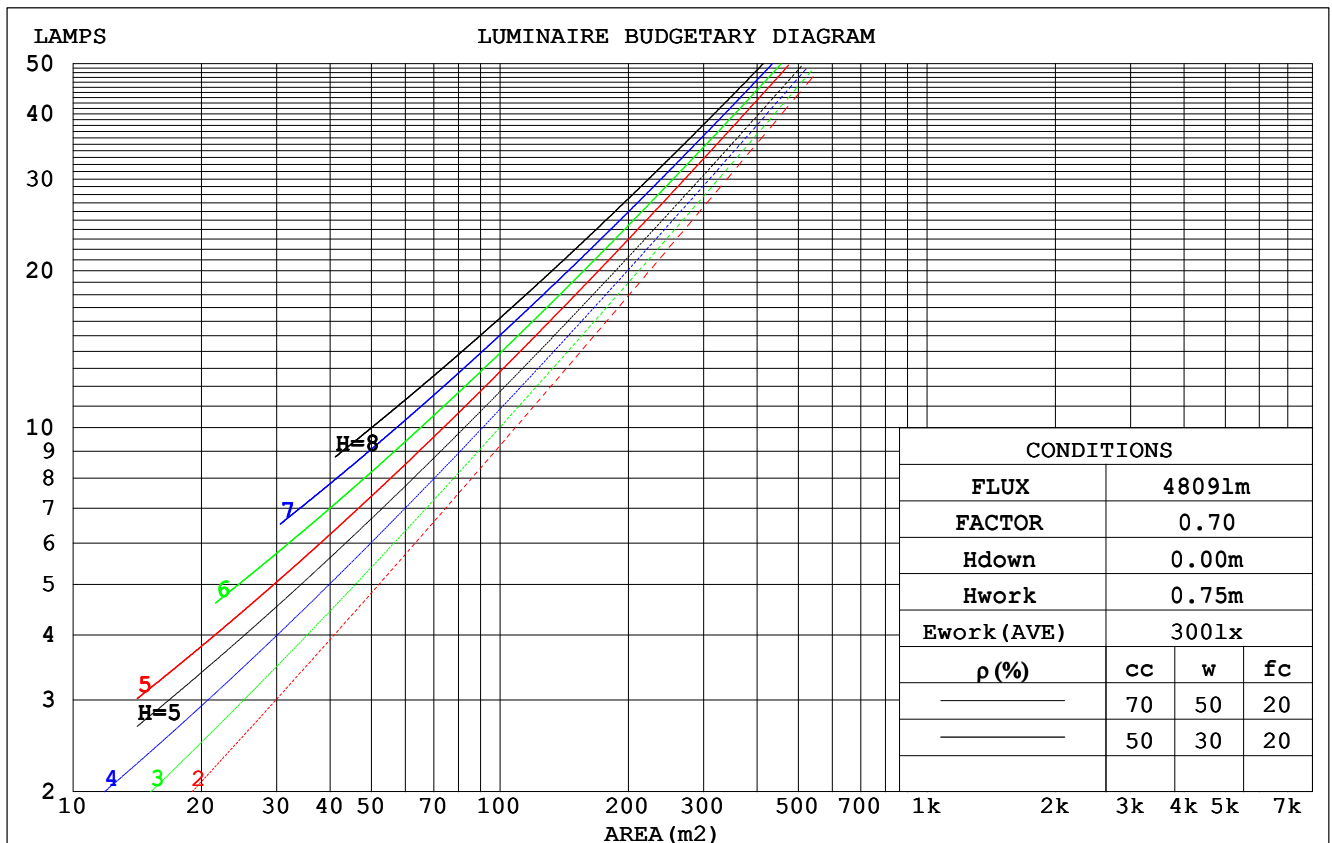
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
5	4886	4795	4789	4789	4872	4768	4760	4777	0- 5	116.5	116.5	2.42,2.22
10	4572	4504	4585	4484	4533	4436	4526	4472	5- 10	332.1	448.5	9.33,8.54
15	4088	4092	4064	4067	4032	4001	3995	4055	10- 15	505.3	953.8	19.8,18.2
20	3518	3501	3542	3478	3461	3405	3463	3465	15- 20	615.9	1570	32.6,29.9
25	2936	2936	2974	2916	2873	2838	2898	2903	20- 25	666.6	2236	46.5,42.6
30	2376	2381	2405	2365	2317	2295	2334	2351	25- 30	661.6	2898	60.3,55.2
35	1823	1862	1922	1852	1776	1796	1861	1836	30- 35	610.9	3509	73,66.8
40	1405	1408	1440	1405	1366	1358	1389	1394	35- 40	529.3	4038	84,76.9
45	844.3	870.9	915.3	869.4	805.6	825.3	873.2	861.3	40- 45	406.8	4445	92.4,84.7
50	308.8	372.5	390.7	372.5	281.2	341.4	357.9	367.3	45- 50	237.0	4682	97.4,89.2
55	17.69	125.9	198.8	124.8	14.26	116.4	184.5	125.9	50- 55	88.48	4770	99.2,90.9
60	5.970	6.227	6.864	7.411	7.673	10.12	11.17	9.192	55- 60	22.25	4793	99.7,91.3
65	4.582	4.904	5.653	6.123	6.447	9.464	10.46	8.522	60- 65	4.402	4797	99.8,91.4
70	3.651	3.857	4.442	5.090	5.357	8.981	9.747	8.181	65- 70	3.337	4800	99.8,91.4
75	2.967	3.056	3.764	4.262	4.480	8.621	9.250	8.093	70- 75	3.093	4804	99.9,91.5
80	2.509	2.568	3.086	3.732	3.888	8.254	8.752	7.963	75- 80	2.939	4806	99.9,91.6
85	0.4661	0.9473	0	1.415	0.5373	3.296	0	3.236	80- 85	2.172	4809	100,91.6
90	0.2613	0	0	0	0.1851	0	0	0	85- 90	0.4168	4809	100,91.6
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		

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:SU  
 Test Date:2016-07-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V1.0.257  
 Humidity:65.0%  
 Test Distance:8.750m [K=1.0000]  
 Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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	1.09	1.09	1.09	1.07	1.07	1.07	1.02	1.02	1.02	.97	.97	.97	.93	.93	.93	.92
1.0	1.01	.99	.96	.99	.97	.95	.95	.93	.92	.92	.90	.89	.89	.88	.87	.85
2.0	.93	.89	.86	.92	.88	.85	.89	.86	.83	.86	.83	.81	.83	.81	.80	.78
3.0	.86	.81	.77	.85	.80	.77	.83	.79	.76	.80	.77	.74	.78	.76	.73	.72
4.0	.80	.75	.70	.79	.74	.70	.77	.73	.69	.75	.71	.68	.73	.70	.67	.66
5.0	.74	.69	.64	.73	.68	.64	.72	.67	.63	.70	.66	.63	.69	.65	.62	.61
6.0	.69	.63	.59	.68	.63	.59	.67	.62	.58	.66	.61	.58	.64	.61	.58	.56
7.0	.65	.59	.54	.64	.58	.54	.63	.58	.54	.62	.57	.54	.60	.56	.53	.52
8.0	.60	.55	.50	.60	.54	.50	.59	.54	.50	.58	.53	.50	.57	.53	.50	.48
9.0	.57	.51	.47	.56	.51	.47	.55	.50	.47	.54	.50	.47	.54	.49	.46	.45
10.0	.53	.48	.44	.53	.47	.44	.52	.47	.44	.51	.47	.44	.51	.46	.43	.42



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: SU  
 Test Date: 2016-07-19

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V1.0.257  
 Humidity: 65.0%  
 Test Distance: 8.750m [K=1.0000]  
 Remarks:

## WEC AND CCEC

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	.173	.098	.031	.167	.095	.030	.155	.089	.028	.145	.083	.027	.135	.078	.025		
2.0	.167	.092	.028	.162	.089	.028	.152	.085	.026	.143	.080	.025	.135	.076	.024		
3.0	.160	.085	.026	.156	.083	.025	.147	.080	.024	.140	.077	.023	.132	.073	.023		
4.0	.153	.080	.023	.149	.078	.023	.142	.075	.022	.135	.073	.022	.129	.070	.021		
5.0	.146	.075	.022	.143	.073	.021	.136	.071	.021	.130	.069	.020	.125	.067	.020		
6.0	.140	.070	.020	.137	.069	.020	.131	.067	.020	.126	.065	.019	.121	.064	.019		
7.0	.133	.066	.019	.131	.065	.019	.126	.064	.018	.121	.062	.018	.116	.060	.018		
8.0	.127	.062	.018	.125	.062	.017	.121	.060	.017	.116	.059	.017	.112	.058	.017		
9.0	.122	.059	.016	.120	.058	.016	.116	.057	.016	.112	.056	.016	.108	.055	.016		
10.0	.117	.056	.016	.115	.055	.015	.111	.054	.015	.108	.053	.015	.104	.052	.015		

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	.174	.174	.174	.149	.149	.149	.102	.102	.102	.058	.058	.058	.019	.019	.019		
1.0	.158	.144	.132	.135	.124	.113	.092	.085	.078	.053	.049	.046	.017	.016	.015		
2.0	.144	.121	.102	.124	.104	.088	.085	.072	.061	.049	.042	.036	.016	.014	.012		
3.0	.134	.104	.080	.115	.090	.070	.079	.062	.049	.046	.036	.029	.015	.012	.009		
4.0	.125	.091	.065	.107	.078	.056	.074	.055	.040	.043	.032	.023	.014	.010	.008		
5.0	.118	.080	.053	.101	.070	.046	.070	.049	.032	.040	.029	.019	.013	.009	.006		
6.0	.111	.072	.044	.096	.062	.038	.066	.044	.027	.038	.026	.016	.012	.008	.005		
7.0	.106	.065	.037	.091	.057	.032	.063	.040	.023	.036	.023	.014	.012	.008	.005		
8.0	.101	.060	.032	.087	.052	.028	.060	.036	.020	.035	.021	.012	.011	.007	.004		
9.0	.096	.055	.028	.083	.048	.024	.057	.034	.017	.033	.020	.010	.011	.007	.003		
10.0	.092	.051	.024	.079	.044	.021	.055	.031	.015	.032	.018	.009	.010	.006	.003		

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:SU  
 Test Date:2016-07-19

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V1.0.257  
 Humidity:65.0%  
 Test Distance:8.750m [K=1.0000]  
 Remarks:

## Uncorrected UGR Table

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	20.8	21.8	21.0	22.0	22.2	21.3	22.4	21.6	22.6	22.7
3H	20.6	21.5	20.9	21.7	22.0	21.2	22.1	21.4	22.3	22.5
4H	20.5	21.4	20.8	21.6	21.9	21.1	22.0	21.4	22.2	22.4
6H	20.4	21.2	20.7	21.5	21.7	21.0	21.8	21.3	22.1	22.3
8H	20.4	21.2	20.7	21.4	21.7	20.9	21.7	21.2	22.0	22.3
12H	20.3	21.1	20.6	21.4	21.6	20.9	21.7	21.2	21.9	22.2
4H 2H	20.5	21.4	20.8	21.6	21.9	21.1	22.0	21.4	22.2	22.4
3H	20.3	21.1	20.7	21.4	21.7	20.9	21.7	21.2	21.9	22.2
4H	20.2	20.9	20.6	21.2	21.5	20.8	21.5	21.2	21.8	22.1
6H	20.1	20.8	20.5	21.1	21.4	20.7	21.3	21.1	21.7	22.0
8H	20.1	20.7	20.5	21.0	21.4	20.7	21.2	21.1	21.6	21.9
12H	20.1	20.6	20.5	20.9	21.3	20.6	21.1	21.0	21.5	21.9
8H 4H	20.1	20.7	20.5	21.0	21.4	20.7	21.2	21.1	21.6	21.9
6H	20.0	20.5	20.4	20.9	21.3	20.6	21.0	21.0	21.4	21.8
8H	20.0	20.4	20.4	20.8	21.2	20.5	20.9	21.0	21.3	21.8
12H	19.9	20.2	20.4	20.7	21.2	20.5	20.8	20.9	21.2	21.7
12H 4H	20.1	20.6	20.5	20.9	21.3	20.6	21.1	21.0	21.5	21.9
6H	20.0	20.4	20.4	20.8	21.2	20.5	20.9	21.0	21.3	21.8
8H	19.9	20.2	20.4	20.7	21.2	20.5	20.8	20.9	21.2	21.7
Variations with the observer position at spacings:										
S = 1.0H	+ 2.5 / -20.8					+ 2.4 / - 9.6				
1.5H	+ 3.5 / -13.6					+ 3.2 / -11.4				
2.0H	+ 7.3 / -18.0					+ 6.3 / -19.3				

CIE Pub.117 Corrected 5250 lm Total Lamp Luminous Flux.(8log(F/F0) = 5.8)

C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:SU  
 Test Date:2016-07-19

γ Range: 0 - 90DEG  
 γ Interval: 0.5DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V1.0.257  
 Humidity:65.0%  
 Test Distance:8.750m [K=1.0000]  
 Remarks:

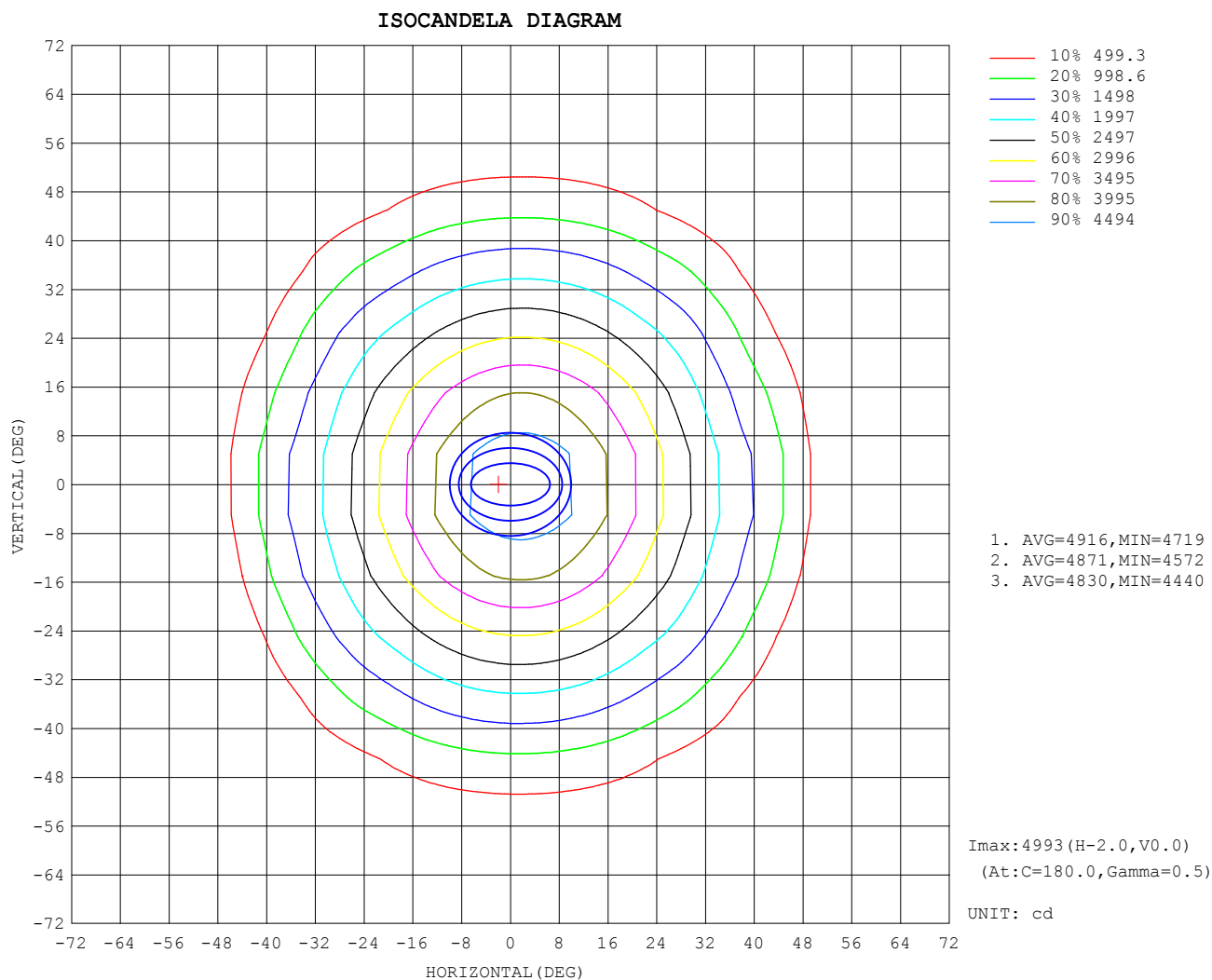
## UTILIZATION FACTORS TABLE

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) $k(RI) \times RCR = 5$									
$k = 0.60$	74	68	64	74	68	64	73	67	63	60
0.80	82	76	72	82	76	72	80	75	71	68
1.00	88	82	78	87	81	78	85	81	77	73
1.25	92	87	83	91	86	83	89	85	82	78
1.50	95	90	87	94	89	86	92	88	85	81
2.00	98	94	91	97	93	90	94	91	89	83
2.50	100	96	93	98	95	92	95	93	90	85
3.00	101	98	95	100	97	94	97	94	92	86
4.00	103	100	98	101	99	97	98	96	94	88
5.00	105	102	100	103	100	99	99	97	96	89
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: SU  
 Test Date: 2016-07-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V1.0.257  
 Humidity: 65.0%  
 Test Distance: 8.750m [K=1.0000]  
 Remarks:

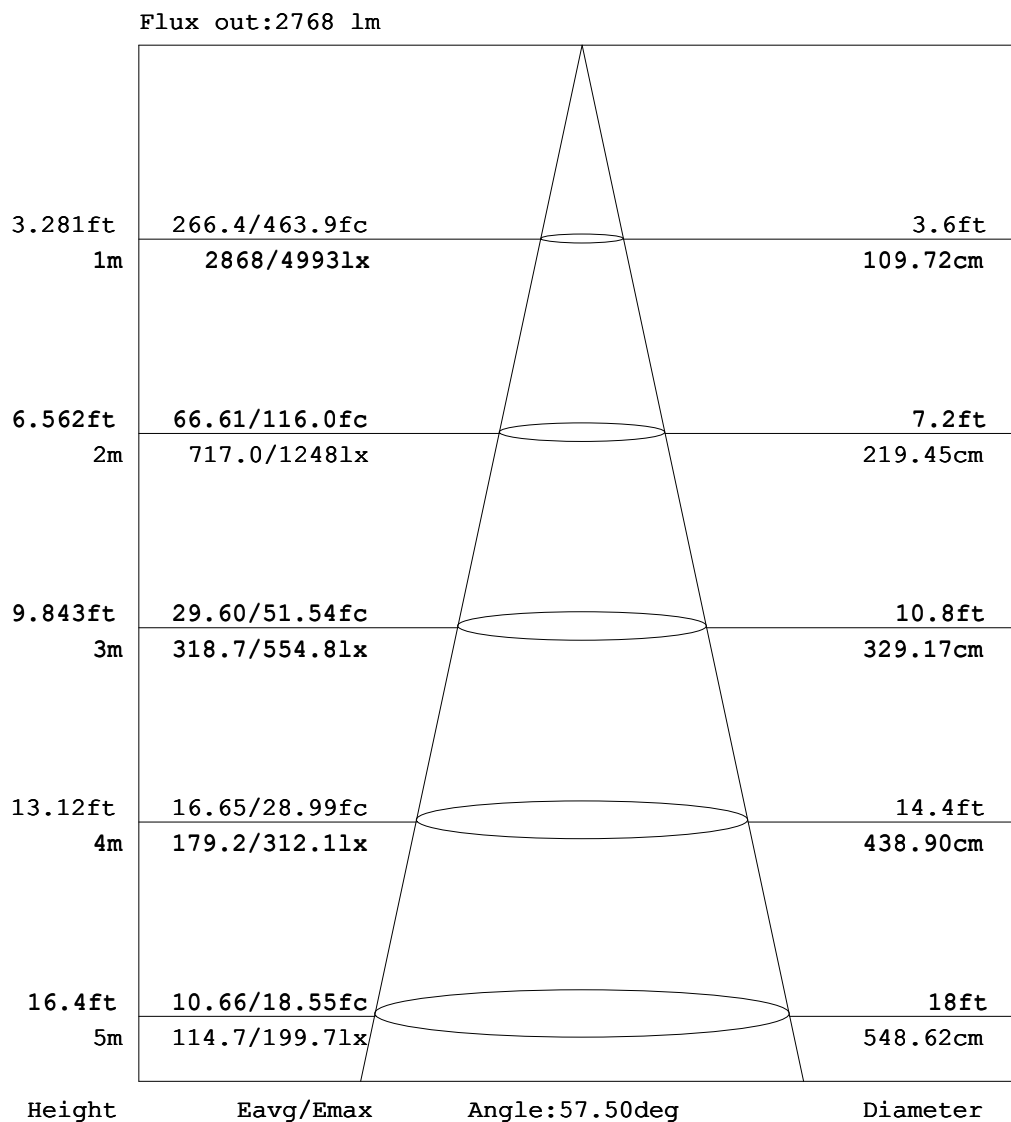
## ISOCANDELA DIAGRAM



C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:SU  
Test Date:2016-07-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V1.0.257  
Humidity:65.0%  
Test Distance:8.750m [K=1.0000]  
Remarks:

AAI Figure



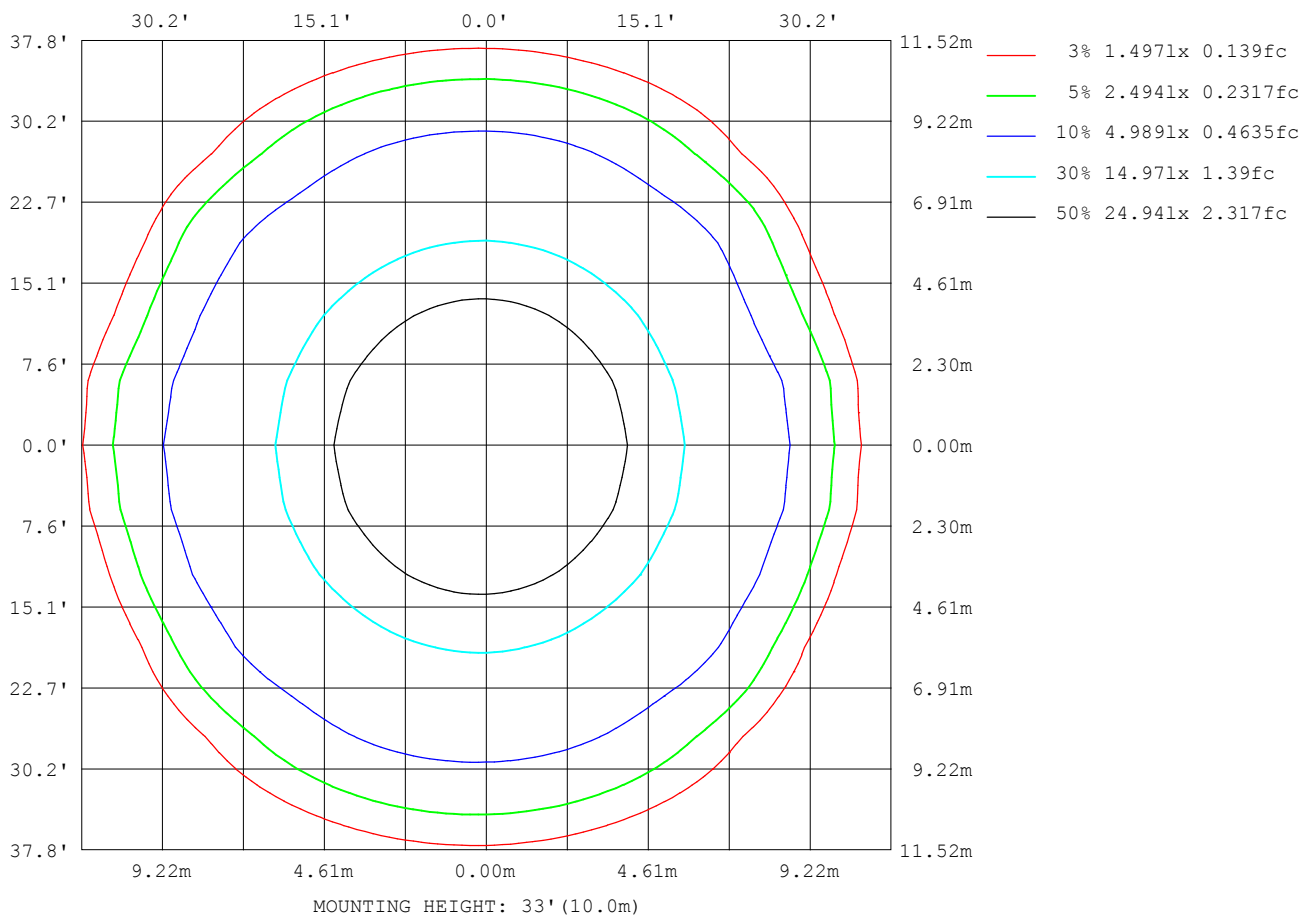
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: SU  
Test Date: 2016-07-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V1.0.257  
Humidity: 65.0%  
Test Distance: 8.750m [K=1.0000]  
Remarks:



## ISOLUX DIAGRAM



C Range: 0 - 360DEG  
 C Interval: 5.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: SU  
 Test Date: 2016-07-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V1.0.257  
 Humidity: 65.0%  
 Test Distance: 8.750m [K=1.0000]  
 Remarks:

### Average Luminance Table (CIBSE)

Parameter description for average Luminance	Symbol	Value	Unit
Luminance in Azimuth Plane	Bc	refer Table 2	cd/sq.m.
Intensity at angle Gamma in given azimuth plane	I	from data	cd/klm
Number of lamps	N	1	
Output of each lamp (initial lumens as specified)	F	5250	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.03	sq.m.
Angle to the downward vertical from light centre	Gamma	from data	deg

Table 1. Calculation parameters for determination of CIBSE LG3:1996 Average Luminance

G deg	C plane (deg)																		
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
55	1028	1668	2986	4057	5742	6622	5468	9265	11084	11552	11163	9366	5552	6704	5468	3373	2187	1388	829
60	398	390	400	406	1072	428	2255	2635	1293	458	1316	2689	2321	496	1020	505	509	504	512
65	361	360	371	377	382	388	395	418	433	446	456	463	463	475	488	499	504	500	509
70	356	354	366	372	372	378	381	405	417	433	448	465	470	489	502	522	529	519	522
75	382	385	403	404	399	389	401	439	463	485	501	519	520	540	562	586	599	588	577
80	482	480	506	506	493	492	495	534	566	592	618	652	673	704	725	747	753	713	746
85	178	543	623	776	473	273	144	66	17	0	19	81	198	398	725	1245	885	692	205

Table 2. Average Luminance (cd/sq.m.) for defined C plane, Gamma angle

CIBSE Category	Gamma (deg)	Average Luminance		Patch Luminance	
		maximum calculated	specified maximum	maximum measured	specified maximum
Category 1	55 to 90	11552	200	---	500
Category 2	65 to 90	1245	200	---	500
Category 3	75 to 90	1245	200	---	500

Table 3. Tabulation of Average and Patch Luminance (cd/sq.m.) for defined CIBSE categories

No match

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: SU  
Test Date: 2016-07-19

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V1.0.257  
Humidity: 65.0%  
Test Distance: 8.750m [K=1.0000]  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1

UNIT: cd

[illegible]

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: SU  
Test Date: 2016-07-19

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.257
Humidity:65.0%
Test Distance:8.750m [K=1.0000]
Remarks:

```

## LUMINOUS DISTRIBUTION INTENSITY DATA

Table--2

UNIT: cd

[illegible]

C Range: 0 - 360DEG  
C Interval: 5.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:SU  
Test Date:2016-07-19

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V1.0.257
Humidity:65.0%
Test Distance:8.750m [K=1.0000]
Remarks:

```



