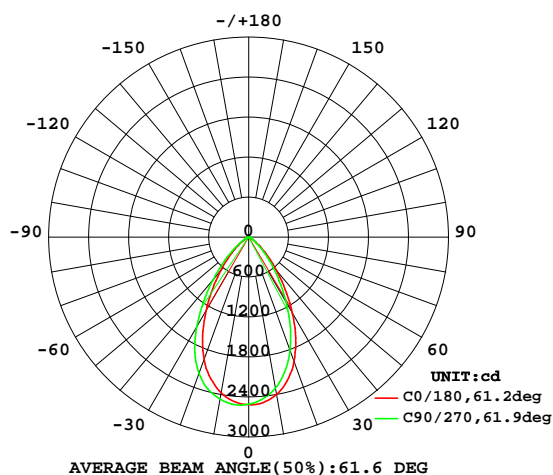


LUMINAIRE PHOTOMETRIC TEST REPORT

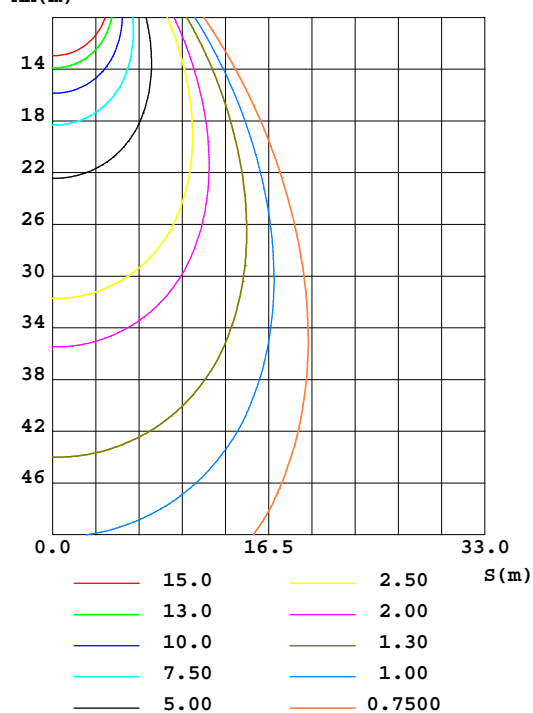
Test:U:228.7V I:0.1521A P:34.63W PF:0.9956 Lamp Flux:2773.27x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 80.08 lm/W			
MODEL	TL-812-35W-2CCT-RC-WH	I _{max} (cd)	2525	S/MH(C0/180)	0.93
NOMINAL POWER(W)	34	LOR(%)	100.0	S/MH(C90/270)	0.85
RATED VOLTAGE(V)	228	TOTAL FLUX(lm)	2773.3	η UP,DN(C0-180)	0.2,45.7
NOMINAL FLUX(lm)	2773.27	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.2,54.0
LAMPS INSIDE	1	η up(%)	0.3	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	228.7	η down(%)	99.7	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:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum, lamp
10	2401	2350	2305	2291	2375	2436	2469	2469	0- 10	233.9	233.9	8.43,8.43
20	1992	1892	1817	1793	1961	2094	2180	2163	10- 20	620.7	854.6	30.8,30.8
30	1315	1210	1125	1112	1286	1447	1566	1547	20- 30	763.6	1618	58.4,58.4
40	652.6	585.5	537.9	537.8	653.7	756.6	827.4	799.1	30- 40	608.5	2227	80.3,80.3
50	244.7	214.2	194.8	197.1	246.2	295.4	323.6	306.0	40- 50	335.1	2562	92.4,92.4
60	72.09	64.33	57.39	56.32	62.13	71.11	83.28	83.00	50- 60	123.8	2686	96.8,96.8
70	34.19	32.11	29.96	29.08	30.70	32.75	34.86	35.15	60- 70	45.42	2731	98.5,98.5
80	18.75	17.17	14.70	14.11	15.60	17.66	19.43	19.48	70- 80	25.82	2757	99.4,99.4
90	0	0	0	0	0	0	0	0	80- 90	7.053	2764	99.7,99.7
100	0	0	0	0	0	0	0	0	90-100	0	2764	99.7,99.7
110	0	0	0	0	0	0	0	0	100-110	0	2764	99.7,99.7
120	0	0	0	0	0	0	0	0	110-120	0	2764	99.7,99.7
130	0.4777	0.9127	1.203	1.210	0.3852	0	0	0	120-130	0.0878	2764	99.7,99.7
140	2.981	3.392	3.668	3.800	2.859	2.415	2.211	2.228	130-140	1.294	2765	99.7,99.7
150	5.108	5.368	5.569	5.849	4.966	4.662	4.567	4.594	140-150	2.523	2768	99.8,99.8
160	6.621	6.723	6.852	7.271	6.450	6.338	6.426	6.487	150-160	2.710	2770	99.9,99.9
170	7.778	7.837	7.956	8.379	7.669	7.577	7.861	7.941	160-170	2.045	2772	100,100
180	8.513	8.513	8.643	8.931	8.537	8.461	8.653	8.917	170-180	0.7824	2773	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

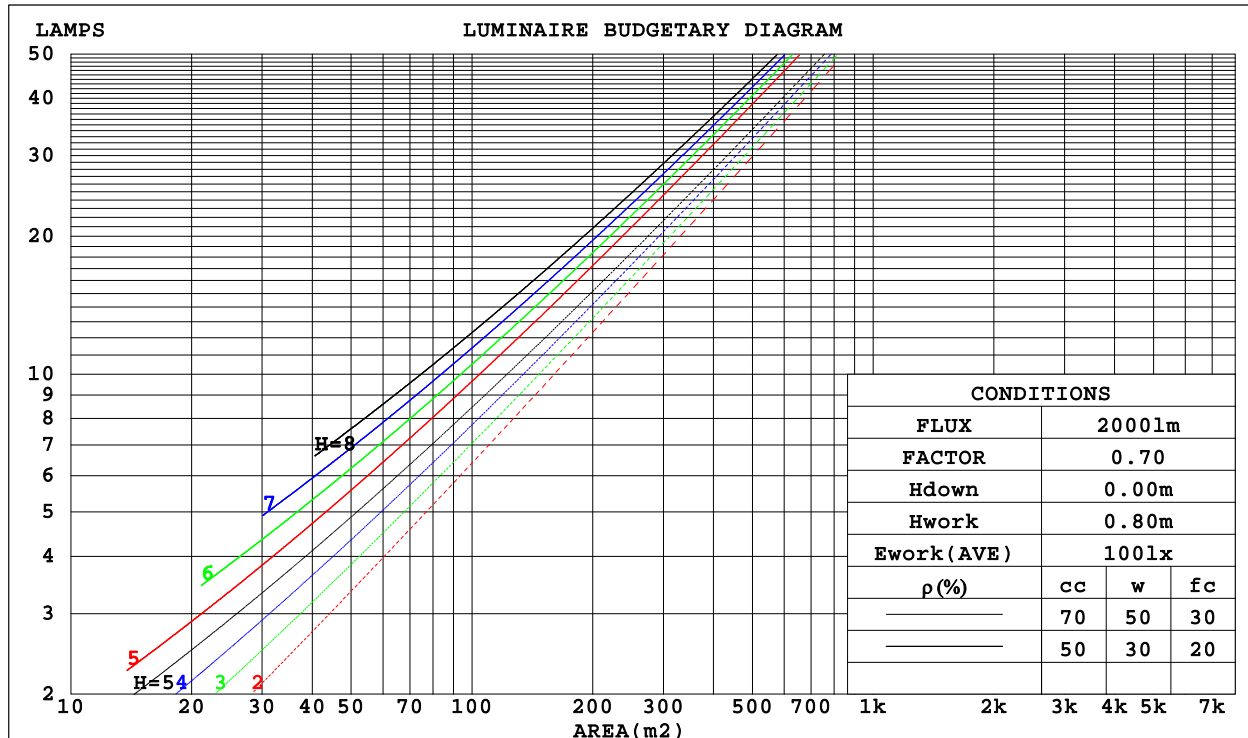
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-27

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:228.7V I:0.1521A P:34.63W PF:0.9956 Lamp Flux:2773.27x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{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	1.02	1.03	1.01	.99	.99	.98	.96	.96	.94	.93	.91
2.0	1.00	.96	.92	.99	.95	.91	.95	.92	.89	.92	.89	.87	.89	.87	.85	.83
3.0	.93	.87	.82	.91	.86	.82	.88	.84	.80	.86	.82	.79	.83	.80	.78	.76
4.0	.85	.79	.74	.84	.78	.74	.82	.77	.73	.80	.76	.72	.78	.74	.71	.70
5.0	.79	.73	.68	.78	.72	.67	.76	.71	.67	.74	.70	.66	.73	.69	.65	.64
6.0	.74	.67	.62	.73	.66	.62	.71	.65	.61	.70	.65	.61	.68	.64	.60	.59
7.0	.69	.62	.57	.68	.61	.57	.66	.61	.57	.65	.60	.56	.64	.59	.56	.54
8.0	.64	.57	.53	.63	.57	.53	.62	.57	.52	.61	.56	.52	.60	.55	.52	.50
9.0	.60	.54	.49	.59	.53	.49	.58	.53	.49	.57	.52	.49	.57	.52	.48	.47
10.0	.56	.50	.46	.56	.50	.46	.55	.49	.46	.54	.49	.45	.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

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:

WEC AND CCEC

Test:U:228.7V I:0.1521A P:34.63W PF:0.9956 Lamp Flux:2773.27x1 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	.202	.115	.036	.195	.111	.035	.182	.105	.033	.171	.098	.032	.160	.093	.030	
2.0	.194	.107	.033	.189	.104	.032	.178	.099	.031	.167	.094	.029	.158	.089	.028	
3.0	.185	.099	.030	.180	.096	.029	.171	.092	.028	.162	.089	.027	.154	.085	.026	
4.0	.176	.091	.027	.171	.090	.027	.163	.086	.026	.155	.083	.025	.148	.081	.025	
5.0	.167	.085	.025	.163	.084	.024	.156	.081	.024	.149	.079	.023	.143	.076	.023	
6.0	.158	.079	.023	.155	.078	.023	.149	.076	.022	.143	.074	.022	.137	.072	.021	
7.0	.151	.075	.021	.148	.074	.021	.142	.072	.021	.137	.070	.020	.132	.068	.020	
8.0	.144	.070	.020	.141	.069	.020	.136	.068	.019	.131	.066	.019	.126	.065	.019	
9.0	.137	.066	.018	.134	.066	.018	.130	.064	.018	.125	.063	.018	.121	.062	.018	
10.0	.131	.063	.017	.129	.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	.193	.193	.193	.165	.165	.165	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.175	.160	.145	.150	.137	.125	.103	.094	.087	.059	.055	.050	.019	.018	.016	
2.0	.162	.135	.112	.139	.116	.097	.095	.080	.068	.055	.047	.040	.018	.015	.013	
3.0	.151	.116	.089	.129	.100	.077	.089	.070	.054	.051	.041	.032	.016	.013	.010	
4.0	.141	.102	.072	.121	.088	.062	.083	.061	.044	.048	.036	.026	.016	.012	.009	
5.0	.133	.091	.059	.115	.078	.052	.079	.055	.036	.046	.032	.022	.015	.011	.007	
6.0	.126	.082	.050	.109	.071	.043	.075	.050	.031	.043	.029	.018	.014	.010	.006	
7.0	.120	.074	.042	.103	.064	.037	.071	.045	.026	.041	.027	.016	.013	.009	.005	
8.0	.114	.068	.037	.098	.059	.032	.068	.042	.023	.040	.025	.014	.013	.008	.004	
9.0	.109	.063	.032	.094	.055	.028	.065	.039	.020	.038	.023	.012	.012	.007	.004	
10.0	.104	.059	.029	.090	.051	.025	.062	.036	.018	.036	.021	.011	.012	.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:228.7V I:0.1521A P:34.63W PF:0.9956 Lamp Flux:2773.27x1 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	18.5	19.5	18.7	19.7	19.9	17.7	18.8	17.9	19.0	19.1
	3H	18.5	19.5	18.8	19.7	19.9	17.7	18.7	18.0	18.9	19.2
	4H	18.5	19.5	18.8	19.7	19.9	17.8	18.7	18.1	18.9	19.2
	6H	18.6	19.5	18.9	19.7	20.0	17.8	18.7	18.1	18.9	19.2
	8H	18.6	19.4	18.9	19.7	20.0	17.8	18.7	18.1	18.9	19.2
	12H	18.6	19.4	18.9	19.7	20.0	17.8	18.6	18.1	18.9	19.2
4H	2H	18.3	19.2	18.6	19.5	19.7	17.6	18.5	17.9	18.8	19.0
	3H	18.4	19.2	18.7	19.5	19.8	17.7	18.5	18.0	18.8	19.1
	4H	18.5	19.2	18.9	19.6	19.9	17.8	18.5	18.2	18.9	19.2
	6H	18.7	19.3	19.1	19.7	20.0	17.9	18.6	18.3	18.9	19.3
	8H	18.7	19.3	19.1	19.7	20.1	18.0	18.6	18.4	18.9	19.3
	12H	18.8	19.3	19.2	19.7	20.1	18.0	18.5	18.4	18.9	19.3
8H	4H	18.5	19.1	18.9	19.4	19.8	17.8	18.4	18.2	18.8	19.1
	6H	18.7	19.2	19.1	19.6	20.0	18.0	18.5	18.4	18.9	19.3
	8H	18.8	19.3	19.3	19.7	20.1	18.1	18.5	18.5	18.9	19.4
	12H	18.9	19.2	19.4	19.7	20.2	18.1	18.5	18.6	18.9	19.4
12H	4H	18.5	19.0	18.9	19.4	19.8	17.8	18.3	18.2	18.7	19.1
	6H	18.7	19.1	19.2	19.6	20.0	18.0	18.4	18.5	18.9	19.3
	8H	18.8	19.2	19.3	19.6	20.1	18.1	18.5	18.6	18.9	19.4
Variations with the observer position at spacings:											
S = 1.0H	+ 1.7 / - 2.7					+ 1.6 / - 2.9					
1.5H	+ 2.7 / - 2.7					+ 2.3 / - 2.6					
2.0H	+ 3.7 / - 2.6					+ 3.4 / - 2.4					

CIE Pub.117 Corrected 2773 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:228.7V I:0.1521A P:34.63W PF:0.9956 Lamp Flux:2773.27x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

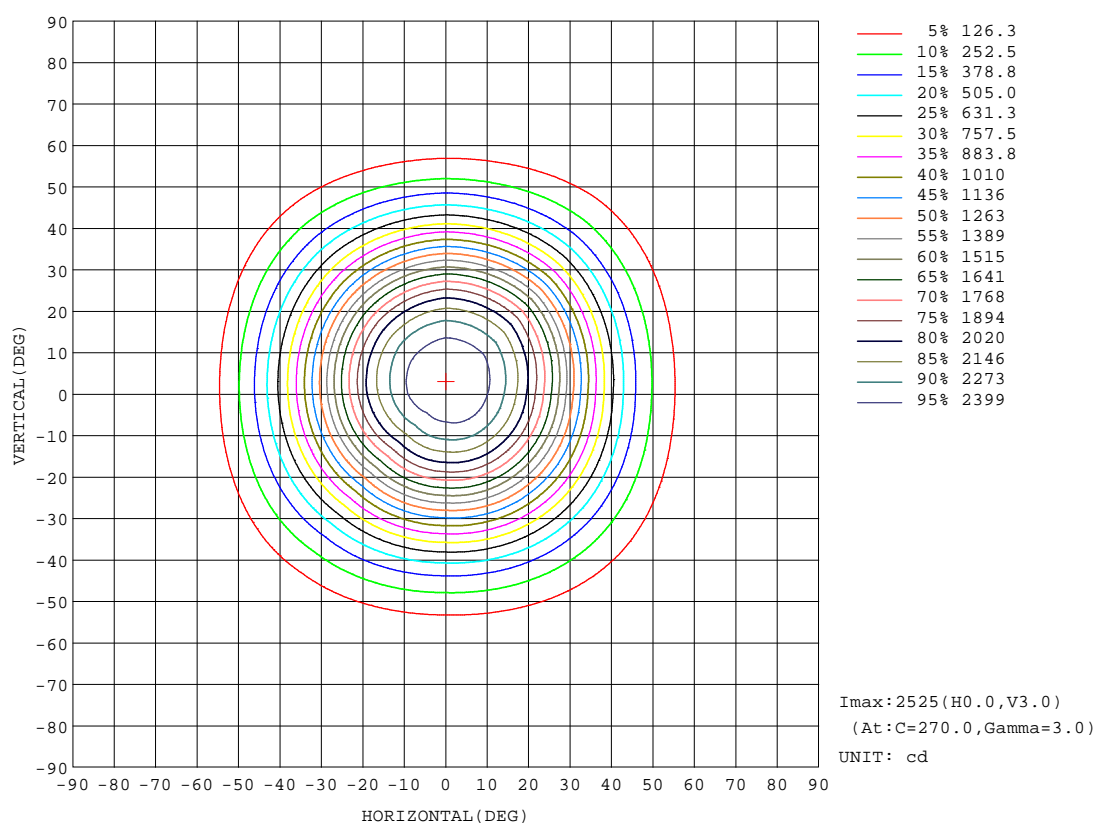
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	79	71	67	78	71	66	78	71	66	62
0.80	88	80	76	87	80	76	86	79	75	71
1.00	94	87	82	93	86	82	91	86	81	77
1.25	99	92	88	97	92	88	95	90	87	82
1.50	102	96	92	101	95	91	98	94	90	85
2.00	106	101	97	104	100	96	101	97	94	89
2.50	108	103	100	106	102	99	103	99	97	90
3.00	110	106	102	108	104	101	104	101	99	92
4.00	112	109	106	110	107	105	106	104	102	94
5.00	113	111	108	111	109	107	107	105	104	95
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:228.7V I:0.1521A P:34.63W PF:0.9956 Lamp Flux:2773.27x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

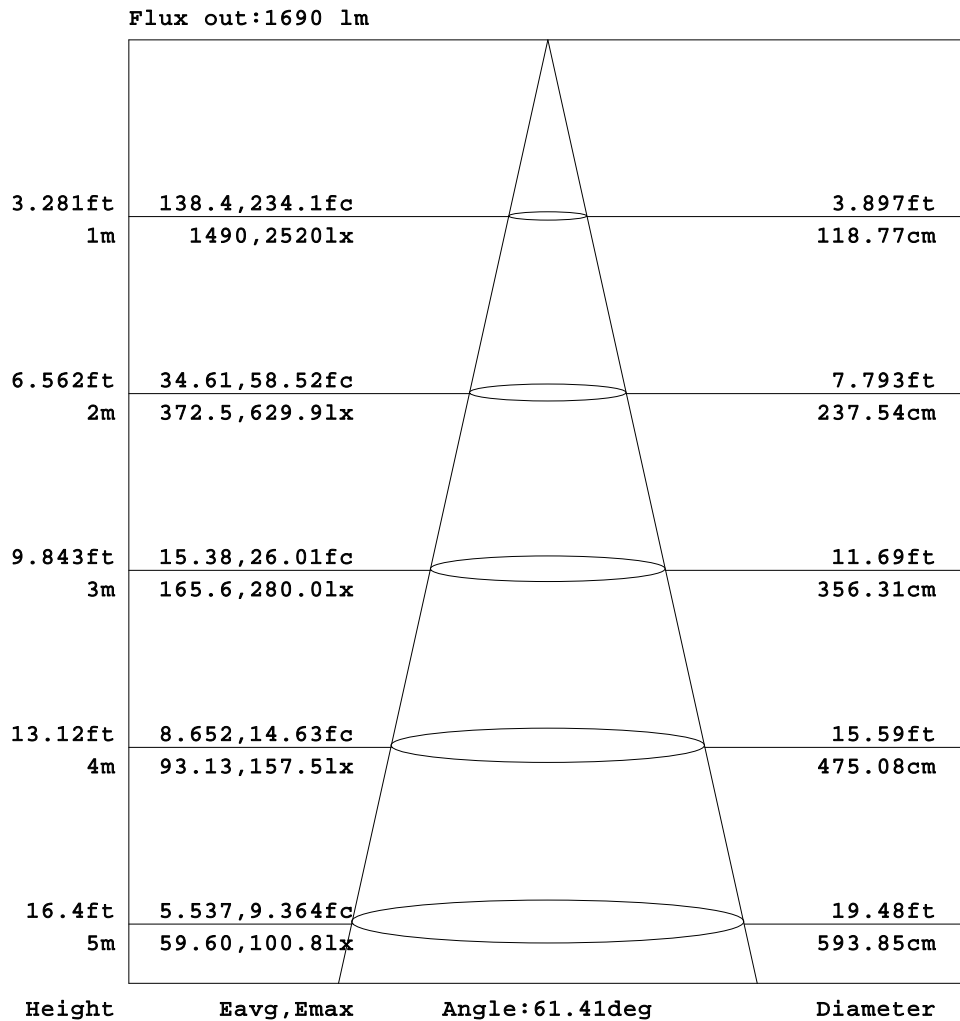


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-08-27

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:

AAI Figure

Test:U:228.7V I:0.1521A P:34.63W PF:0.9956 Lamp Flux:2773.27x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



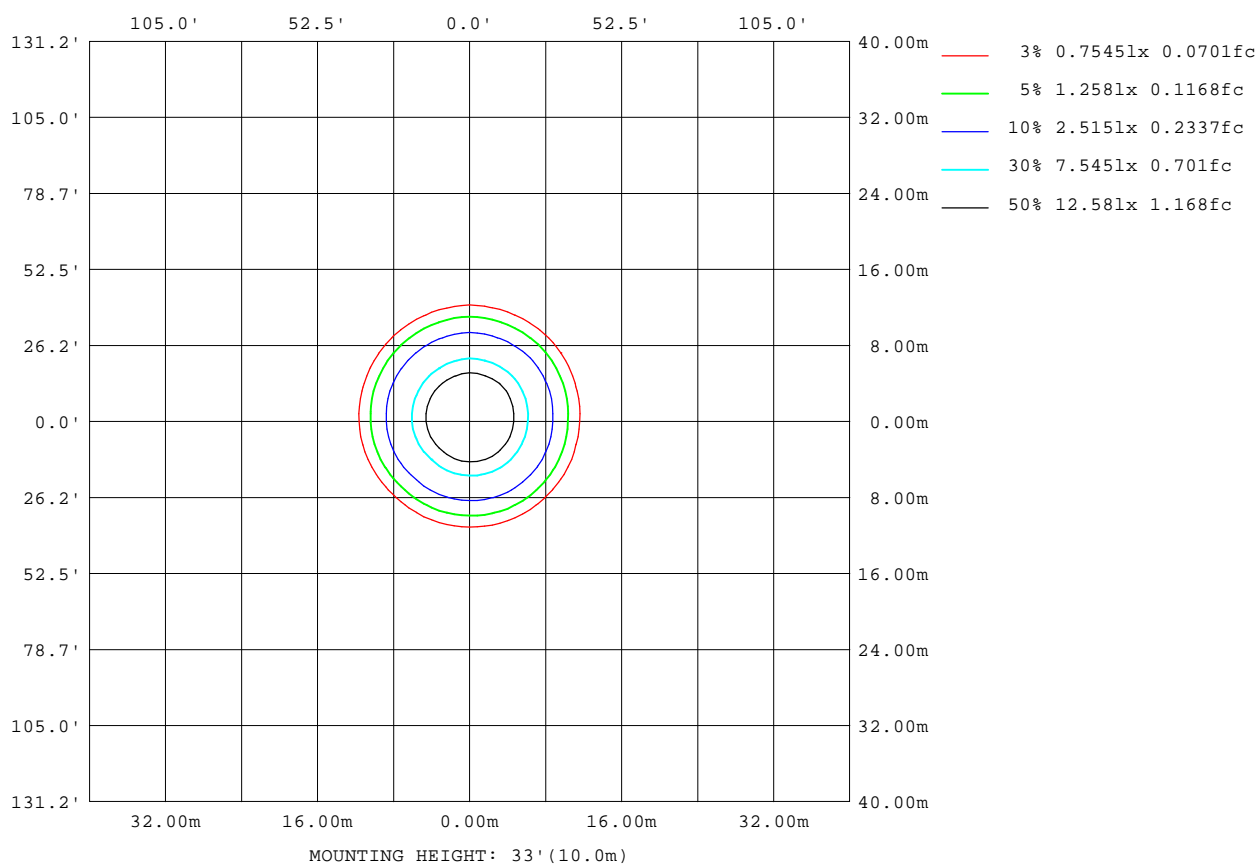
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

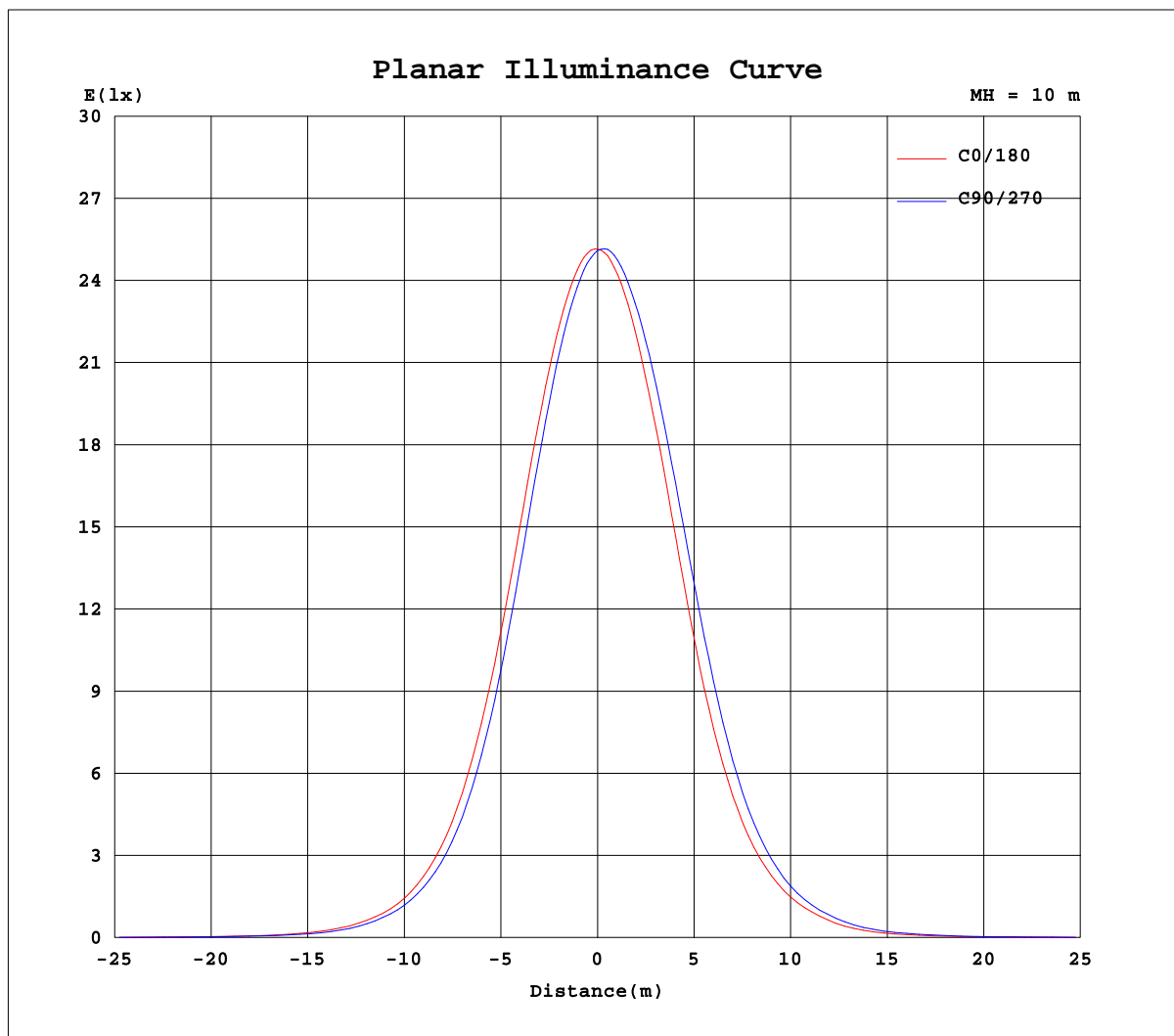
Test:U:228.7V I:0.1521A P:34.63W PF:0.9956 Lamp Flux:2773.27x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



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

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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:228.7V I:0.1521A P:34.63W PF:0.9956 Lamp Flux:2773.27x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEC) γ (DEC)	0	45	90	135	180	225	270	315										
0	2515	2517	2510	2506	2515	2517	2510	2506										
5	2494	2466	2438	2430	2477	2509	2521	2520										
10	2401	2350	2305	2291	2375	2436	2469	2469										
15	2236	2160	2096	2076	2202	2305	2363	2348										
20	1992	1892	1817	1793	1961	2094	2180	2163										
25	1673	1561	1478	1457	1641	1808	1913	1895										
30	1315	1210	1125	1112	1286	1447	1566	1547										
35	962	871	803	797	945	1078	1180	1158										
40	653	585	538	538	654	757	827	799										
45	411	366	338	340	422	493	536	507										
50	245	214	195	197	246	295	324	306										
55	132	113	99.9	97.9	118	145	165	158										
60	72.1	64.3	57.4	56.3	62.1	71.1	83.3	83.0										
65	45.7	42.3	39.7	38.7	41.1	43.9	48.7	49.4										
70	34.2	32.1	30.0	29.1	30.7	32.8	34.9	35.2										
75	26.0	24.5	22.5	21.7	22.4	24.4	26.4	26.7										
80	18.7	17.2	14.7	14.1	15.6	17.7	19.4	19.5										
85	6.78	5.12	2.73	2.70	4.25	6.01	8.11	8.01										
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	0.48	0.91	1.20	1.21	0.39	0.00	0.00	0.00										
135	1.74	2.18	2.47	2.54	1.63	1.18	0.95	0.94										
140	2.98	3.39	3.67	3.80	2.86	2.41	2.21	2.23										
145	4.12	4.47	4.70	4.92	3.98	3.60	3.43	3.45										
150	5.11	5.37	5.57	5.85	4.97	4.66	4.57	4.59										
155	5.92	6.10	6.25	6.62	5.76	5.56	5.57	5.59										
160	6.62	6.72	6.85	7.27	6.45	6.34	6.43	6.49										
165	7.23	7.28	7.43	7.86	7.07	7.01	7.19	7.26										
170	7.78	7.84	7.96	8.38	7.67	7.58	7.86	7.94										
175	8.23	8.29	8.39	8.79	8.19	8.07	8.38	8.51										
180	8.51	8.51	8.64	8.93	8.54	8.46	8.65	8.92										

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: