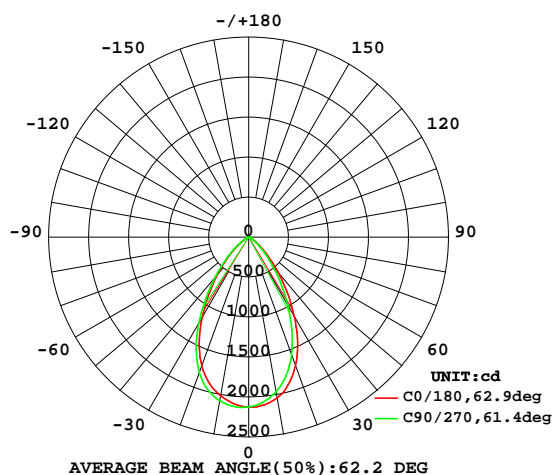


## LUMINAIRE PHOTOMETRIC TEST REPORT

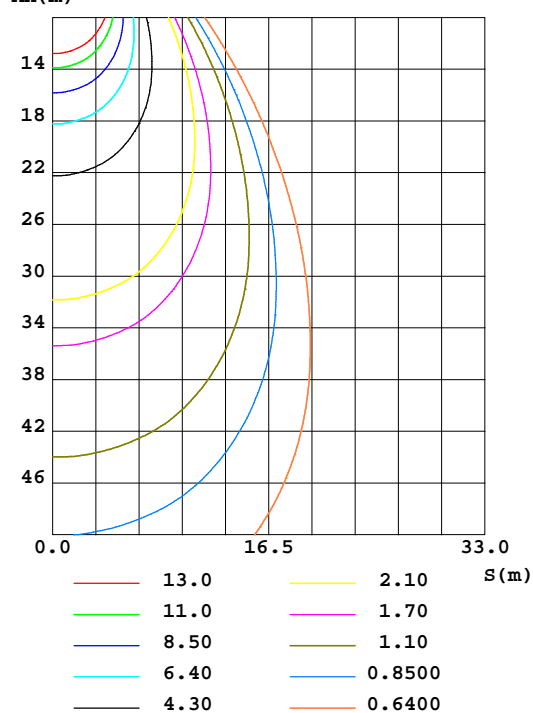
Test:U:229.3V I:0.1556A P:35.54W PF:0.9961 Lamp Flux:2357.3x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 66.33 lm/W			
MODEL	TL-812-35W-2CCT-RC-WH	I <sub>max</sub> (cd)	2135	S/MH(C0/180)	0.94
NOMINAL POWER(W)	36	LOR(%)	100.0	S/MH(C90/270)	0.87
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	2357.3	η UP,DN(C0-180)	0.1,46.6
NOMINAL FLUX(lm)	2357.3	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.1,53.1
LAMPS INSIDE	1	η up(%)	0.2	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	229.3	η down(%)	99.8	CIBSE SHR MAX	0.95

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	2044	2014	1966	1954	2015	2048	2078	2079	0- 10	198.0	198.0	8.4,8.4
20	1713	1642	1571	1585	1717	1754	1802	1809	10- 20	529.1	727.1	30.8,30.8
30	1142	1063	977.9	1006	1168	1206	1251	1246	20- 30	653.4	1380	58.6,58.6
40	568.9	517.5	464.7	487.0	604.4	629.0	651.8	634.6	30- 40	519.0	1900	80.6,80.6
50	212.2	188.0	166.1	177.6	233.3	246.9	256.4	245.5	40- 50	285.9	2185	92.7,92.7
60	59.45	53.59	46.99	48.53	56.25	59.27	66.11	66.18	50- 60	105.2	2291	97.2,97.2
70	26.27	25.55	23.76	23.39	25.02	26.19	27.87	27.90	60- 70	36.93	2328	98.7,98.7
80	13.35	12.88	10.83	10.61	12.25	13.39	14.97	14.72	70- 80	20.12	2348	99.6,99.6
90	0	0	0	0	0	0	0	0	80- 90	4.812	2352	99.8,99.8
100	0	0	0	0	0	0	0	0	90-100	0	2352	99.8,99.8
110	0	0	0	0	0	0	0	0	100-110	0	2352	99.8,99.8
120	0	0	0	0	0	0	0	0	110-120	0	2352	99.8,99.8
130	0	0	0	0	0	0	0	0	120-130	0	2352	99.8,99.8
140	1.176	1.307	1.444	1.447	0.9142	0.6479	0.4774	0.4270	130-140	0.1986	2353	99.8,99.8
150	2.966	3.078	3.144	3.217	2.747	2.549	2.488	2.405	140-150	1.195	2354	99.9,99.9
160	4.268	4.322	4.307	4.462	4.097	3.976	4.054	3.957	150-160	1.617	2355	99.9,99.9
170	5.315	5.297	5.233	5.441	5.211	5.037	5.230	5.147	160-170	1.324	2357	100,100
180	5.930	5.892	5.844	6.002	6.007	5.786	5.911	5.930	170-180	0.5271	2357	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

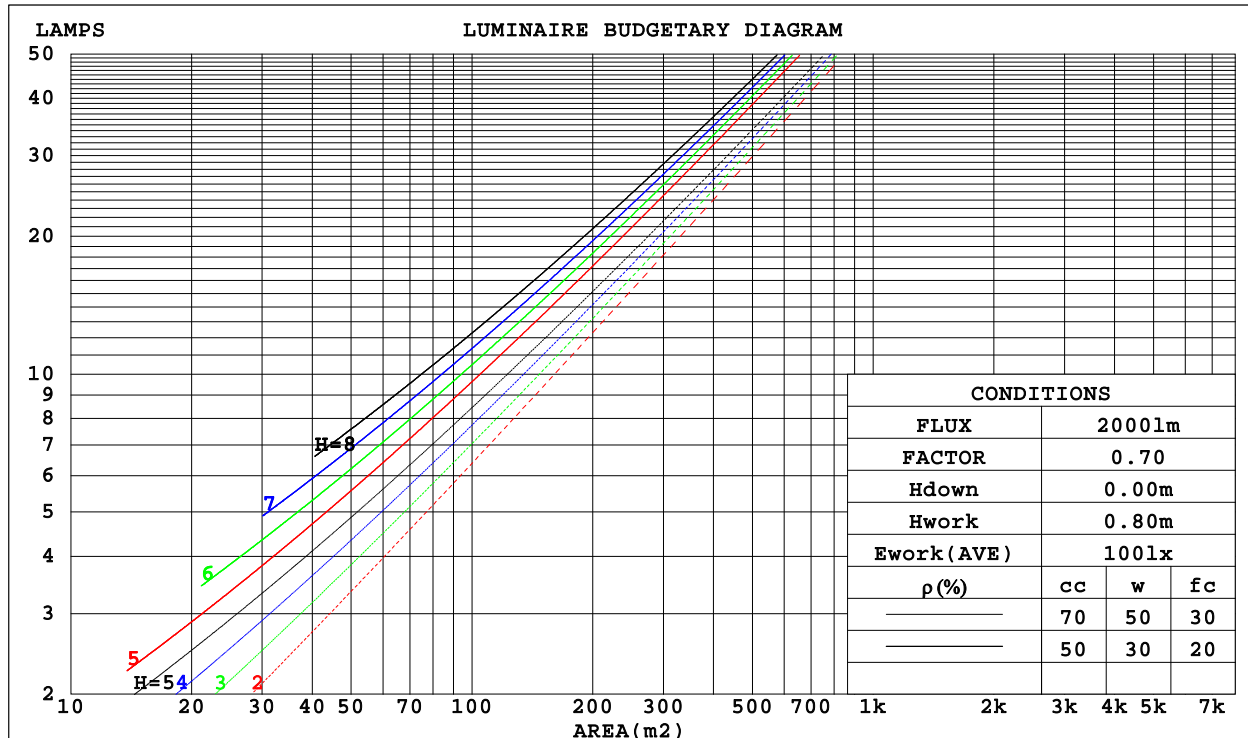
C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-08-27

$\gamma$  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:229.3V I:0.1556A P:35.54W PF:0.9961 Lamp Flux:2357.3x1 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	1.09	1.07	1.04	1.07	1.05	1.03	1.03	1.01	.99	.99	.98	.96	.96	.95	.93	.92
2.0	1.01	.96	.92	.99	.95	.91	.96	.92	.89	.92	.90	.87	.90	.87	.85	.84
3.0	.93	.87	.83	.91	.86	.82	.88	.84	.81	.86	.82	.79	.84	.81	.78	.76
4.0	.86	.79	.75	.84	.79	.74	.82	.77	.73	.80	.76	.72	.78	.74	.71	.70
5.0	.79	.73	.68	.78	.72	.68	.76	.71	.67	.75	.70	.66	.73	.69	.66	.64
6.0	.74	.67	.62	.73	.67	.62	.71	.66	.61	.70	.65	.61	.68	.64	.61	.59
7.0	.69	.62	.57	.68	.62	.57	.67	.61	.57	.65	.60	.56	.64	.60	.56	.55
8.0	.64	.58	.53	.64	.57	.53	.62	.57	.53	.61	.56	.52	.60	.56	.52	.51
9.0	.60	.54	.49	.60	.53	.49	.59	.53	.49	.58	.52	.49	.57	.52	.49	.47
10.0	.56	.50	.46	.56	.50	.46	.55	.50	.46	.54	.49	.46	.53	.49	.45	.44



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:229.3V I:0.1556A P:35.54W PF:0.9961 Lamp Flux:2357.3x1 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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.201	.114	.036	.194	.111	.035	.181	.104	.033	.170	.098	.031	.159	.092	.030	
2.0	.194	.106	.033	.188	.103	.032	.177	.098	.031	.167	.094	.029	.158	.089	.028	
3.0	.184	.098	.029	.179	.096	.029	.170	.092	.028	.161	.088	.027	.153	.085	.026	
4.0	.175	.091	.027	.171	.089	.026	.163	.086	.026	.155	.083	.025	.148	.080	.024	
5.0	.166	.085	.025	.163	.083	.024	.155	.081	.024	.149	.078	.023	.142	.076	.023	
6.0	.158	.079	.023	.155	.078	.023	.148	.076	.022	.142	.074	.022	.137	.072	.021	
7.0	.150	.074	.021	.147	.073	.021	.142	.072	.021	.136	.070	.020	.131	.068	.020	
8.0	.143	.070	.020	.141	.069	.020	.136	.068	.019	.131	.066	.019	.126	.065	.019	
9.0	.137	.066	.018	.134	.065	.018	.130	.064	.018	.125	.063	.018	.121	.062	.018	
10.0	.131	.063	.017	.128	.062	.017	.124	.061	.017	.120	.060	.017	.117	.059	.017	

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	.192	.192	.192	.164	.164	.164	.112	.112	.112	.064	.064	.064	.021	.021	.021	
1.0	.174	.159	.145	.149	.136	.124	.102	.094	.086	.059	.054	.050	.019	.017	.016	
2.0	.161	.134	.111	.138	.115	.096	.094	.080	.067	.054	.046	.039	.017	.015	.013	
3.0	.150	.115	.088	.128	.099	.076	.088	.069	.054	.051	.040	.032	.016	.013	.010	
4.0	.140	.101	.071	.120	.087	.062	.083	.061	.043	.048	.036	.026	.015	.012	.008	
5.0	.132	.090	.058	.114	.078	.051	.078	.054	.036	.045	.032	.021	.015	.010	.007	
6.0	.125	.081	.049	.108	.070	.042	.074	.049	.030	.043	.029	.018	.014	.009	.006	
7.0	.119	.073	.041	.102	.064	.036	.071	.045	.026	.041	.026	.015	.013	.009	.005	
8.0	.113	.067	.036	.097	.058	.031	.067	.041	.022	.039	.024	.013	.013	.008	.004	
9.0	.108	.062	.031	.093	.054	.027	.064	.038	.019	.038	.022	.012	.012	.007	.004	
10.0	.103	.058	.028	.089	.050	.024	.062	.035	.017	.036	.021	.010	.012	.007	.003	

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:229.3V I:0.1556A P:35.54W PF:0.9961 Lamp Flux:2357.3x1 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	18.0	19.1	18.3	19.3	19.5	17.3	18.3	17.5	18.5	18.7	
	3H	18.0	19.0	18.3	19.2	19.4	17.3	18.3	17.5	18.5	18.7
	4H	18.0	19.0	18.3	19.2	19.4	17.3	18.2	17.6	18.4	18.7
	6H	18.1	18.9	18.4	19.2	19.4	17.3	18.2	17.6	18.4	18.7
	8H	18.1	18.9	18.4	19.2	19.4	17.3	18.1	17.6	18.4	18.7
	12H	18.0	18.8	18.4	19.1	19.4	17.2	18.0	17.6	18.3	18.6
4H	2H	17.9	18.8	18.2	19.1	19.3	17.1	18.1	17.4	18.3	18.5
	3H	17.9	18.7	18.3	19.0	19.3	17.2	18.0	17.5	18.3	18.6
	4H	18.0	18.7	18.4	19.0	19.4	17.3	18.0	17.6	18.3	18.6
	6H	18.1	18.7	18.5	19.1	19.4	17.4	18.0	17.7	18.3	18.7
	8H	18.1	18.7	18.5	19.1	19.4	17.4	18.0	17.8	18.3	18.7
	12H	18.1	18.6	18.5	19.0	19.4	17.3	17.9	17.8	18.3	18.7
8H	4H	17.9	18.5	18.3	18.9	19.3	17.3	17.8	17.7	18.2	18.6
	6H	18.1	18.6	18.5	19.0	19.4	17.4	17.9	17.8	18.3	18.7
	8H	18.2	18.6	18.6	19.0	19.4	17.4	17.9	17.9	18.3	18.7
	12H	18.1	18.5	18.6	19.0	19.4	17.4	17.8	17.9	18.2	18.7
12H	4H	17.9	18.5	18.3	18.8	19.2	17.2	17.8	17.6	18.1	18.5
	6H	18.1	18.5	18.5	18.9	19.4	17.4	17.8	17.8	18.2	18.7
	8H	18.1	18.5	18.6	19.0	19.4	17.4	17.8	17.9	18.2	18.7
Variations with the observer position at spacings:											
S = 1.0H	+ 1.9 / - 3.2					+ 1.8 / - 3.3					
1.5H	+ 2.8 / - 3.1					+ 2.4 / - 2.9					
2.0H	+ 4.0 / - 3.1					+ 3.7 / - 2.8					

CIE Pub.117 Corrected 2357 lm Total Lamp Luminous Flux.(8log(F/F0) = 3.0)

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:229.3V I:0.1556A P:35.54W PF:0.9961 Lamp Flux:2357.3x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

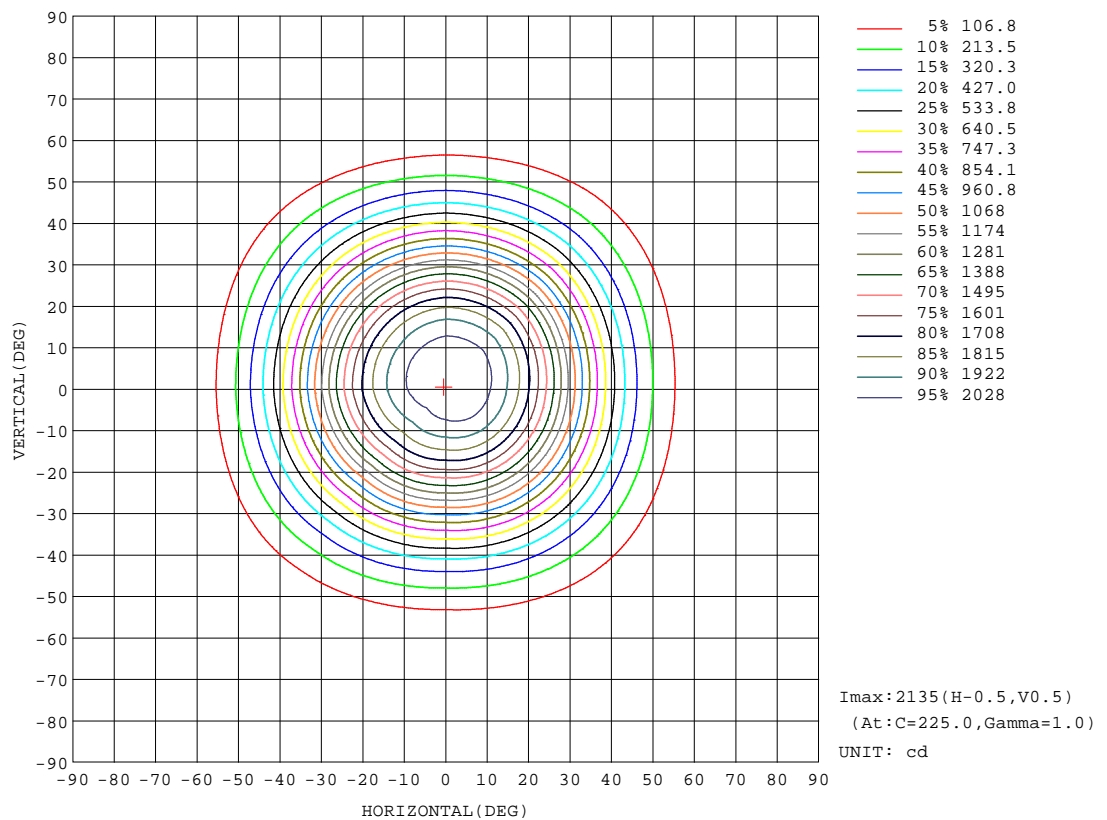
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	79	71	67	79	71	67	78	71	67	62
0.80	88	81	76	87	80	76	86	79	75	71
1.00	94	87	82	93	86	82	91	87	82	77
1.25	99	92	88	98	92	88	96	91	87	82
1.50	102	96	92	101	96	92	98	94	91	85
2.00	106	101	97	104	100	96	101	98	95	89
2.50	108	103	100	106	102	99	103	100	97	90
3.00	110	106	103	108	104	101	104	102	99	92
4.00	112	109	106	110	107	105	106	104	102	94
5.00	114	111	108	111	109	107	107	105	104	96
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

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:

## ISOCANDELA DIAGRAM

Test:U:229.3V I:0.1556A P:35.54W PF:0.9961 Lamp Flux:2357.3x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

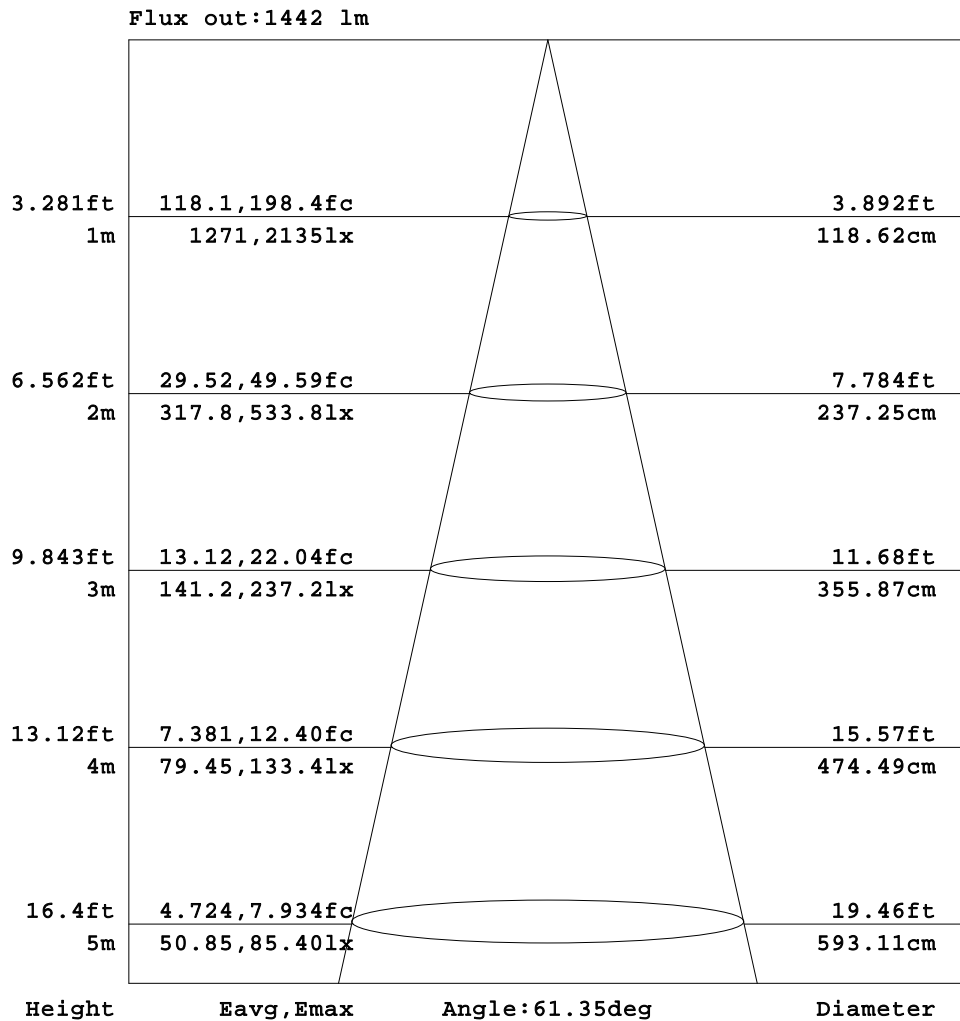


C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2018-08-27

$\gamma$  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:229.3V I:0.1556A P:35.54W PF:0.9961 Lamp Flux:2357.3x1 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.

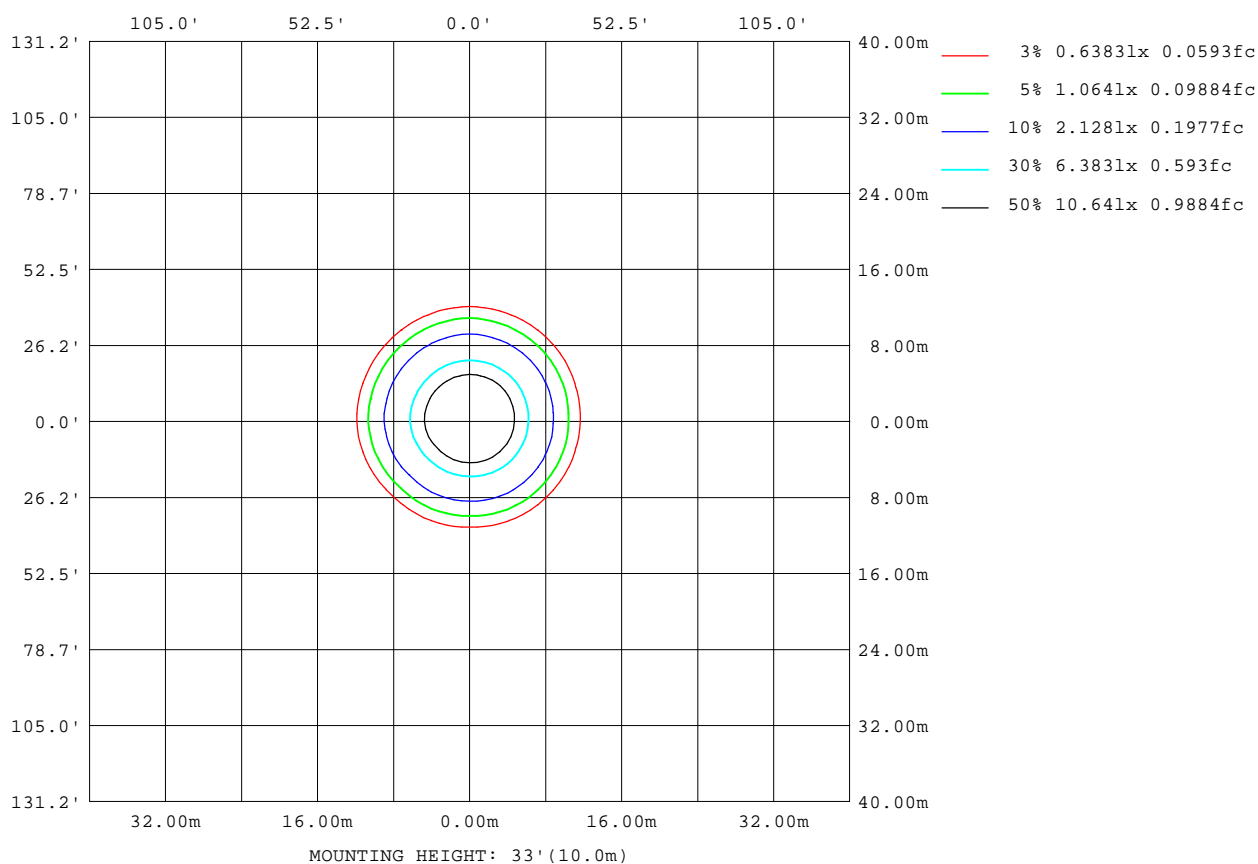
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: DAMIN  
Test Date: 2018-08-27

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

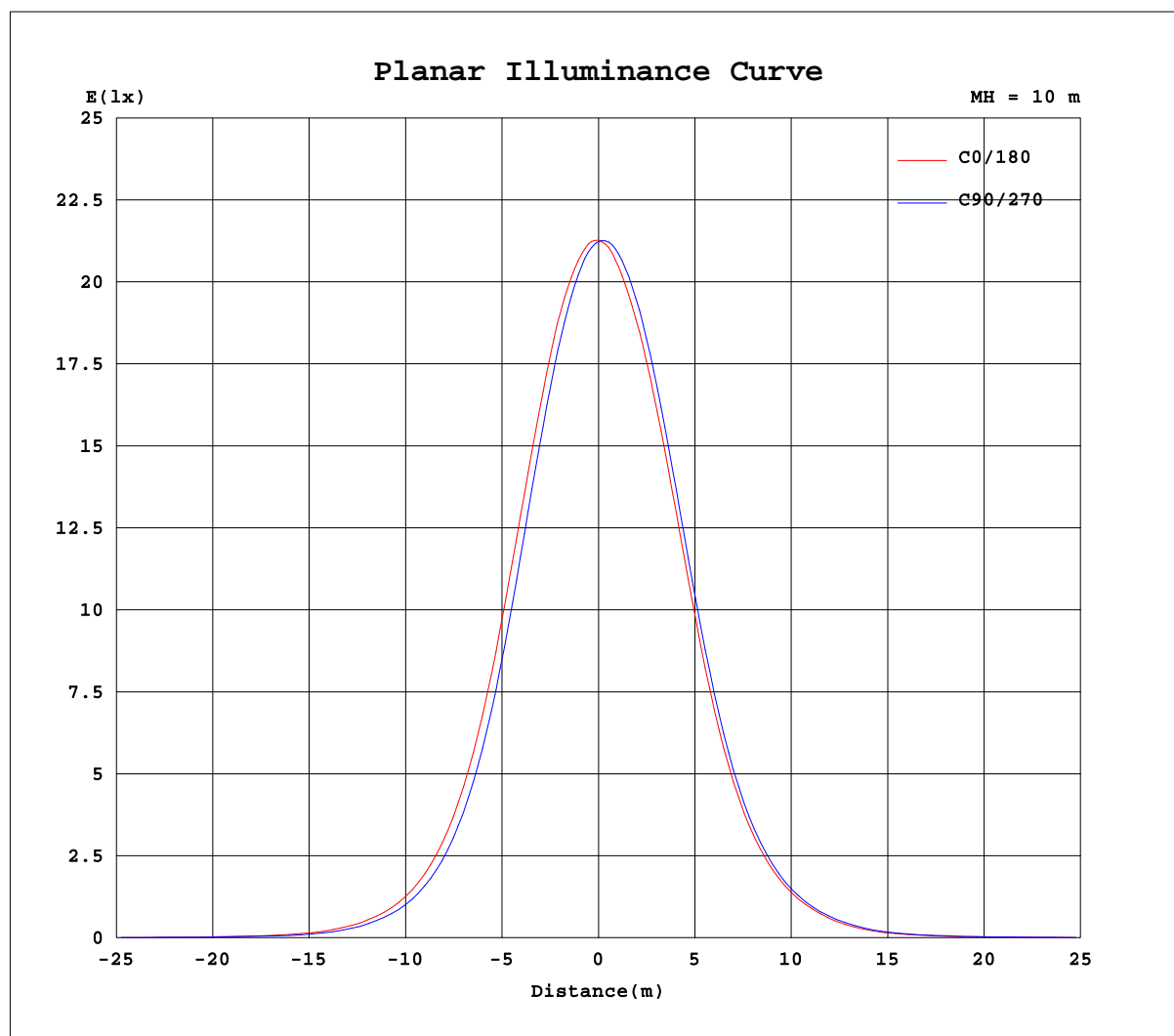
Test:U:229.3V I:0.1556A P:35.54W PF:0.9961 Lamp Flux:2357.3x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



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:229.3V I:0.1556A P:35.54W PF:0.9961 Lamp Flux:2357.3x1 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	2128	2135	2123	2111	2128	2135	2123	2111										
5	2110	2102	2073	2054	2093	2115	2126	2120										
10	2044	2014	1966	1954	2015	2048	2078	2079										
15	1912	1861	1800	1801	1897	1932	1976	1981										
20	1713	1642	1571	1585	1717	1754	1802	1809										
25	1453	1363	1283	1305	1468	1510	1553	1556										
30	1142	1063	978	1006	1168	1206	1251	1246										
35	838	769	698	722	866	900	932	924										
40	569	518	465	487	604	629	652	635										
45	359	323	289	309	394	410	425	406										
50	212	188	166	178	233	247	256	245										
55	111	97.3	83.8	88.5	113	123	131	128										
60	59.5	53.6	47.0	48.5	56.2	59.3	66.1	66.2										
65	36.0	34.2	31.8	31.8	34.6	35.9	39.1	39.6										
70	26.3	25.5	23.8	23.4	25.0	26.2	27.9	27.9										
75	19.5	19.0	17.4	17.0	17.8	19.2	20.6	20.9										
80	13.4	12.9	10.8	10.6	12.3	13.4	15.0	14.7										
85	3.08	2.26	0.49	0.85	2.94	3.94	5.54	4.95										
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	0.14	0.27	0.40	0.38	0.00	0.00	0.00	0.00										
140	1.18	1.31	1.44	1.45	0.91	0.65	0.48	0.43										
145	2.14	2.26	2.38	2.41	1.89	1.66	1.52	1.45										
150	2.97	3.08	3.14	3.22	2.75	2.55	2.49	2.40										
155	3.67	3.74	3.77	3.89	3.47	3.32	3.32	3.23										
160	4.27	4.32	4.31	4.46	4.10	3.98	4.05	3.96										
165	4.83	4.84	4.79	4.97	4.67	4.54	4.68	4.60										
170	5.31	5.30	5.23	5.44	5.21	5.04	5.23	5.15										
175	5.70	5.68	5.60	5.82	5.70	5.48	5.67	5.61										
180	5.93	5.89	5.84	6.00	6.01	5.79	5.91	5.93										

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: