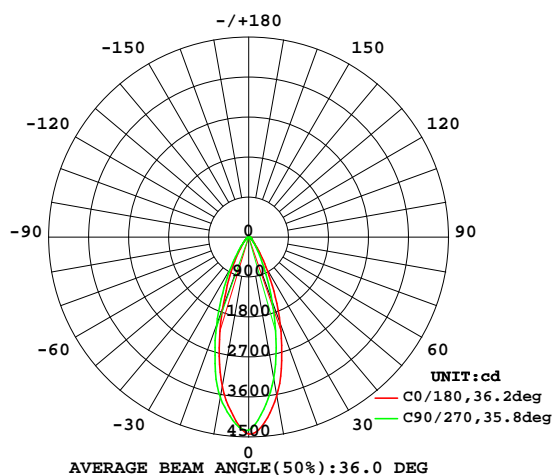


## LUMINAIRE PHOTOMETRIC TEST REPORT

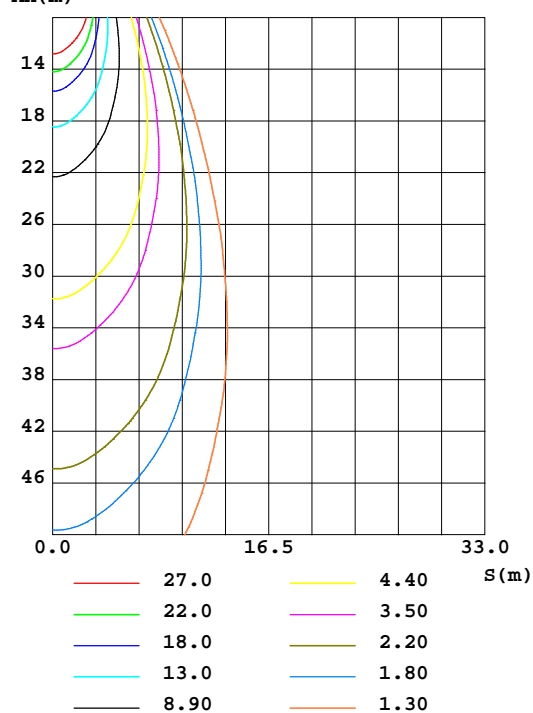
Test:U:228.6V I:0.1506A P:34.28W PF:0.9954 Lamp Flux:2188.89x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 63.85 lm/W			
MODEL	TL-812-35W-2CCT-RC-WH	I <sub>max</sub> (cd)	4431	S/MH(C0/180)	0.62
NOMINAL POWER(W)	34	LOR(%)	100.0	S/MH(C90/270)	0.53
RATED VOLTAGE(V)	228	TOTAL FLUX(lm)	2188.9	η UP,DN(C0-180)	0.1,46.9
NOMINAL FLUX(lm)	2188.89	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.1,52.8
LAMPS INSIDE	1	η up(%)	0.2	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	228.6	η down(%)	99.8	CIBSE SHR MAX	0.60

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-08-27

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
 Humidity:65.0%  
 Test Distance:7.810m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum, lamp
10	3638	3400	3243	3298	3424	3586	3672	3624	0- 10	368.8	368.8	16.8,16.8
20	2083	1706	1555	1605	1734	2011	2126	2166	10- 20	738.2	1107	50.6,50.6
30	783.4	593.0	539.8	591.4	644.2	757.1	842.6	873.8	20- 30	548.5	1655	75.6,75.6
40	254.7	217.3	201.9	222.1	224.7	248.5	270.0	273.0	30- 40	263.5	1919	87.7,87.7
50	102.7	94.17	91.29	96.46	101.3	106.2	109.4	106.5	40- 50	119.6	2039	93.1,93.1
60	59.91	57.01	54.35	55.60	56.85	59.26	61.40	61.18	50- 60	67.54	2106	96.2,96.2
70	36.32	33.61	31.92	32.93	35.00	37.12	39.19	38.15	60- 70	46.05	2152	98.3,98.3
80	14.57	13.26	12.37	14.09	15.92	17.61	18.52	16.63	70- 80	26.59	2179	99.5,99.5
90	0	0	0	0	0	0	0	0	80- 90	5.079	2184	99.8,99.8
100	0	0	0	0	0	0	0	0	90-100	0	2184	99.8,99.8
110	0	0	0	0	0	0	0	0	100-110	0	2184	99.8,99.8
120	0	0	0	0	0	0	0	0	110-120	0	2184	99.8,99.8
130	0	0	0	0	0	0	0	0	120-130	0	2184	99.8,99.8
140	0.7189	1.212	1.492	1.442	0.8144	0.3404	0.0319	0.0479	130-140	0.1045	2184	99.8,99.8
150	3.408	3.726	3.840	3.875	3.434	3.125	2.949	2.875	140-150	1.334	2185	99.8,99.8
160	4.590	4.514	4.518	4.744	4.413	4.490	4.601	4.480	150-160	1.889	2187	99.9,99.9
170	4.485	4.221	4.278	4.706	4.240	4.456	4.725	4.768	160-170	1.293	2188	100,100
180	4.542	4.466	4.610	4.955	4.547	4.446	4.619	4.941	170-180	0.4283	2189	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

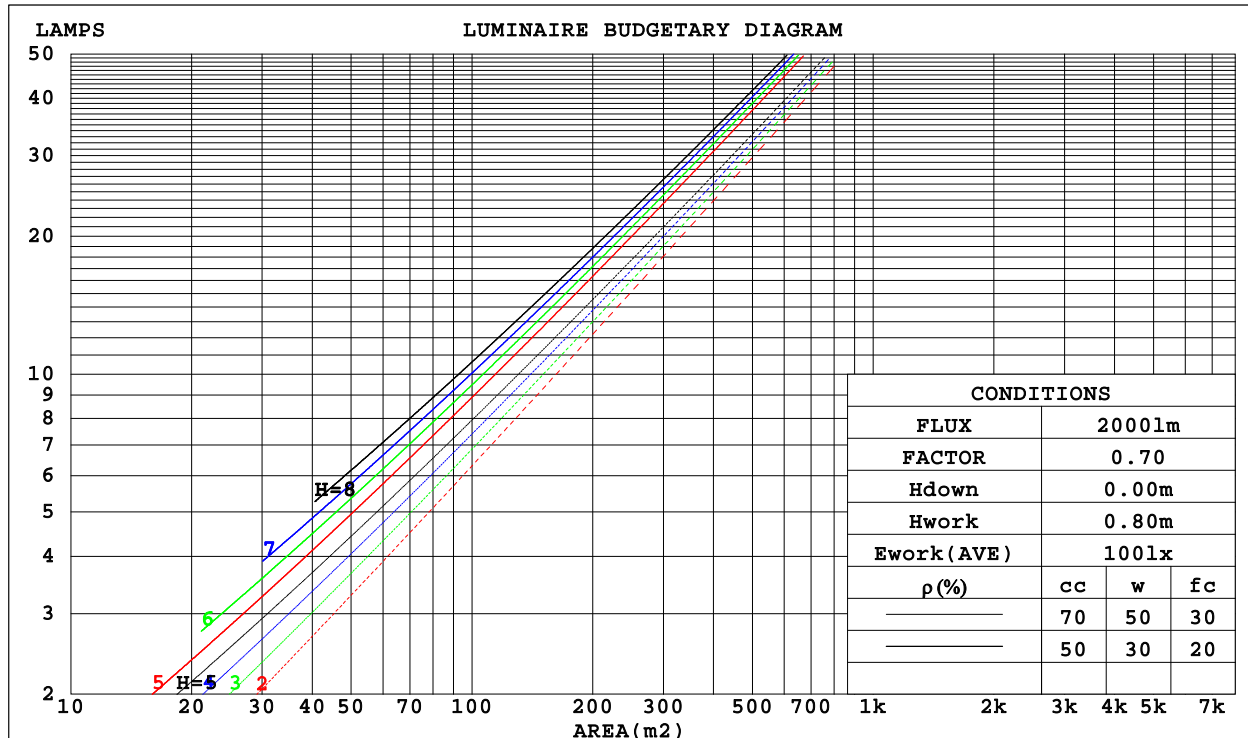
C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-08-27

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
 Humidity:65.0%  
 Test Distance:7.810m [K=1.0000]  
 Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:228.6V I:0.1506A P:34.28W PF:0.9954 Lamp Flux:2188.89x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

$\rho_{cc}$	80%			70%			50%			30%			10%			0	
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
$\rho_{fc}$	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	1.10	1.08	1.06	1.08	1.06	1.04	1.04	1.02	1.01	1.00	.99	.98	.97	.96	.95	.93	
2.0	1.03	.99	.95	1.01	.97	.94	.98	.95	.92	.95	.92	.90	.92	.90	.88	.87	
3.0	.96	.91	.87	.95	.90	.87	.92	.88	.85	.90	.86	.84	.87	.85	.82	.81	
4.0	.90	.85	.81	.89	.84	.80	.87	.83	.79	.85	.81	.78	.83	.80	.77	.76	
5.0	.85	.79	.75	.84	.79	.75	.82	.78	.74	.81	.77	.74	.79	.76	.73	.71	
6.0	.80	.75	.71	.80	.74	.70	.78	.73	.70	.77	.73	.69	.75	.72	.69	.67	
7.0	.76	.71	.67	.76	.70	.66	.74	.70	.66	.73	.69	.66	.72	.68	.65	.64	
8.0	.73	.67	.63	.72	.67	.63	.71	.66	.63	.70	.65	.62	.69	.65	.62	.61	
9.0	.69	.64	.60	.69	.63	.60	.68	.63	.59	.67	.62	.59	.66	.62	.59	.58	
10.0	.66	.61	.57	.66	.60	.57	.65	.60	.57	.64	.60	.57	.63	.59	.56	.55	



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2018-08-27

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
Humidity: 65.0%  
Test Distance: 7.810m [K=1.0000]  
Remarks:

## WEC AND CCEC

Test:U:228.6V I:0.1506A P:34.28W PF:0.9954 Lamp Flux:2188.89x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	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															

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      Ceiling Cavity Exitance Coefficients(CCEC)															
0.0	.192	.192	.192	.164	.164	.164	.112	.112	.112	.064	.064	.064	.021	.021	.021	
1.0	.173	.159	.146	.148	.136	.126	.101	.094	.087	.058	.054	.051	.019	.017	.016	
2.0	.158	.134	.114	.135	.116	.099	.093	.080	.069	.054	.047	.040	.017	.015	.013	
3.0	.145	.115	.091	.125	.100	.079	.086	.069	.056	.049	.040	.033	.016	.013	.011	
4.0	.135	.101	.075	.116	.087	.065	.080	.061	.046	.046	.035	.027	.015	.012	.009	
5.0	.126	.089	.062	.108	.077	.054	.074	.054	.038	.043	.032	.023	.014	.010	.007	
6.0	.118	.080	.052	.101	.069	.045	.070	.048	.032	.041	.028	.019	.013	.009	.006	
7.0	.111	.072	.045	.095	.062	.039	.066	.044	.027	.038	.026	.016	.012	.008	.005	
8.0	.105	.066	.039	.090	.057	.034	.062	.040	.024	.036	.024	.014	.012	.008	.005	
9.0	.100	.060	.034	.086	.052	.029	.059	.037	.021	.035	.022	.012	.011	.007	.004	
10.0	.095	.056	.030	.082	.048	.026	.057	.034	.018	.033	.020	.011	.011	.007	.004	

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2018-08-27

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
Humidity:65.0%  
Test Distance:7.810m [K=1.0000]  
Remarks:

### Uncorrected UGR Table

Test:U:228.6V I:0.1506A P:34.28W PF:0.9954 Lamp Flux:2188.89x1 lm											
NAME: S1-CN002(180528)					TYPE:			WEIGHT:			
DIM.:					SPEC.:			SERIAL No.:			
MFR.:					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	14.3	15.2	14.5	15.4	15.5	13.5	14.4	13.7	14.6	14.7	
	3H	15.0	15.9	15.3	16.1	16.3	14.3	15.1	14.5	15.3	15.5
	4H	15.3	16.1	15.6	16.4	16.6	14.6	15.4	14.9	15.7	15.9
	6H	15.6	16.3	15.9	16.6	16.8	14.9	15.6	15.2	15.9	16.1
	8H	15.6	16.4	16.0	16.6	16.9	14.9	15.6	15.2	15.9	16.2
	12H	15.6	16.3	15.9	16.6	16.9	14.9	15.6	15.2	15.8	16.1
4H	2H	14.5	15.3	14.8	15.5	15.7	13.8	14.6	14.1	14.8	15.0
	3H	15.4	16.1	15.7	16.4	16.7	14.8	15.5	15.1	15.8	16.0
	4H	15.9	16.5	16.2	16.8	17.1	15.3	15.9	15.6	16.2	16.5
	6H	16.2	16.8	16.6	17.1	17.5	15.6	16.2	16.0	16.5	16.9
	8H	16.3	16.8	16.7	17.2	17.5	15.7	16.2	16.1	16.5	16.9
	12H	16.3	16.8	16.7	17.1	17.5	15.6	16.1	16.0	16.5	16.9
8H	4H	16.0	16.5	16.4	16.9	17.2	15.4	15.9	15.8	16.3	16.7
	6H	16.4	16.9	16.9	17.3	17.7	15.9	16.3	16.3	16.7	17.1
	8H	16.5	16.9	17.0	17.3	17.8	15.9	16.3	16.4	16.8	17.2
	12H	16.5	16.9	17.0	17.3	17.8	15.9	16.2	16.4	16.7	17.2
12H	4H	15.9	16.4	16.4	16.8	17.2	15.4	15.9	15.8	16.3	16.7
	6H	16.4	16.8	16.9	17.2	17.7	15.9	16.3	16.3	16.7	17.1
	8H	16.5	16.9	17.0	17.3	17.8	16.0	16.3	16.4	16.7	17.2
Variations with the observer position at spacings:											
S = 1.0H	+ 0.9 / - 0.9					+ 0.6 / - 0.8					
1.5H	+ 1.8 / - 0.7					+ 1.0 / - 0.7					
2.0H	+ 1.2 / - 0.5					+ 1.0 / - 0.6					

CIE Pub.117 Corrected 2189 lm Total Lamp Luminous Flux.(8log(F/F0) = 2.7)

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2018-08-27

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
Humidity:65.0%  
Test Distance:7.810m [K=1.0000]  
Remarks:

### UTILIZATION FACTORS TABLE

Test:U:228.6V I:0.1506A P:34.28W PF:0.9954 Lamp Flux:2188.89x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

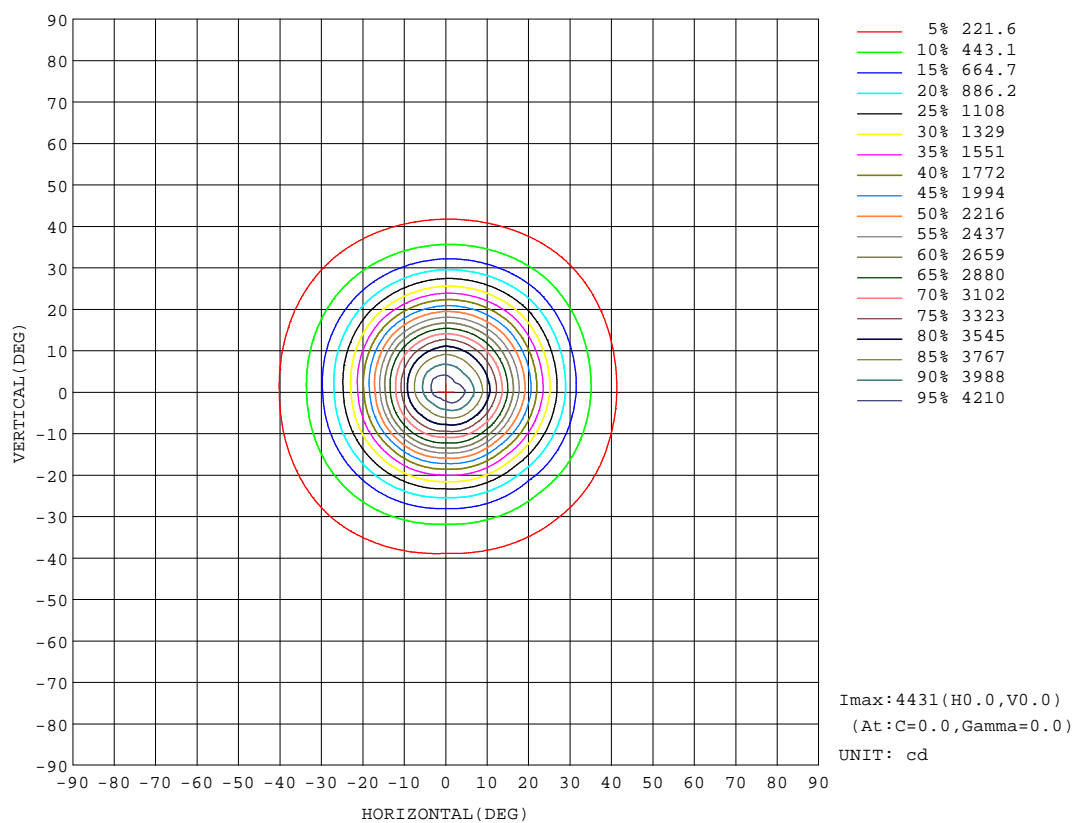
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	84	77	73	83	77	73	83	76	73	69
0.80	92	85	81	91	85	81	90	84	80	76
1.00	96	90	86	96	90	86	94	90	85	81
1.25	101	95	91	100	94	91	98	93	90	85
1.50	104	98	95	102	98	94	100	96	93	88
2.00	107	102	99	105	101	98	103	99	96	91
2.50	109	105	101	107	103	100	104	101	98	92
3.00	111	107	104	109	105	103	105	103	100	94
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	112	110	112	110	108	108	106	105	97
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2018-08-27

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
Humidity:65.0%  
Test Distance:7.810m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

Test:U:228.6V I:0.1506A P:34.28W PF:0.9954 Lamp Flux:2188.89x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

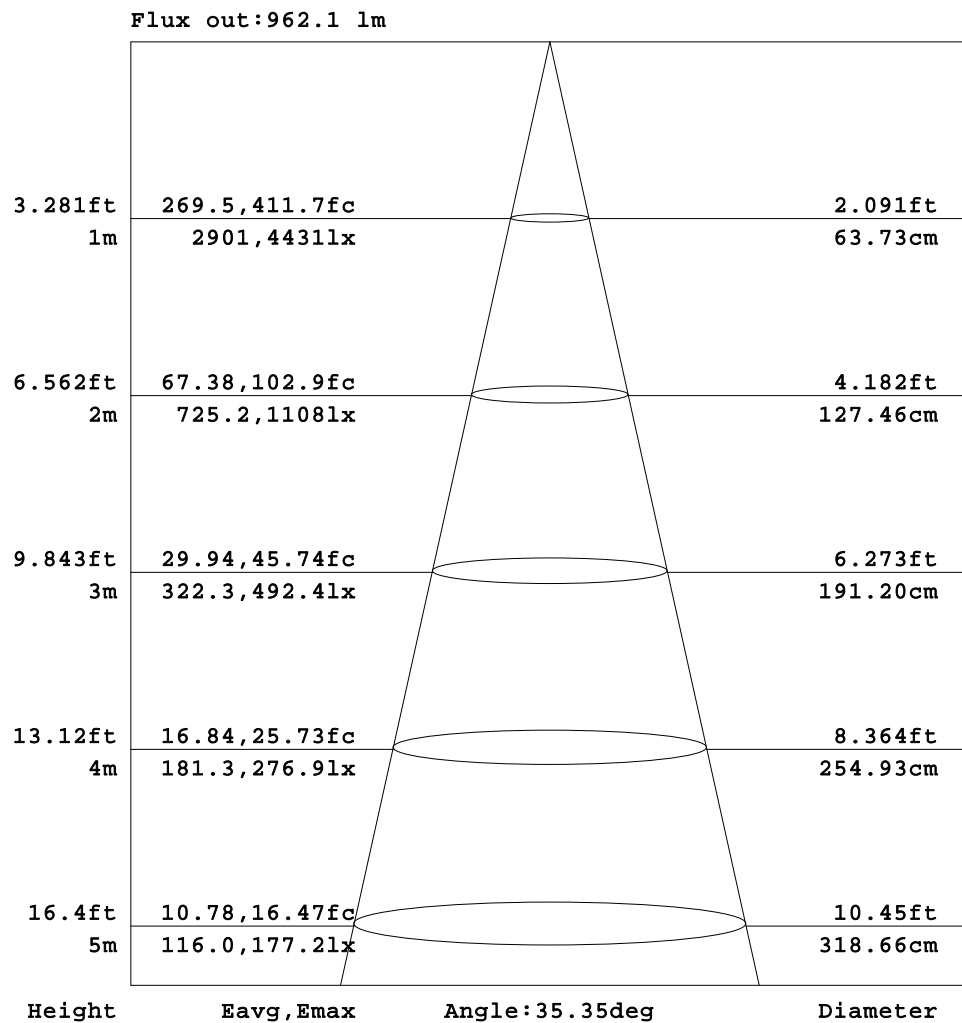


C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2018-08-27

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
Humidity: 65.0%  
Test Distance: 7.810m [K=1.0000]  
Remarks:

### AAI Figure

Test:U:228.6V I:0.1506A P:34.28W PF:0.9954 Lamp Flux:2188.89x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



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

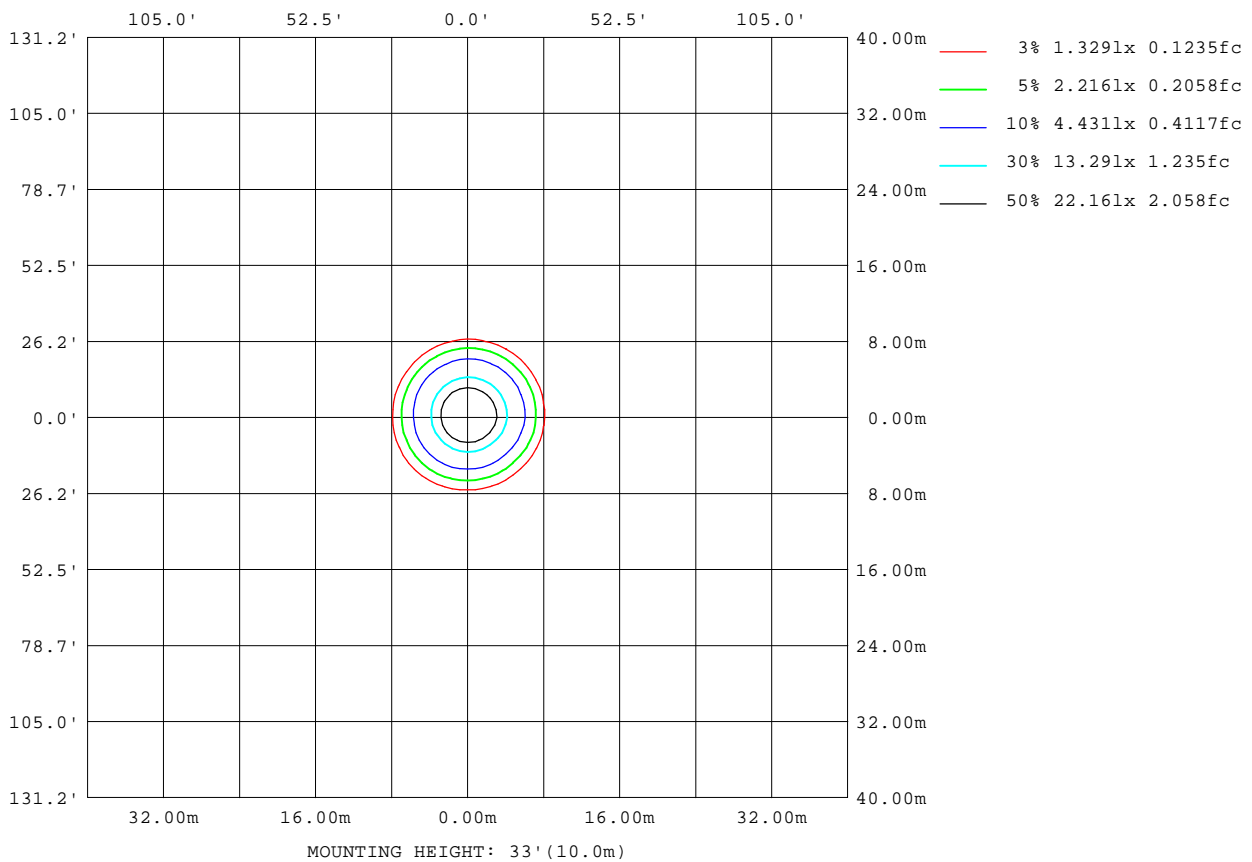
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2018-08-27

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
Humidity:65.0%  
Test Distance:7.810m [K=1.0000]  
Remarks:



ISOLUX DIAGRAM

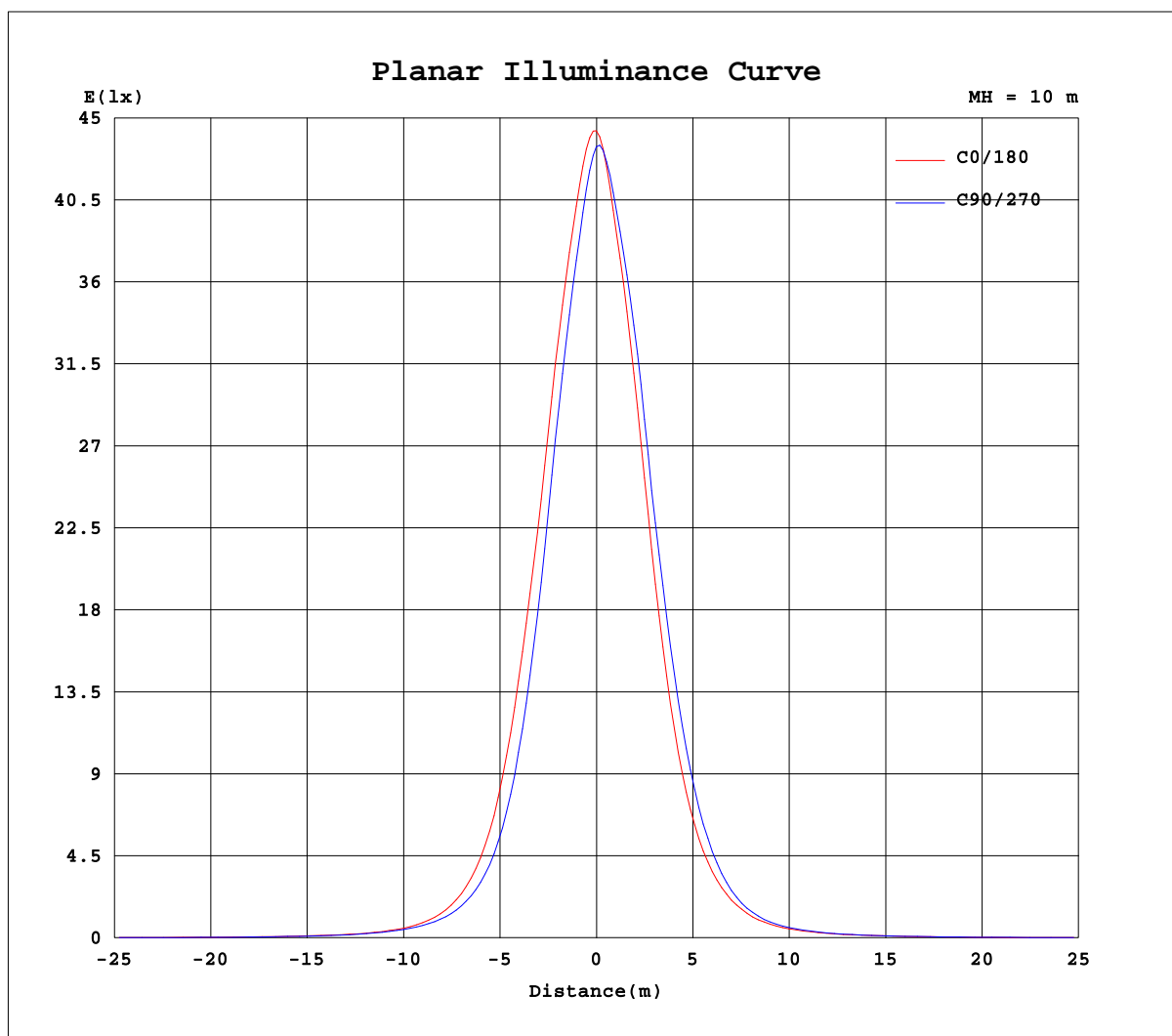
Test:U:228.6V I:0.1506A P:34.28W PF:0.9954 Lamp Flux:2188.89x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2018-08-27

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
 Humidity: 65.0%  
 Test Distance: 7.810m [K=1.0000]  
 Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2018-08-27

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
Humidity: 65.0%  
Test Distance: 7.810m [K=1.0000]  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:228.6V I:0.1506A P:34.28W PF:0.9954 Lamp Flux:2188.89x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	45	90	135	180	225	270	315										
0	4431	4415	4343	4301	4431	4415	4343	4301										
5	4183	4038	3895	3881	4040	4147	4139	4089										
10	3638	3400	3243	3298	3424	3586	3672	3624										
15	2877	2565	2371	2453	2584	2844	2946	2936										
20	2083	1706	1555	1605	1734	2011	2126	2166										
25	1347	1027	932	991	1074	1288	1395	1443										
30	783	593	540	591	644	757	843	874										
35	446	350	322	359	379	432	475	494										
40	255	217	202	222	225	249	270	273										
45	153	141	135	142	144	155	162	163										
50	103	94.2	91.3	96.5	101	106	109	107										
55	75.6	71.2	68.5	70.5	73.0	75.4	78.1	77.8										
60	59.9	57.0	54.4	55.6	56.9	59.3	61.4	61.2										
65	47.8	45.4	43.2	44.0	44.8	47.5	48.8	49.3										
70	36.3	33.6	31.9	32.9	35.0	37.1	39.2	38.2										
75	24.2	23.3	22.4	23.7	25.1	26.9	27.8	26.8										
80	14.6	13.3	12.4	14.1	15.9	17.6	18.5	16.6										
85	1.89	0.69	0.02	1.30	2.74	4.06	4.92	3.43										
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
140	0.72	1.21	1.49	1.44	0.81	0.34	0.03	0.05										
145	2.21	2.64	2.86	2.82	2.27	1.86	1.59	1.56										
150	3.41	3.73	3.84	3.88	3.43	3.12	2.95	2.88										
155	4.21	4.36	4.38	4.52	4.16	4.01	3.98	3.87										
160	4.59	4.51	4.52	4.74	4.41	4.49	4.60	4.48										
165	4.64	4.40	4.43	4.72	4.35	4.57	4.78	4.75										
170	4.49	4.22	4.28	4.71	4.24	4.46	4.72	4.77										
175	4.43	4.28	4.31	4.80	4.31	4.35	4.63	4.78										
180	4.54	4.47	4.61	4.96	4.55	4.45	4.62	4.94										

C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2018-08-27

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
Humidity:65.0%  
Test Distance:7.810m [K=1.0000]  
Remarks: