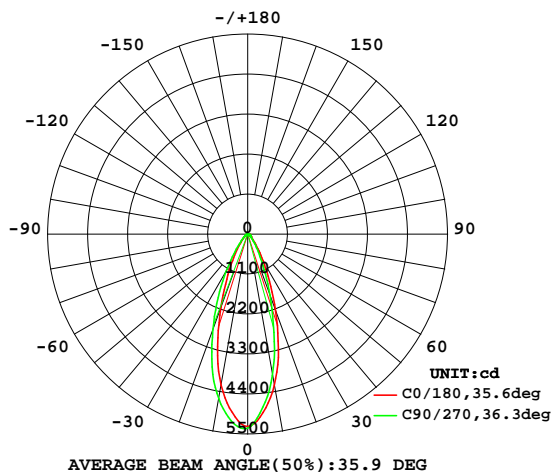


## LUMINAIRE PHOTOMETRIC TEST REPORT

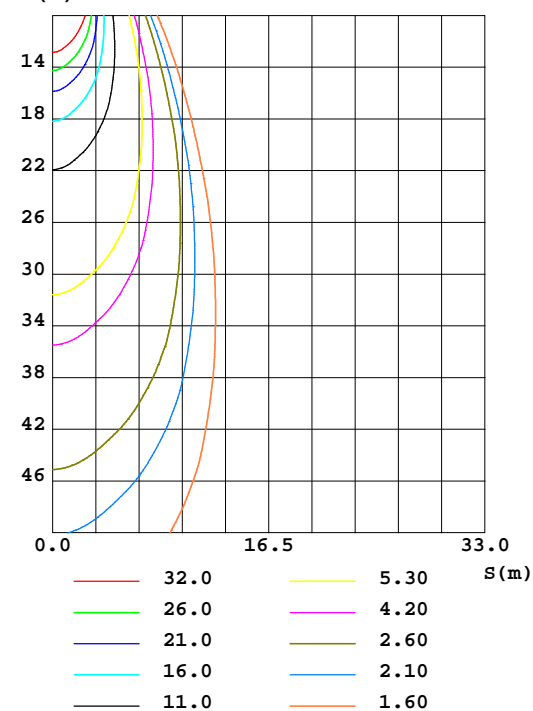
Test:U:228.8V I:0.1512A P:34.40W PF:0.9941 Lamp Flux:2701.93x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 78.56 lm/W			
MODEL	TL-812-35W-2CCT-RC-WH	I <sub>max</sub> (cd)	5407	S/MH(C0/180)	0.59
NOMINAL POWER(W)	34	LOR(%)	100.0	S/MH(C90/270)	0.52
RATED VOLTAGE(V)	228	TOTAL FLUX(lm)	2701.9	η UP,DN(C0-180)	0.2,44.7
NOMINAL FLUX(lm)	2701.93	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.2,54.9
LAMPS INSIDE	1	η up(%)	0.4	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	228.8	η down(%)	99.6	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	4223	4119	3946	4003	4220	4544	4600	4442	0- 10	451.8	451.8	16.7,16.7
20	2250	2005	1807	1844	2171	2568	2815	2651	10- 20	896.4	1348	49.9,49.9
30	848.0	692.7	634.7	674.6	843.7	1007	1199	1137	20- 30	672.9	2021	74.8,74.8
40	290.9	259.4	243.9	260.0	300.3	328.4	369.9	355.8	30- 40	331.4	2353	87.1,87.1
50	122.2	115.4	113.8	118.5	128.5	138.5	145.0	139.1	40- 50	150.9	2503	92.7,92.7
60	73.16	71.48	69.03	70.30	72.66	76.92	80.11	77.97	50- 60	85.47	2589	95.8,95.8
70	46.41	43.50	41.57	42.63	45.77	48.79	51.56	49.59	60- 70	59.06	2648	98,98
80	20.34	18.67	17.49	19.58	21.74	24.28	25.16	22.96	70- 80	35.35	2683	99.3,99.3
90	0	0	0	0	0	0	0	0	80- 90	7.929	2691	99.6,99.6
100	0	0	0	0	0	0	0	0	90-100	0	2691	99.6,99.6
110	0	0	0	0	0	0	0	0	100-110	0	2691	99.6,99.6
120	0	0	0	0	0	0	0	0	110-120	0	2691	99.6,99.6
130	0	0.2071	0.6205	0.3799	0	0	0	0	120-130	0.0089	2691	99.6,99.6
140	3.532	4.137	4.493	4.310	3.163	2.564	2.165	2.352	130-140	1.138	2692	99.6,99.6
150	6.697	7.059	7.201	7.256	6.406	6.039	5.763	5.838	140-150	3.133	2696	99.8,99.8
160	8.004	7.855	7.889	8.297	7.774	7.836	7.924	7.860	150-160	3.403	2699	99.9,99.9
170	7.784	7.462	7.635	8.245	7.577	7.856	8.230	8.249	160-170	2.257	2701	100,100
180	7.870	7.808	8.081	8.489	7.875	7.793	8.100	8.456	170-180	0.7522	2702	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

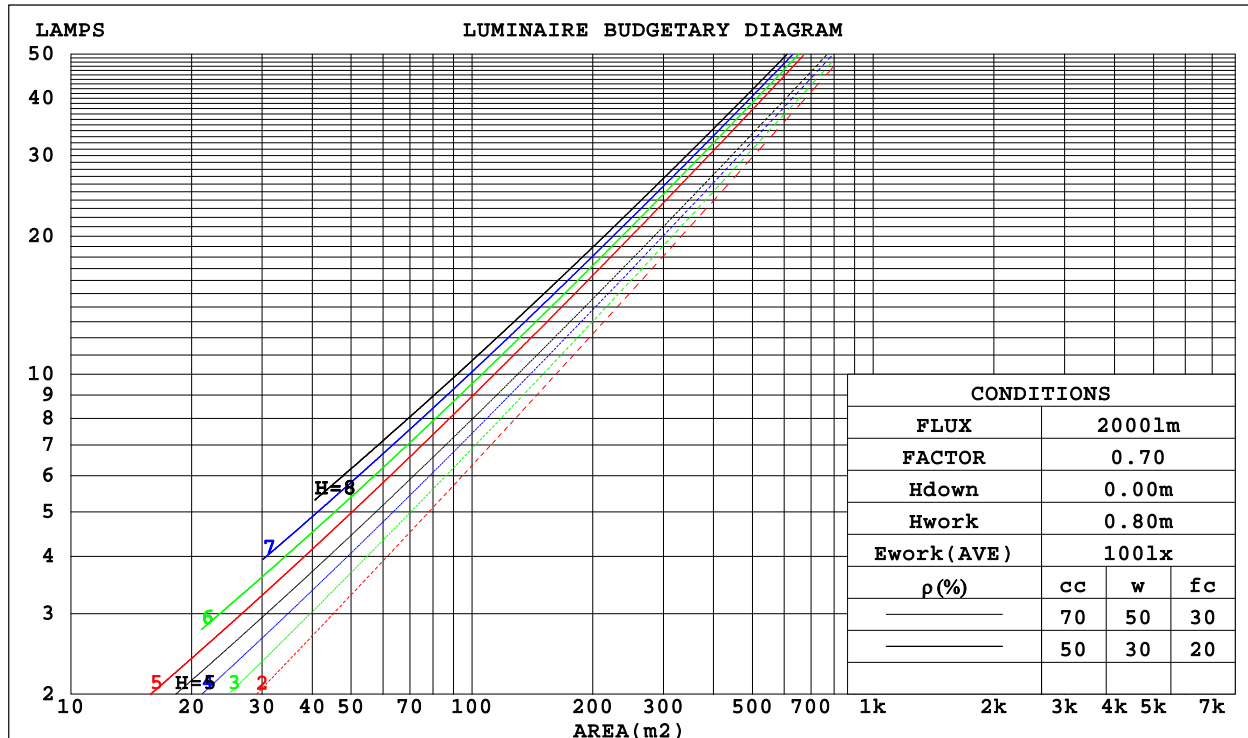
C Range: 0 - 360DEG  
 C Interval: 45.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-08-27

$\gamma$  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:228.8V I:0.1512A P:34.40W PF:0.9941 Lamp Flux:2701.93x1 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	1.05	1.08	1.06	1.04	1.04	1.02	1.00	1.00	.99	.97	.97	.96	.95	.93	
2.0	1.03	.99	.95	1.01	.97	.94	.98	.94	.92	.94	.92	.90	.92	.90	.88	.86	
3.0	.96	.91	.87	.94	.90	.86	.92	.88	.85	.89	.86	.83	.87	.84	.82	.80	
4.0	.90	.84	.80	.89	.84	.80	.87	.82	.79	.85	.81	.78	.83	.80	.77	.75	
5.0	.85	.79	.75	.84	.78	.74	.82	.77	.74	.80	.76	.73	.79	.75	.72	.71	
6.0	.80	.74	.70	.79	.74	.70	.78	.73	.69	.76	.72	.69	.75	.71	.68	.67	
7.0	.76	.70	.66	.75	.70	.66	.74	.69	.66	.73	.68	.65	.72	.68	.65	.63	
8.0	.72	.66	.63	.72	.66	.62	.70	.66	.62	.69	.65	.62	.68	.64	.62	.60	
9.0	.69	.63	.59	.68	.63	.59	.67	.62	.59	.66	.62	.59	.66	.62	.59	.57	
10.0	.66	.60	.57	.65	.60	.56	.64	.60	.56	.64	.59	.56	.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:228.8V I:0.1512A P:34.40W PF:0.9941 Lamp Flux:2701.93x1 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	.184	.105	.033	.177	.101	.032	.165	.094	.030	.153	.088	.028	.142	.082	.027	
2.0	.174	.095	.029	.168	.093	.029	.157	.088	.027	.147	.083	.026	.138	.078	.025	
3.0	.164	.087	.026	.159	.085	.026	.149	.081	.025	.141	.077	.024	.133	.074	.023	
4.0	.154	.080	.024	.150	.078	.023	.142	.075	.022	.134	.072	.022	.127	.069	.021	
5.0	.145	.074	.021	.141	.073	.021	.135	.070	.021	.128	.068	.020	.122	.065	.020	
6.0	.137	.069	.020	.134	.068	.019	.128	.066	.019	.122	.064	.019	.117	.062	.018	
7.0	.130	.064	.018	.127	.063	.018	.122	.062	.018	.117	.060	.017	.112	.058	.017	
8.0	.124	.061	.017	.121	.060	.017	.117	.058	.017	.112	.057	.016	.108	.055	.016	
9.0	.118	.057	.016	.116	.056	.016	.111	.055	.016	.107	.054	.015	.104	.053	.015	
10.0	.113	.054	.015	.111	.053	.015	.107	.052	.015	.103	.051	.015	.100	.050	.014	

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	.193	.193	.193	.165	.165	.165	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.175	.160	.147	.149	.138	.127	.102	.095	.088	.059	.055	.051	.019	.018	.016	
2.0	.160	.136	.115	.137	.117	.100	.094	.081	.070	.054	.047	.041	.017	.015	.013	
3.0	.147	.117	.092	.126	.101	.080	.087	.070	.056	.050	.041	.033	.016	.013	.011	
4.0	.136	.102	.076	.117	.088	.066	.081	.061	.046	.047	.036	.027	.015	.012	.009	
5.0	.127	.090	.063	.109	.078	.055	.075	.055	.039	.044	.032	.023	.014	.010	.008	
6.0	.120	.081	.053	.103	.070	.046	.071	.049	.033	.041	.029	.019	.013	.009	.006	
7.0	.113	.073	.046	.097	.064	.040	.067	.045	.028	.039	.026	.017	.013	.009	.006	
8.0	.107	.067	.040	.092	.058	.035	.063	.041	.025	.037	.024	.015	.012	.008	.005	
9.0	.101	.062	.035	.087	.053	.030	.060	.038	.022	.035	.022	.013	.011	.007	.004	
10.0	.096	.057	.031	.083	.050	.027	.058	.035	.019	.034	.021	.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:228.8V I:0.1512A P:34.40W PF:0.9941 Lamp Flux:2701.93x1 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	2H	14.7	15.6	14.9	15.8	16.0	14.2	15.1	14.4	15.3	15.4
	3H	15.6	16.4	15.8	16.6	16.9	15.0	15.9	15.3	16.1	16.3
	4H	16.0	16.8	16.3	17.0	17.2	15.5	16.3	15.7	16.5	16.7
	6H	16.3	17.1	16.6	17.3	17.6	15.8	16.5	16.1	16.8	17.0
	8H	16.4	17.1	16.7	17.4	17.7	15.8	16.6	16.1	16.8	17.1
	12H	16.4	17.1	16.7	17.4	17.7	15.8	16.5	16.1	16.8	17.1
4H	2H	15.0	15.8	15.3	16.0	16.2	14.5	15.3	14.8	15.5	15.8
	3H	16.0	16.8	16.4	17.0	17.3	15.6	16.3	15.9	16.6	16.9
	4H	16.6	17.2	16.9	17.5	17.8	16.1	16.8	16.5	17.1	17.4
	6H	17.0	17.6	17.4	17.9	18.3	16.6	17.1	16.9	17.5	17.8
	8H	17.2	17.7	17.6	18.1	18.4	16.7	17.2	17.1	17.5	17.9
	12H	17.2	17.7	17.6	18.0	18.4	16.6	17.1	17.1	17.5	17.9
8H	4H	16.7	17.3	17.1	17.6	18.0	16.3	16.9	16.7	17.2	17.6
	6H	17.3	17.7	17.7	18.1	18.6	16.9	17.3	17.3	17.7	18.1
	8H	17.5	17.9	17.9	18.3	18.7	17.0	17.4	17.5	17.8	18.3
	12H	17.5	17.9	18.0	18.3	18.8	17.0	17.3	17.5	17.8	18.3
12H	4H	16.7	17.2	17.1	17.6	18.0	16.3	16.8	16.7	17.2	17.6
	6H	17.3	17.7	17.8	18.1	18.6	16.9	17.3	17.3	17.7	18.2
	8H	17.5	17.8	18.0	18.3	18.8	17.1	17.4	17.5	17.8	18.3
Variations with the observer position at spacings:											
S = 1.0H		+ 0.7 / - 0.7					+ 0.5 / - 0.7				
1.5H		+ 1.4 / - 0.6					+ 0.8 / - 0.6				
2.0H		+ 0.9 / - 0.4					+ 0.8 / - 0.5				

CIE Pub.117 Corrected 2702 lm Total Lamp Luminous Flux.(8log(F/F0) = 3.5)

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:228.8V I:0.1512A P:34.40W PF:0.9941 Lamp Flux:2701.93x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

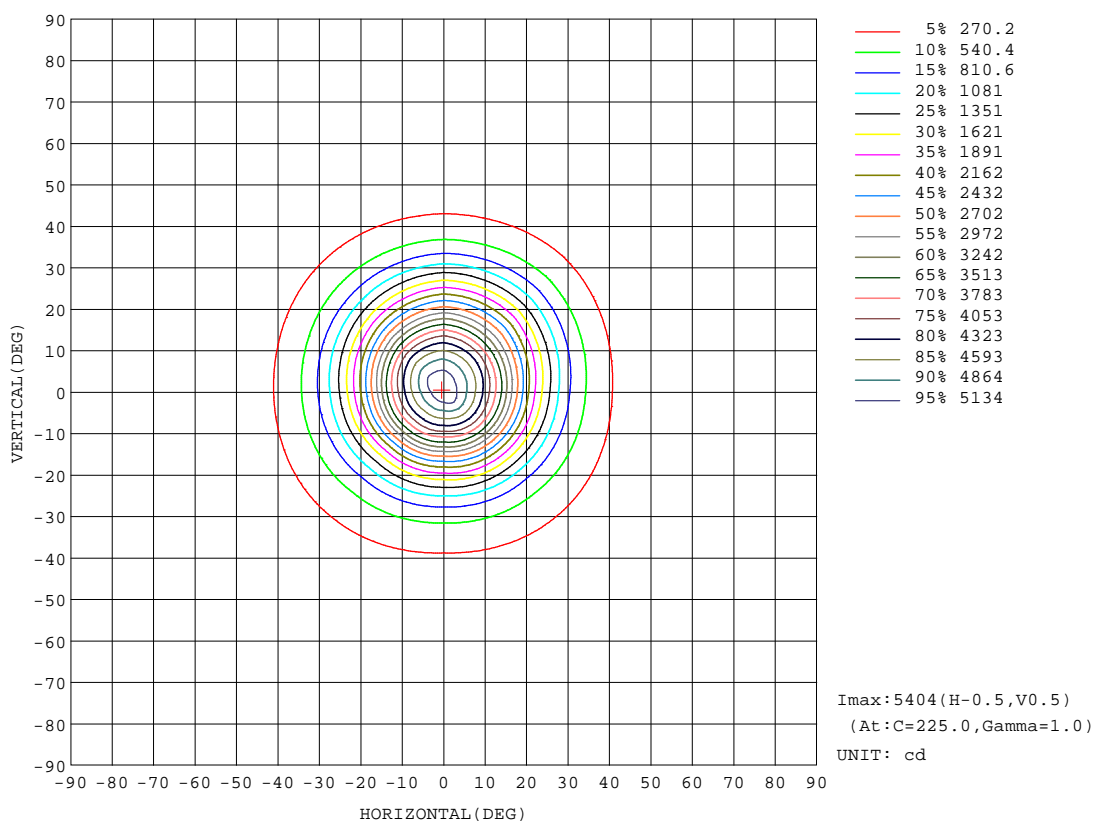
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	84	77	72	83	76	72	82	76	72	68
0.80	91	85	81	91	84	80	89	84	80	76
1.00	96	90	86	95	89	86	94	89	85	81
1.25	101	95	91	99	94	90	97	93	89	85
1.50	104	98	94	102	97	94	100	96	93	88
2.00	107	102	98	105	101	98	102	99	96	90
2.50	109	104	101	107	103	100	104	101	98	92
3.00	110	107	103	109	105	102	105	102	100	93
4.00	113	110	107	111	108	106	107	105	103	95
5.00	114	112	109	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:228.8V I:0.1512A P:34.40W PF:0.9941 Lamp Flux:2701.93x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

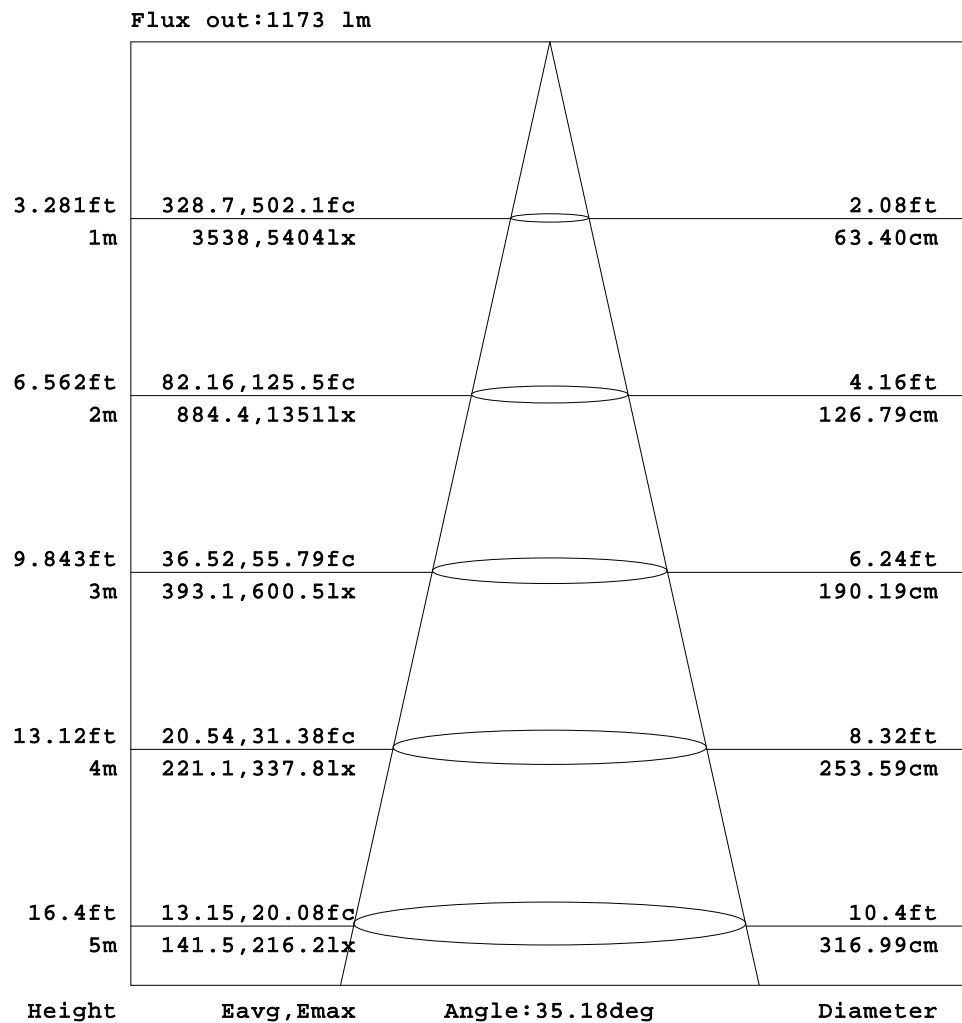


C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2018-08-27

$\gamma$  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:228.8V I:0.1512A P:34.40W PF:0.9941 Lamp Flux:2701.93x1 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.

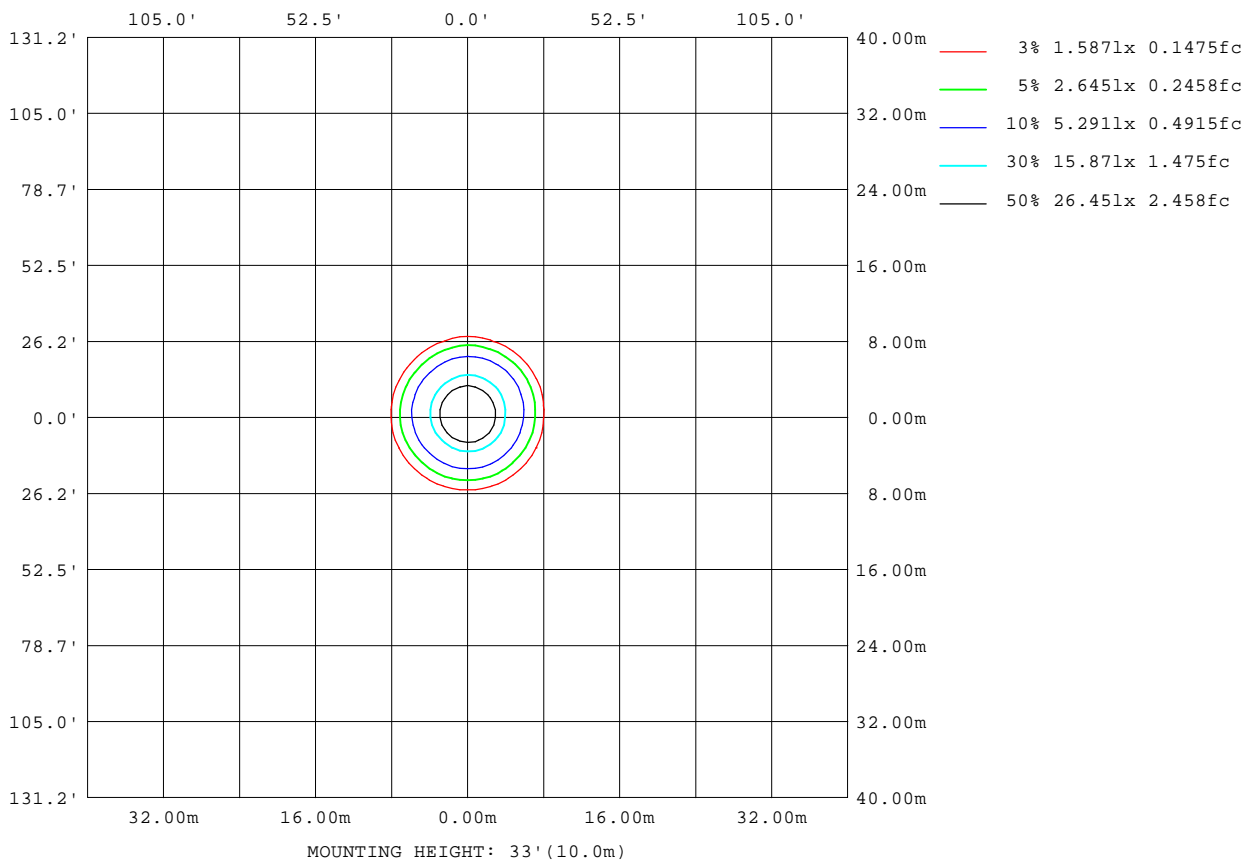
C Range: 0 - 360DEG  
C Interval: 45.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2018-08-27

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

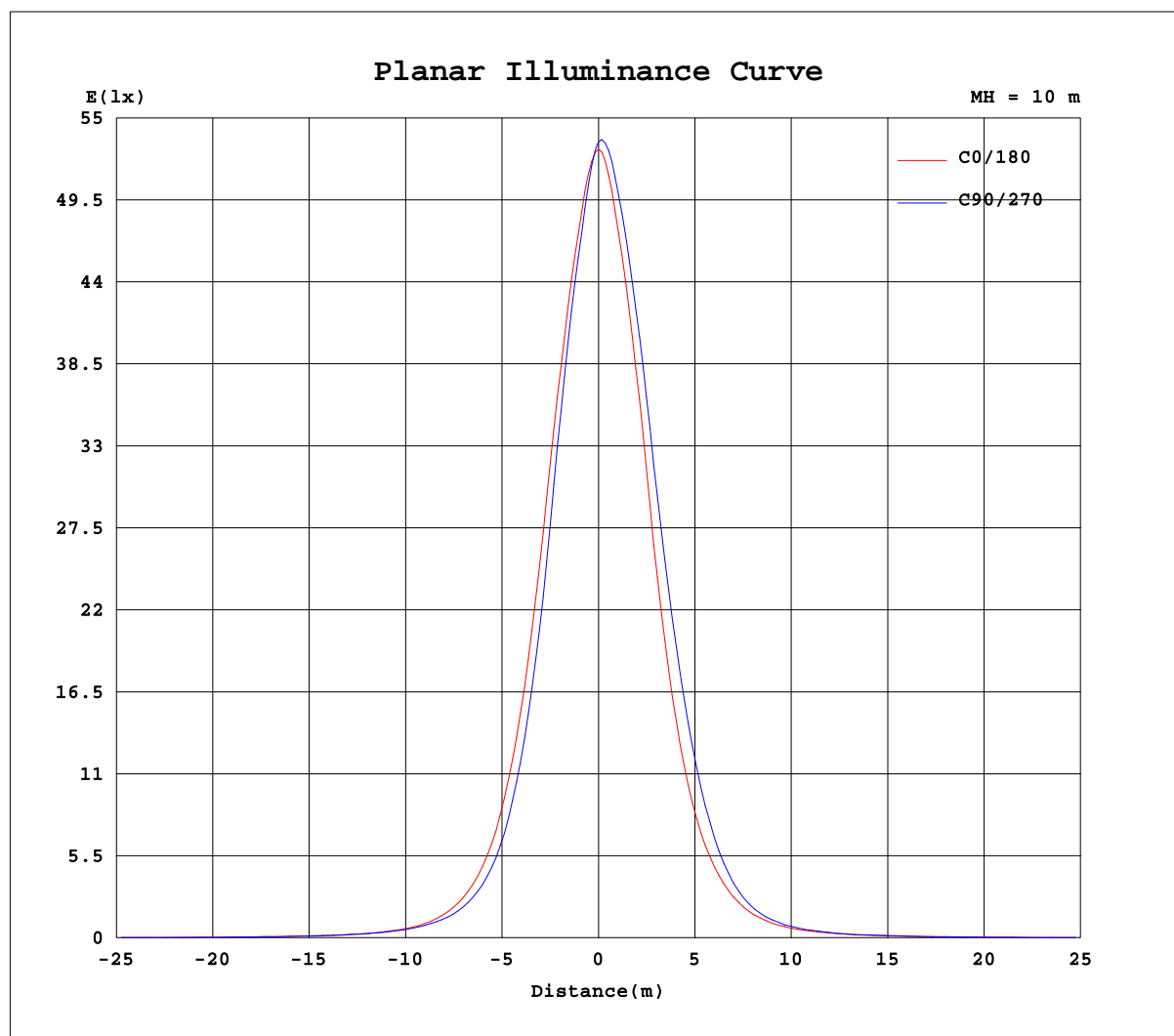
Test:U:228.8V I:0.1512A P:34.40W PF:0.9941 Lamp Flux:2701.93x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



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

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:

## 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:228.8V I:0.1512A P:34.40W PF:0.9941 Lamp Flux:2701.93x1 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	5291	5397	5340	5282	5291	5397	5340	5282										
5	4925	4923	4785	4799	4929	5163	5159	5026										
10	4223	4119	3946	4003	4220	4544	4600	4442										
15	3279	3049	2804	2898	3210	3611	3786	3558										
20	2250	2005	1807	1844	2171	2568	2815	2651										
25	1433	1199	1083	1122	1374	1686	1930	1831										
30	848	693	635	675	844	1007	1199	1137										
35	498	413	384	414	503	574	672	650										
40	291	259	244	260	300	328	370	356										
45	179	170	166	170	188	203	220	211										
50	122	115	114	119	129	138	145	139										
55	91.7	88.4	86.6	88.4	92.7	97.9	102	99.0										
60	73.2	71.5	69.0	70.3	72.7	76.9	80.1	78.0										
65	59.5	57.7	55.4	56.3	58.2	61.9	63.9	63.2										
70	46.4	43.5	41.6	42.6	45.8	48.8	51.6	49.6										
75	32.3	31.0	29.9	31.9	33.5	35.8	37.1	35.6										
80	20.3	18.7	17.5	19.6	21.7	24.3	25.2	23.0										
85	4.68	3.18	2.11	4.00	5.88	7.62	8.68	6.73										
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	0.21	0.62	0.38	0.00	0.00	0.00	0.00										
135	1.57	2.19	2.59	2.36	1.20	0.62	0.23	0.42										
140	3.53	4.14	4.49	4.31	3.16	2.56	2.16	2.35										
145	5.31	5.81	6.07	5.99	4.96	4.46	4.08	4.23										
150	6.70	7.06	7.20	7.26	6.41	6.04	5.76	5.84										
155	7.60	7.75	7.77	8.02	7.37	7.21	7.07	7.07										
160	8.00	7.86	7.89	8.30	7.77	7.84	7.92	7.86										
165	8.01	7.65	7.77	8.28	7.73	8.00	8.26	8.21										
170	7.78	7.46	7.63	8.24	7.58	7.86	8.23	8.25										
175	7.71	7.56	7.72	8.32	7.63	7.69	8.13	8.26										
180	7.87	7.81	8.08	8.49	7.87	7.79	8.10	8.46										

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: