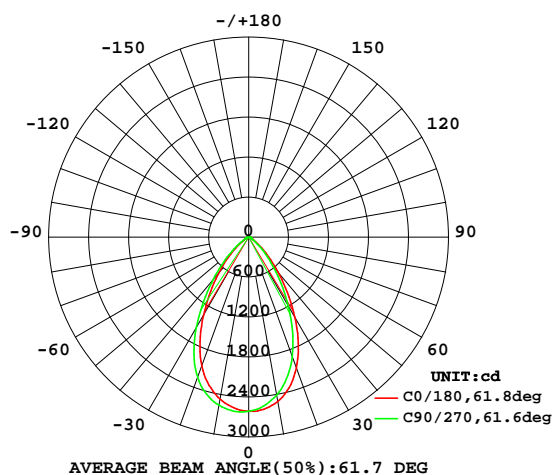


LUMINAIRE PHOTOMETRIC TEST REPORT

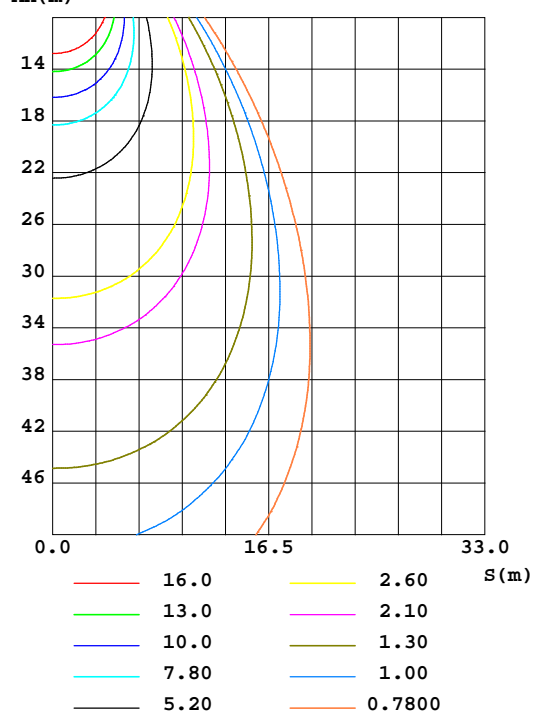
Test:U:228.8V I:0.1470A P:33.49W PF:0.9954 Lamp Flux:2891.45x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 86.34 lm/W			
MODEL	TL-812-35W-2CCT-RC-WH	I _{max} (cd)	2630	S/MH(C0/180)	0.94
NOMINAL POWER(W)	34	LOR(%)	100.0	S/MH(C90/270)	0.86
RATED VOLTAGE(V)	228	TOTAL FLUX(lm)	2891.4	η UP,DN(C0-180)	0.2,46.3
NOMINAL FLUX(lm)	2891.45	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.2,53.3
LAMPS INSIDE	1	η up(%)	0.4	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	228.8	η down(%)	99.6	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	2507	2468	2411	2393	2470	2527	2563	2572	0- 10	243.7	243.7	8.43,8.43
20	2093	2002	1913	1900	2061	2161	2242	2247	10- 20	648.4	892.0	30.9,30.9
30	1387	1287	1188	1186	1361	1475	1578	1583	20- 30	797.3	1689	58.4,58.4
40	689.3	623.6	566.2	572.3	692.0	764.8	825.9	810.9	30- 40	632.1	2321	80.3,80.3
50	259.4	228.9	205.4	210.0	262.2	298.0	324.0	312.0	40- 50	347.2	2669	92.3,92.3
60	76.37	68.74	60.54	60.17	66.02	73.37	84.38	85.36	50- 60	128.9	2798	96.8,96.8
70	36.08	34.32	31.92	30.96	32.34	34.47	36.62	37.06	60- 70	47.75	2845	98.4,98.4
80	19.97	18.61	16.00	15.39	16.61	18.94	20.68	20.61	70- 80	27.46	2873	99.4,99.4
90	0	0	0	0	0	0	0	0	80- 90	7.709	2880	99.6,99.6
100	0	0	0	0	0	0	0	0	90-100	0	2880	99.6,99.6
110	0	0	0	0	0	0	0	0	100-110	0	2880	99.6,99.6
120	0	0	0	0	0	0	0	0	110-120	0	2880	99.6,99.6
130	1.001	1.316	1.606	1.652	0.8750	0.5121	0.2508	0.2480	120-130	0.1896	2881	99.6,99.6
140	3.624	3.929	4.205	4.342	3.450	3.102	2.859	2.847	130-140	1.709	2882	99.7,99.7
150	5.814	6.036	6.236	6.492	5.647	5.415	5.302	5.310	140-150	2.932	2885	99.8,99.8
160	7.418	7.501	7.606	7.981	7.223	7.131	7.204	7.251	150-160	3.050	2888	99.9,99.9
170	8.633	8.658	8.729	9.143	8.509	8.393	8.634	8.748	160-170	2.269	2891	100,100
180	9.402	9.363	9.450	9.771	9.435	9.315	9.464	9.752	170-180	0.8612	2891	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

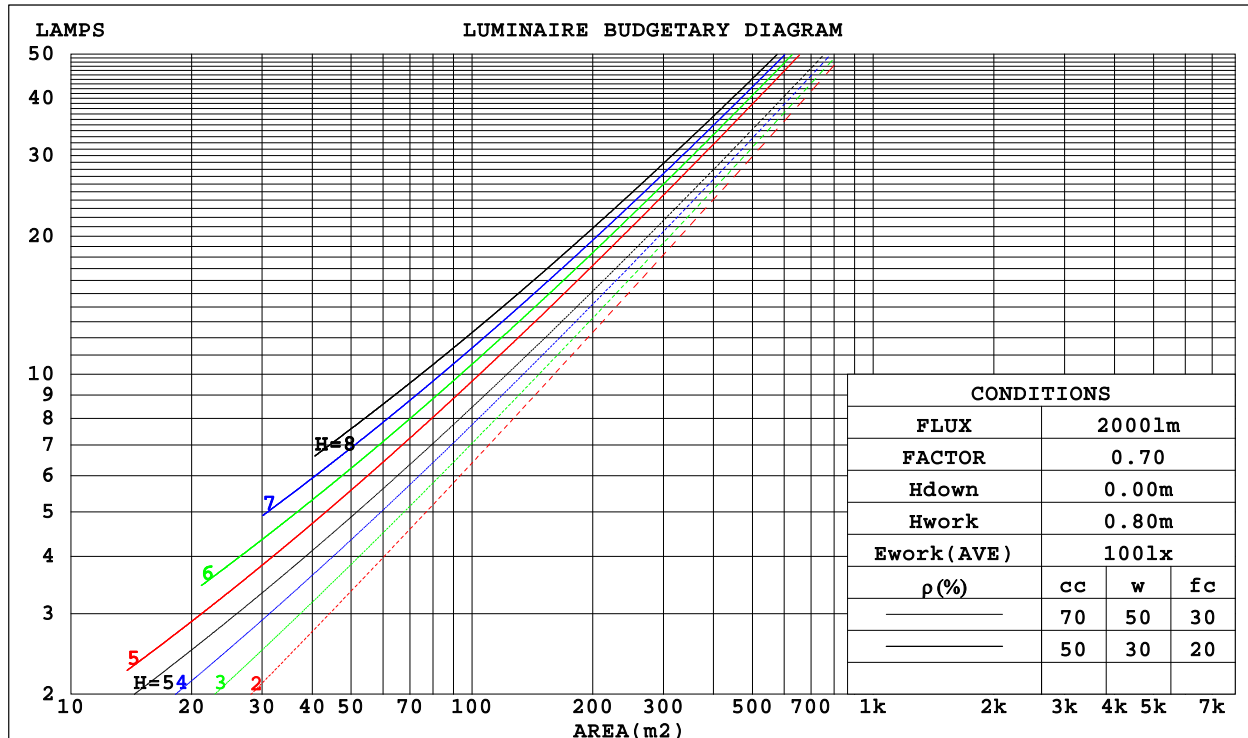
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-27

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:228.8V I:0.1470A P:33.49W PF:0.9954 Lamp Flux:2891.45x1 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:228.8V I:0.1470A P:33.49W PF:0.9954 Lamp Flux:2891.45x1 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	.112	.035	.183	.105	.033	.171	.098	.032	.160	.093	.030	
2.0	.195	.107	.033	.189	.104	.032	.178	.099	.031	.168	.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	.074	.021	.148	.074	.021	.142	.072	.021	.137	.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	.066	.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	.193	.193	.193	.165	.165	.165	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.176	.160	.146	.150	.137	.125	.103	.094	.087	.059	.055	.050	.019	.018	.016	
2.0	.162	.135	.113	.139	.116	.097	.095	.081	.068	.055	.047	.040	.018	.015	.013	
3.0	.151	.117	.089	.130	.101	.077	.089	.070	.054	.051	.041	.032	.017	.013	.010	
4.0	.142	.102	.072	.122	.088	.063	.084	.062	.044	.048	.036	.026	.016	.012	.009	
5.0	.134	.091	.060	.115	.079	.052	.079	.055	.037	.046	.032	.022	.015	.011	.007	
6.0	.127	.082	.050	.109	.071	.044	.075	.050	.031	.044	.029	.018	.014	.010	.006	
7.0	.120	.075	.043	.103	.065	.037	.071	.045	.026	.042	.027	.016	.013	.009	.005	
8.0	.115	.069	.037	.099	.060	.032	.068	.042	.023	.040	.025	.014	.013	.008	.005	
9.0	.109	.064	.033	.094	.055	.028	.065	.039	.020	.038	.023	.012	.012	.008	.004	
10.0	.105	.059	.029	.090	.051	.025	.063	.036	.018	.037	.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:228.8V I:0.1470A P:33.49W PF:0.9954 Lamp Flux:2891.45x1 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	18.7	19.8	19.0	20.0	20.2	18.0	19.0	18.2	19.2	19.4	
	3H	18.7	19.7	19.0	19.9	20.2	18.0	19.0	18.3	19.2	19.4
	4H	18.8	19.7	19.1	19.9	20.2	18.0	19.0	18.3	19.2	19.4
	6H	18.8	19.7	19.1	20.0	20.2	18.1	18.9	18.4	19.2	19.5
	8H	18.9	19.7	19.2	20.0	20.2	18.1	18.9	18.4	19.2	19.5
	12H	18.9	19.7	19.2	19.9	20.2	18.0	18.9	18.4	19.1	19.4
4H	2H	18.6	19.5	18.9	19.7	20.0	17.8	18.8	18.1	19.0	19.3
	3H	18.7	19.5	19.0	19.8	20.0	18.0	18.8	18.3	19.1	19.3
	4H	18.8	19.5	19.1	19.8	20.1	18.1	18.8	18.4	19.1	19.4
	6H	18.9	19.6	19.3	19.9	20.3	18.2	18.9	18.6	19.2	19.6
	8H	19.0	19.6	19.4	20.0	20.3	18.2	18.8	18.7	19.2	19.6
	12H	19.0	19.6	19.4	19.9	20.3	18.2	18.8	18.7	19.2	19.6
8H	4H	18.7	19.3	19.1	19.7	20.1	18.1	18.7	18.5	19.0	19.4
	6H	19.0	19.5	19.4	19.9	20.3	18.3	18.8	18.7	19.2	19.6
	8H	19.1	19.5	19.6	20.0	20.4	18.4	18.8	18.8	19.2	19.7
	12H	19.2	19.5	19.6	20.0	20.5	18.4	18.7	18.9	19.2	19.7
12H	4H	18.7	19.3	19.1	19.6	20.0	18.0	18.6	18.5	19.0	19.4
	6H	19.0	19.4	19.4	19.8	20.3	18.3	18.7	18.7	19.1	19.6
	8H	19.1	19.5	19.6	19.9	20.4	18.4	18.8	18.9	19.2	19.7
Variations with the observer position at spacings:											
S = 1.0H	+ 1.7 / - 2.7					+ 1.6 / - 2.8					
1.5H	+ 2.6 / - 2.6					+ 2.2 / - 2.5					
2.0H	+ 3.7 / - 2.5					+ 3.3 / - 2.3					

CIE Pub.117 Corrected 2891 lm Total Lamp Luminous Flux.(8log(F/F0) = 3.7)

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:228.8V I:0.1470A P:33.49W PF:0.9954 Lamp Flux:2891.45x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

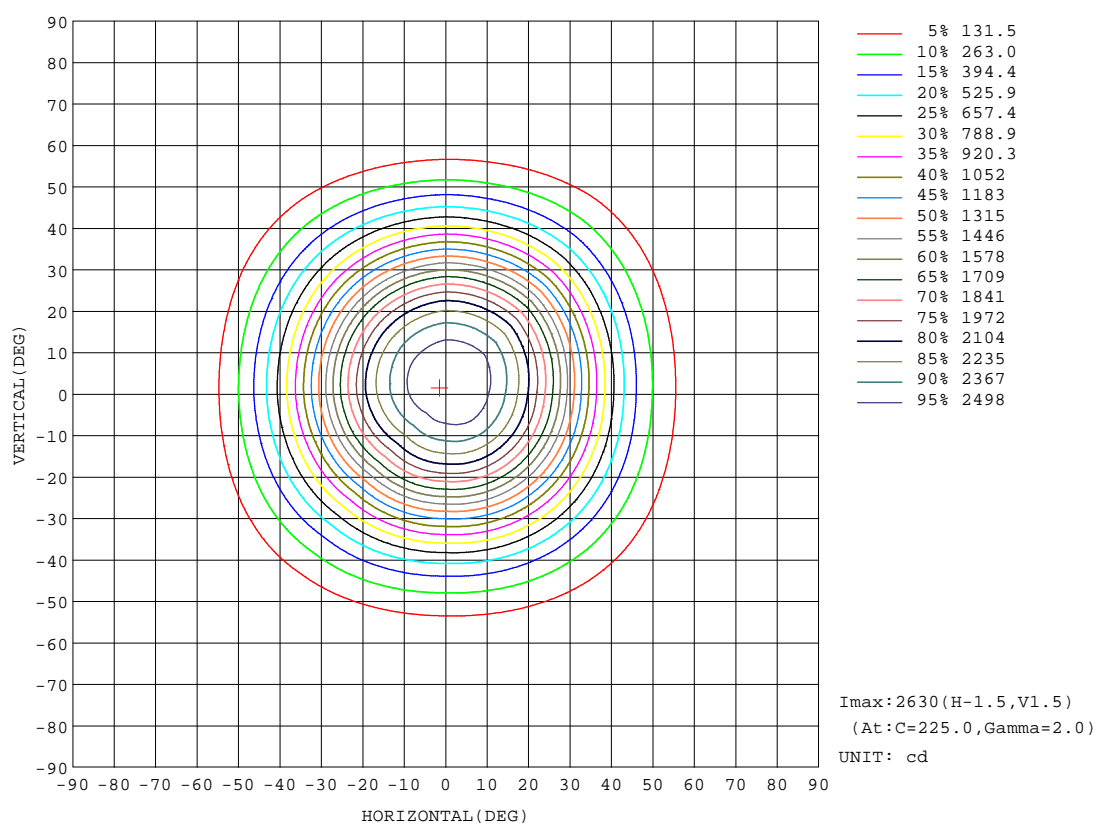
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	79	71	67	78	71	67	78	71	66	62
0.80	88	80	76	87	80	76	85	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	103	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:228.8V I:0.1470A P:33.49W PF:0.9954 Lamp Flux:2891.45x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



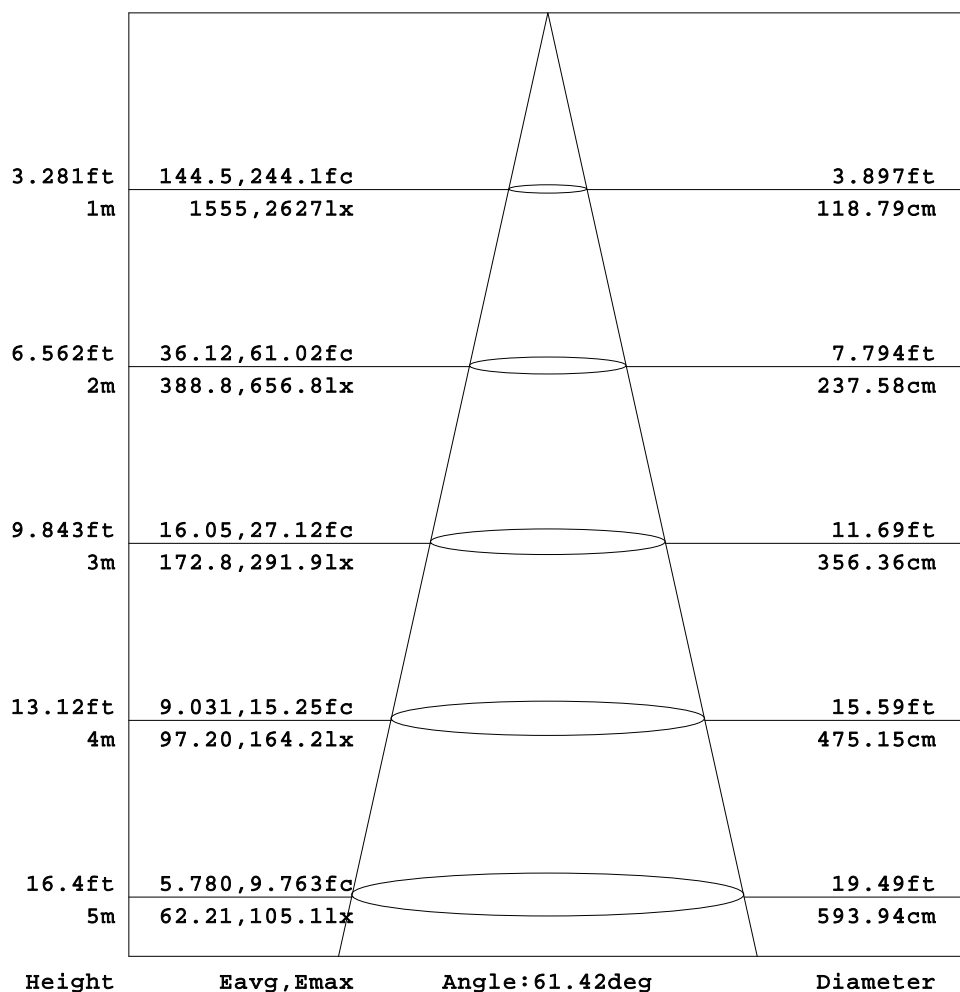
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2018-08-27

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:228.8V I:0.1470A P:33.49W PF:0.9954 Lamp Flux:2891.45x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

Flux out:1764 lm



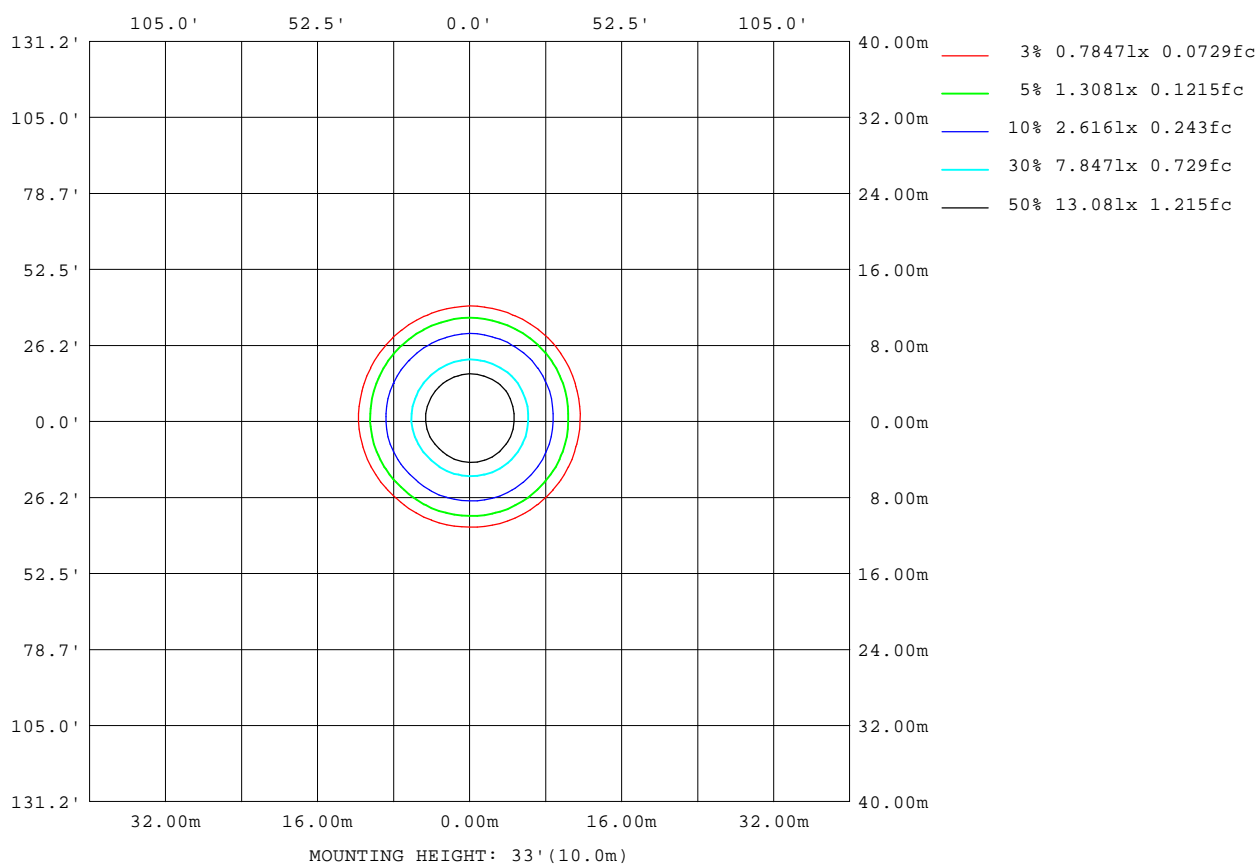
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

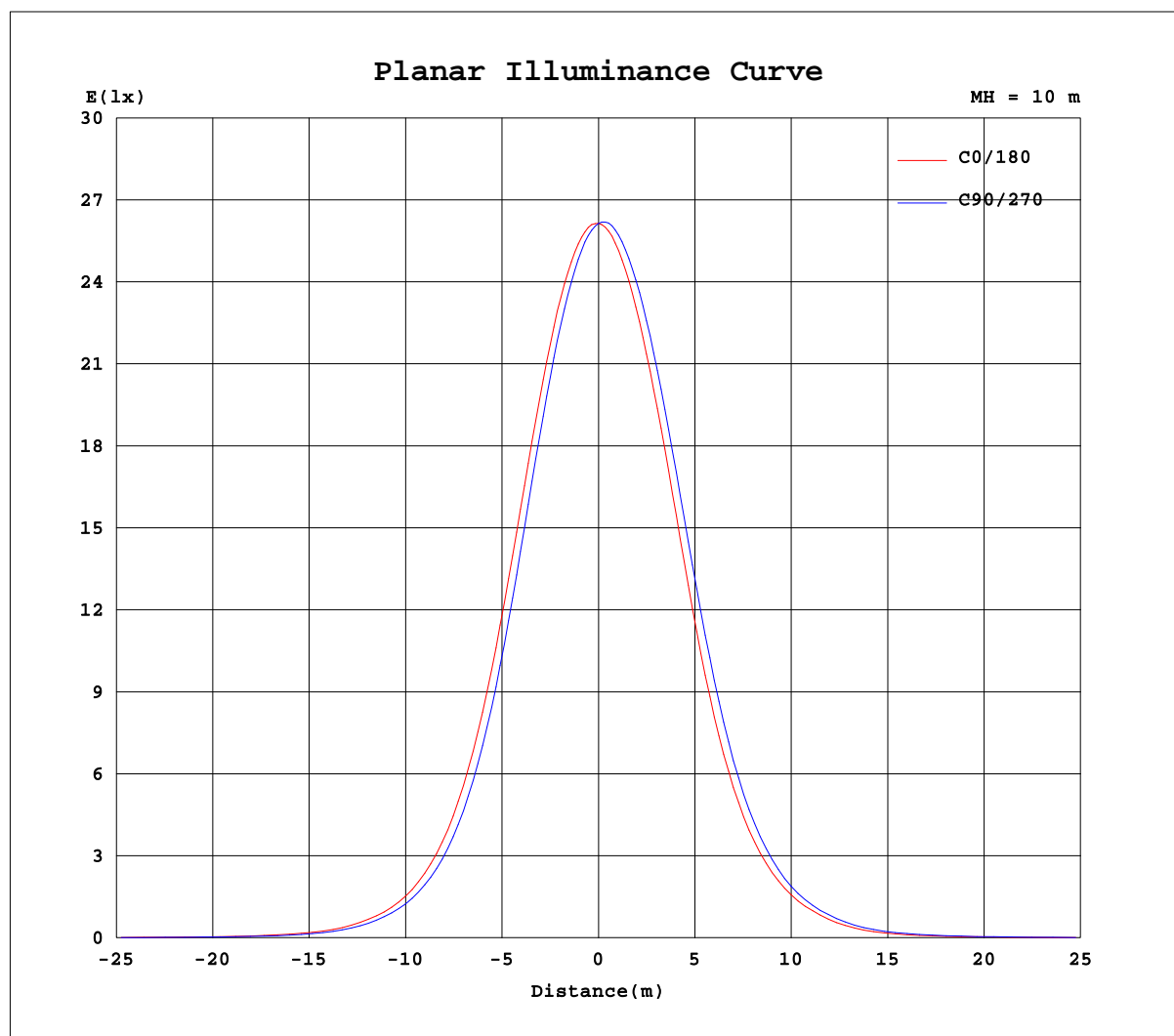
Test:U:228.8V I:0.1470A P:33.49W PF:0.9954 Lamp Flux:2891.45x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



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:228.8V I:0.1470A P:33.49W PF:0.9954 Lamp Flux:2891.45x1 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	2616	2626	2614	2607	2616	2626	2614	2607										
5	2594	2580	2546	2532	2573	2610	2621	2623										
10	2507	2468	2411	2393	2470	2527	2563	2572										
15	2341	2275	2200	2183	2301	2385	2444	2448										
20	2093	2002	1913	1900	2061	2161	2242	2247										
25	1765	1656	1559	1550	1734	1853	1947	1953										
30	1387	1287	1188	1186	1361	1475	1578	1583										
35	1016	927	848	848	1001	1096	1181	1178										
40	689	624	566	572	692	765	826	811										
45	434	389	355	361	447	496	536	517										
50	259	229	205	210	262	298	324	312										
55	139	121	106	106	126	148	165	162										
60	76.4	68.7	60.5	60.2	66.0	73.4	84.4	85.4										
65	48.2	45.2	42.0	41.0	43.3	45.9	50.4	51.8										
70	36.1	34.3	31.9	31.0	32.3	34.5	36.6	37.1										
75	27.5	26.3	24.0	23.4	23.7	25.9	27.7	28.3										
80	20.0	18.6	16.0	15.4	16.6	18.9	20.7	20.6										
85	7.41	5.92	3.41	3.35	4.89	6.60	8.88	8.74										
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	0.03	0.30	0.31	0.00	0.00	0.00	0.00										
130	1.00	1.32	1.61	1.65	0.88	0.51	0.25	0.25										
135	2.33	2.65	2.95	3.04	2.18	1.80	1.53	1.53										
140	3.62	3.93	4.21	4.34	3.45	3.10	2.86	2.85										
145	4.81	5.08	5.32	5.52	4.64	4.33	4.13	4.13										
150	5.81	6.04	6.24	6.49	5.65	5.42	5.30	5.31										
155	6.68	6.83	6.98	7.30	6.50	6.34	6.33	6.35										
160	7.42	7.50	7.61	7.98	7.22	7.13	7.20	7.25										
165	8.04	8.10	8.18	8.59	7.89	7.82	7.98	8.05										
170	8.63	8.66	8.73	9.14	8.51	8.39	8.63	8.75										
175	9.12	9.13	9.19	9.59	9.08	8.91	9.19	9.33										
180	9.40	9.36	9.45	9.77	9.44	9.32	9.46	9.75										

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: