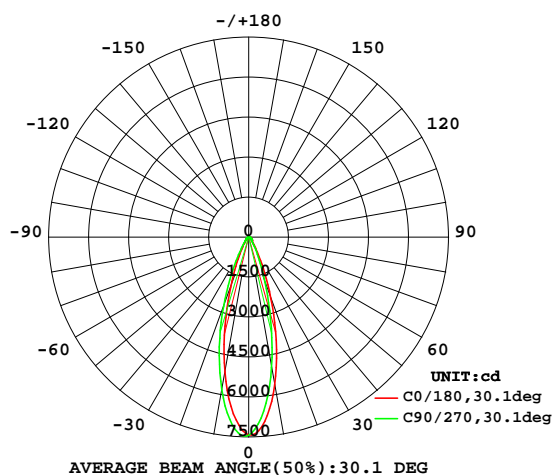


LUMINAIRE PHOTOMETRIC TEST REPORT

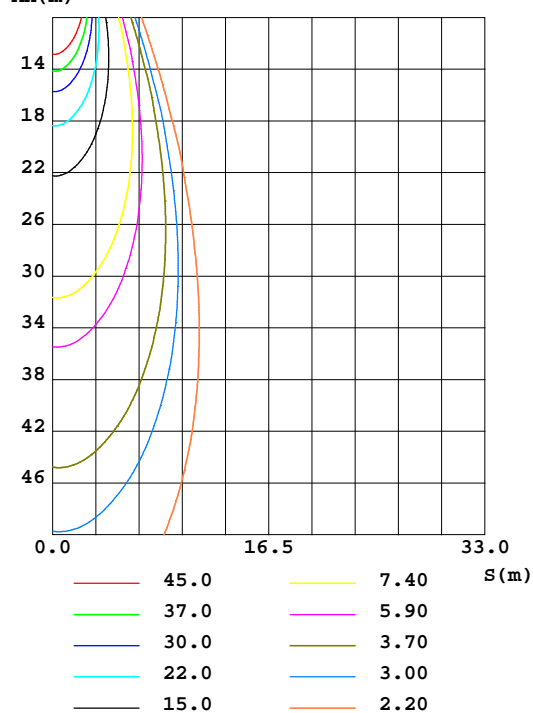
Test:U:228.6V I:0.1449A P:32.98W PF:0.9951 Lamp Flux:2762.89x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 83.79 lm/W			
MODEL	TL-812-35W-2CCT-RC-WH	I _{max} (cd)	7512	S/MH(C0/180)	0.53
NOMINAL POWER(W)	32	LOR(%)	100.0	S/MH(C90/270)	0.45
RATED VOLTAGE(V)	228	TOTAL FLUX(lm)	2762.9	η UP,DN(C0-180)	0.2,46.7
NOMINAL FLUX(lm)	2762.89	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.2,52.9
LAMPS INSIDE	1	η up(%)	0.4	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	228.6	η down(%)	99.6	CIBSE SHR MAX	0.55

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	\$lum,lamp
10	5637	5335	4970	4943	5148	5472	5816	5944	0- 10	605.1	605.1	21.9,21.9
20	2454	2112	1815	1788	1992	2390	2771	2810	10- 20	1022	1627	58.9,58.9
30	657.3	586.6	505.4	490.1	547.9	635.6	775.8	777.5	20- 30	576.7	2204	79.8,79.8
40	222.4	204.8	193.9	191.6	204.7	221.4	241.9	239.1	30- 40	224.5	2428	87.9,87.9
50	127.3	122.5	119.3	117.8	120.6	128.8	138.1	134.3	40- 50	125.7	2554	92.4,92.4
60	82.95	77.93	75.44	74.41	76.95	83.03	87.66	84.99	50- 60	90.67	2645	95.7,95.7
70	48.55	46.07	44.97	44.08	46.66	48.96	52.32	51.82	60- 70	62.74	2708	98,98
80	20.40	19.21	18.08	18.68	20.39	21.67	22.73	21.25	70- 80	36.11	2744	99.3,99.3
90	0	0	0	0	0	0	0	0	80- 90	7.077	2751	99.6,99.6
100	0	0	0	0	0	0	0	0	90-100	0	2751	99.6,99.6
110	0	0	0	0	0	0	0	0	100-110	0	2751	99.6,99.6
120	0	0	0	0	0	0	0	0	110-120	0	2751	99.6,99.6
130	0	0.0003	0.3425	0.3704	0	0	0	0	120-130	0.0038	2751	99.6,99.6
140	3.897	4.387	4.934	5.035	3.884	3.423	2.847	2.808	130-140	1.280	2752	99.6,99.6
150	7.666	7.947	8.205	8.408	7.626	7.336	6.973	6.961	140-150	3.671	2756	99.7,99.7
160	9.147	8.940	8.984	9.392	8.912	9.008	9.071	9.070	150-160	3.947	2760	99.9,99.9
170	8.433	7.971	8.019	8.681	8.023	8.375	8.791	9.056	160-170	2.517	2762	100,100
180	8.072	7.956	8.120	8.782	8.062	7.937	8.115	8.782	170-180	0.7854	2763	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

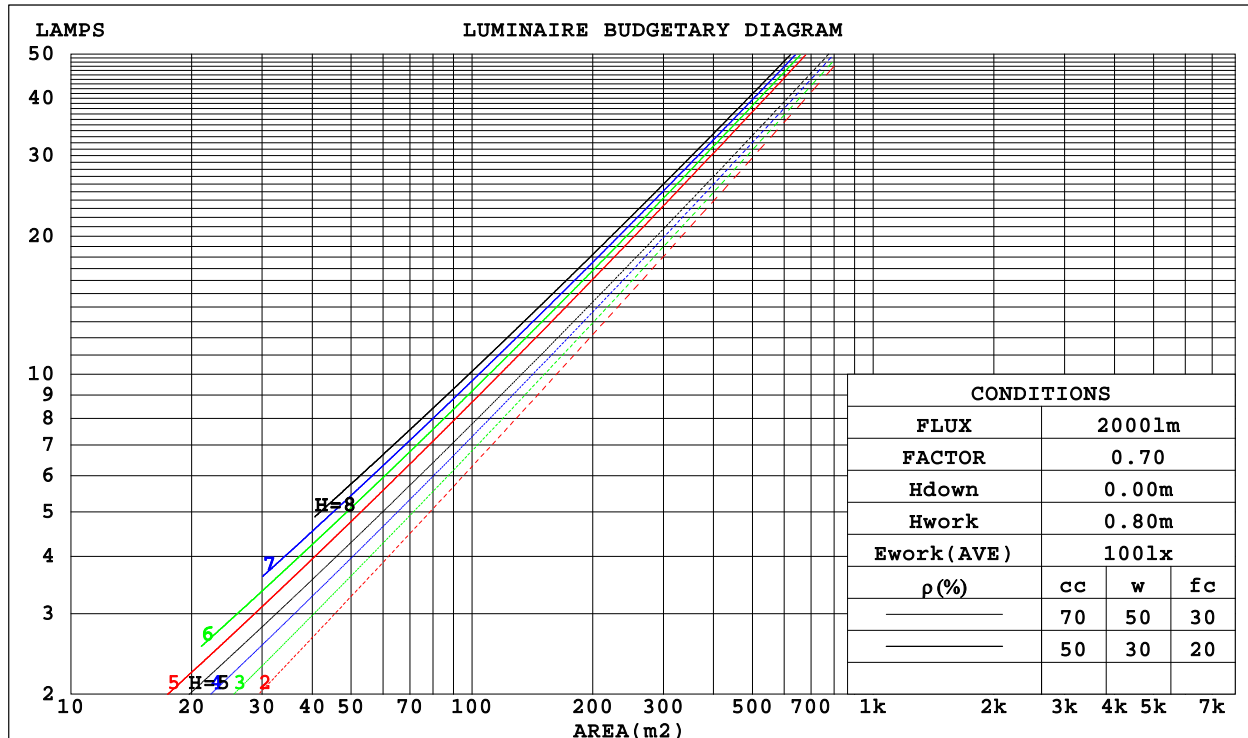
C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-27

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:228.6V I:0.1449A P:32.98W PF:0.9951 Lamp Flux:2762.89x1 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	1.11	1.08	1.06	1.09	1.06	1.04	1.04	1.03	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.04	.90	.96	1.02	.98	.95	.98	.96	.93	.95	.93	.91	.93	.91	.89	.87
3.0	.97	.93	.89	.96	.92	.88	.93	.90	.87	.91	.88	.85	.88	.86	.84	.82
4.0	.92	.87	.83	.91	.86	.82	.88	.84	.81	.86	.83	.80	.85	.82	.79	.78
5.0	.87	.82	.78	.86	.81	.77	.84	.80	.77	.83	.79	.76	.81	.78	.75	.74
6.0	.83	.77	.73	.82	.77	.73	.80	.76	.73	.79	.75	.72	.78	.74	.72	.70
7.0	.79	.74	.70	.78	.73	.70	.77	.73	.69	.76	.72	.69	.75	.71	.68	.67
8.0	.76	.70	.67	.75	.70	.66	.74	.69	.66	.73	.69	.66	.72	.68	.66	.64
9.0	.72	.67	.64	.72	.67	.64	.71	.67	.63	.70	.66	.63	.69	.66	.63	.62
10.0	.70	.65	.61	.69	.64	.61	.68	.64	.61	.68	.64	.61	.67	.63	.61	.59



WEC AND CCEC

Test:U:228.6V I:0.1449A P:32.98W PF:0.9951 Lamp Flux:2762.89x1 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 Wall Exitance Coefficients(WEC)															
0.0																
1.0	.176	.100	.032	.169	.096	.031	.156	.090	.029	.144	.083	.027	.134	.077	.025	
2.0	.165	.091	.028	.160	.088	.027	.149	.083	.026	.139	.078	.024	.130	.073	.023	
3.0	.155	.082	.025	.150	.080	.024	.141	.076	.023	.132	.072	.022	.124	.069	.021	
4.0	.145	.075	.022	.141	.074	.022	.133	.070	.021	.126	.067	.020	.119	.065	.020	
5.0	.136	.069	.020	.133	.068	.020	.126	.066	.019	.119	.063	.019	.114	.061	.018	
6.0	.129	.064	.018	.125	.063	.018	.119	.061	.018	.114	.059	.017	.109	.057	.017	
7.0	.122	.060	.017	.119	.059	.017	.114	.057	.017	.109	.056	.016	.104	.054	.016	
8.0	.116	.056	.016	.113	.056	.016	.108	.054	.015	.104	.053	.015	.100	.051	.015	
9.0	.110	.053	.015	.108	.053	.015	.104	.051	.015	.100	.050	.014	.096	.049	.014	
10.0	.105	.050	.014	.103	.050	.014	.099	.049	.014	.096	.048	.014	.092	.046	.013	

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	.194	.194	.194	.166	.166	.166	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.174	.161	.148	.149	.138	.128	.102	.095	.088	.059	.055	.051	.019	.018	.017	
2.0	.159	.136	.117	.136	.117	.101	.093	.081	.070	.054	.047	.041	.017	.015	.013	
3.0	.146	.117	.094	.125	.101	.082	.086	.070	.057	.050	.041	.034	.016	.013	.011	
4.0	.135	.102	.077	.116	.088	.067	.079	.061	.047	.046	.036	.028	.015	.012	.009	
5.0	.125	.090	.065	.107	.078	.056	.074	.055	.040	.043	.032	.024	.014	.010	.008	
6.0	.117	.081	.055	.100	.070	.048	.069	.049	.034	.040	.029	.020	.013	.009	.007	
7.0	.110	.073	.047	.094	.063	.041	.065	.044	.029	.038	.026	.017	.012	.009	.006	
8.0	.104	.067	.041	.089	.058	.036	.062	.041	.025	.036	.024	.015	.012	.008	.005	
9.0	.098	.061	.036	.084	.053	.032	.058	.037	.022	.034	.022	.013	.011	.007	.004	
10.0	.093	.057	.032	.080	.049	.028	.056	.035	.020	.032	.020	.012	.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:0.1449A P:32.98W PF:0.9951 Lamp Flux:2762.89x1 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	14.6	15.4	15.5	13.9	14.7	14.1	14.9	15.1	
	3H	15.4	16.2	15.7	16.4	16.6	14.9	15.7	15.2	15.9	16.2
	4H	15.9	16.6	16.2	16.9	17.1	15.4	16.2	15.7	16.4	16.6
	6H	16.3	17.0	16.6	17.2	17.5	15.7	16.5	16.0	16.7	17.0
	8H	16.3	17.0	16.7	17.3	17.6	15.8	16.5	16.1	16.8	17.0
	12H	16.4	17.0	16.7	17.3	17.6	15.8	16.5	16.1	16.7	17.0
4H	2H	14.7	15.5	15.0	15.7	15.9	14.3	15.1	14.6	15.3	15.5
	3H	16.0	16.6	16.3	16.9	17.2	15.6	16.3	15.9	16.5	16.8
	4H	16.6	17.2	16.9	17.5	17.8	16.2	16.8	16.6	17.1	17.4
	6H	17.1	17.6	17.5	18.0	18.3	16.6	17.2	17.0	17.5	17.9
	8H	17.2	17.7	17.6	18.1	18.4	16.7	17.2	17.1	17.6	18.0
	12H	17.2	17.7	17.6	18.1	18.5	16.7	17.2	17.1	17.6	18.0
8H	4H	16.8	17.3	17.2	17.6	18.0	16.4	16.9	16.8	17.3	17.7
	6H	17.4	17.8	17.8	18.2	18.6	17.0	17.4	17.4	17.8	18.2
	8H	17.6	17.9	18.0	18.3	18.8	17.1	17.5	17.6	17.9	18.3
	12H	17.6	17.9	18.1	18.4	18.8	17.1	17.4	17.6	17.9	18.4
12H	4H	16.8	17.2	17.2	17.6	18.0	16.4	16.9	16.8	17.3	17.7
	6H	17.4	17.8	17.8	18.2	18.6	17.0	17.4	17.4	17.8	18.2
	8H	17.6	17.9	18.1	18.3	18.8	17.1	17.5	17.6	17.9	18.4
Variations with the observer position at spacings:											
S = 1.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4					
1.5H	+ 0.5 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.5 / - 0.4					+ 0.4 / - 0.5					

CIE Pub.117 Corrected 2763 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:228.6V I:0.1449A P:32.98W PF:0.9951 Lamp Flux:2762.89x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

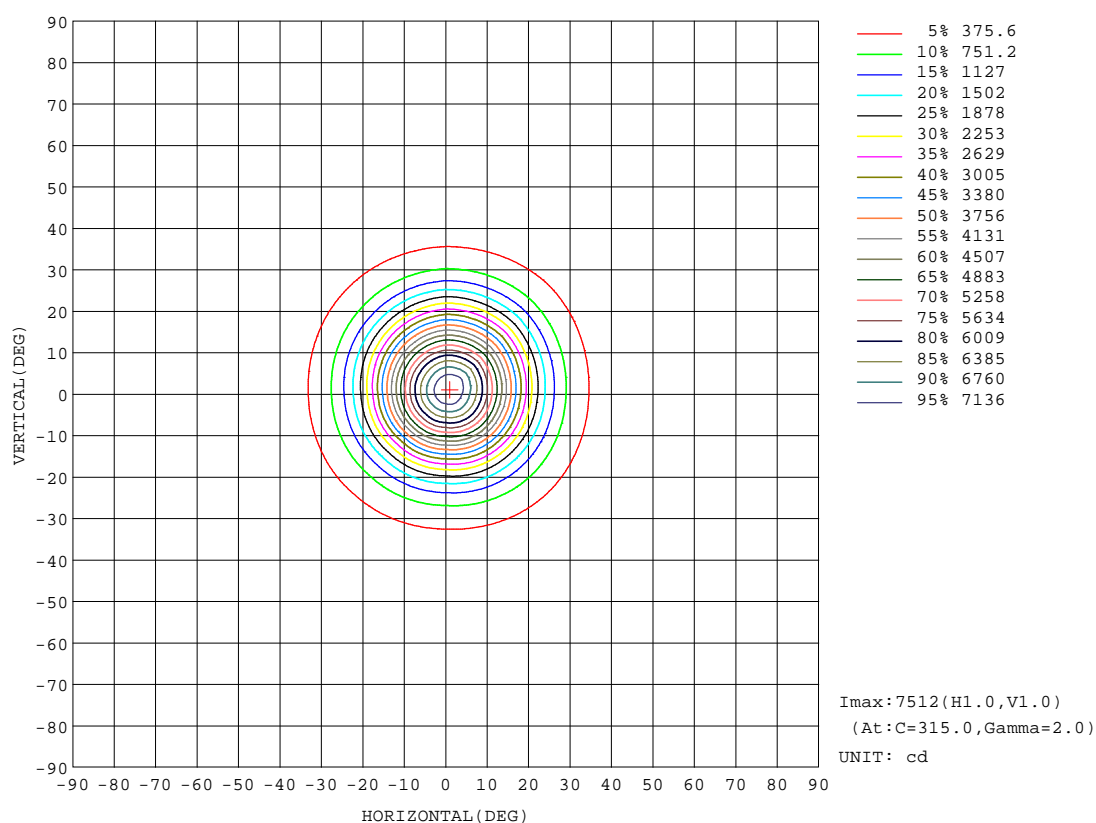
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	84	77	73	84	77	73	83	77	73	69
0.80	92	85	81	91	85	81	90	84	81	77
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	102	99	96	91
2.50	109	104	101	107	103	100	104	101	98	92
3.00	111	107	104	109	105	103	105	102	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

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:228.6V I:0.1449A P:32.98W PF:0.9951 Lamp Flux:2762.89x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

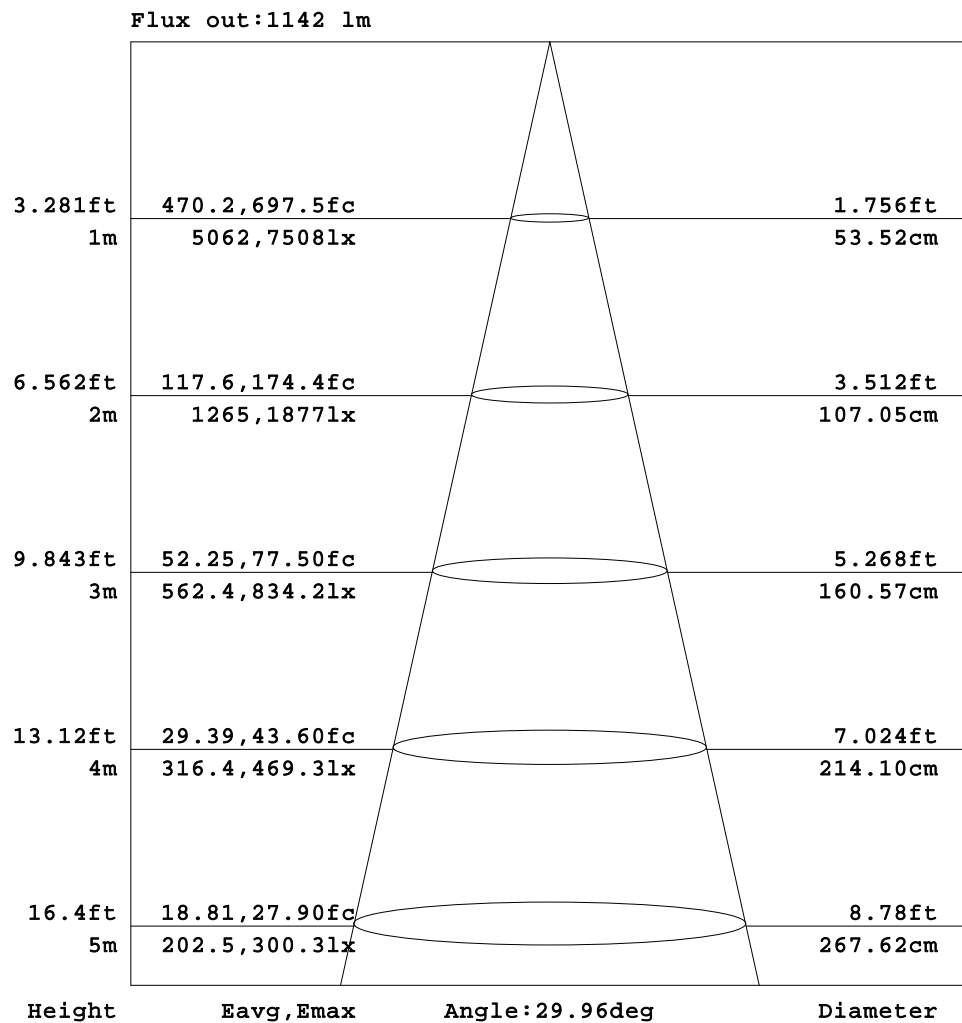


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2018-08-27

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:228.6V I:0.1449A P:32.98W PF:0.9951 Lamp Flux:2762.89x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



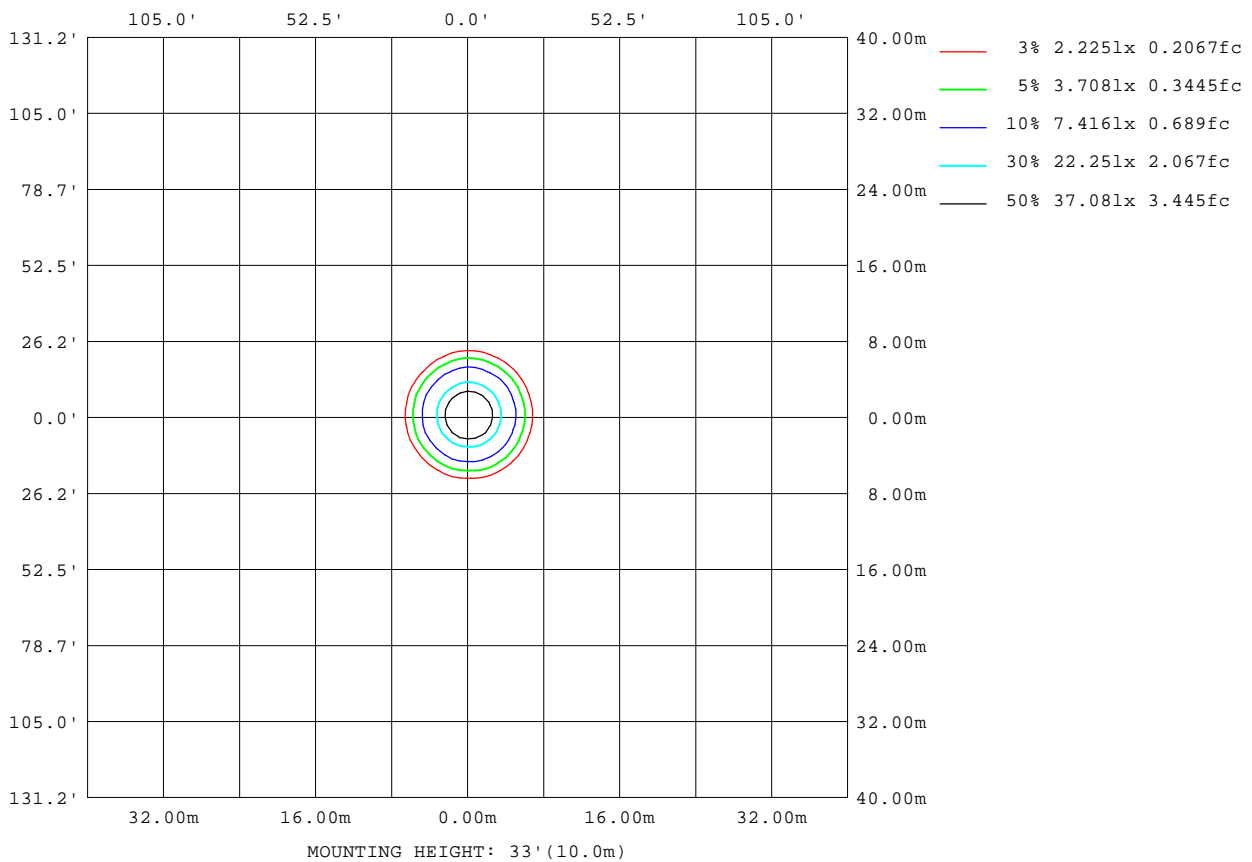
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

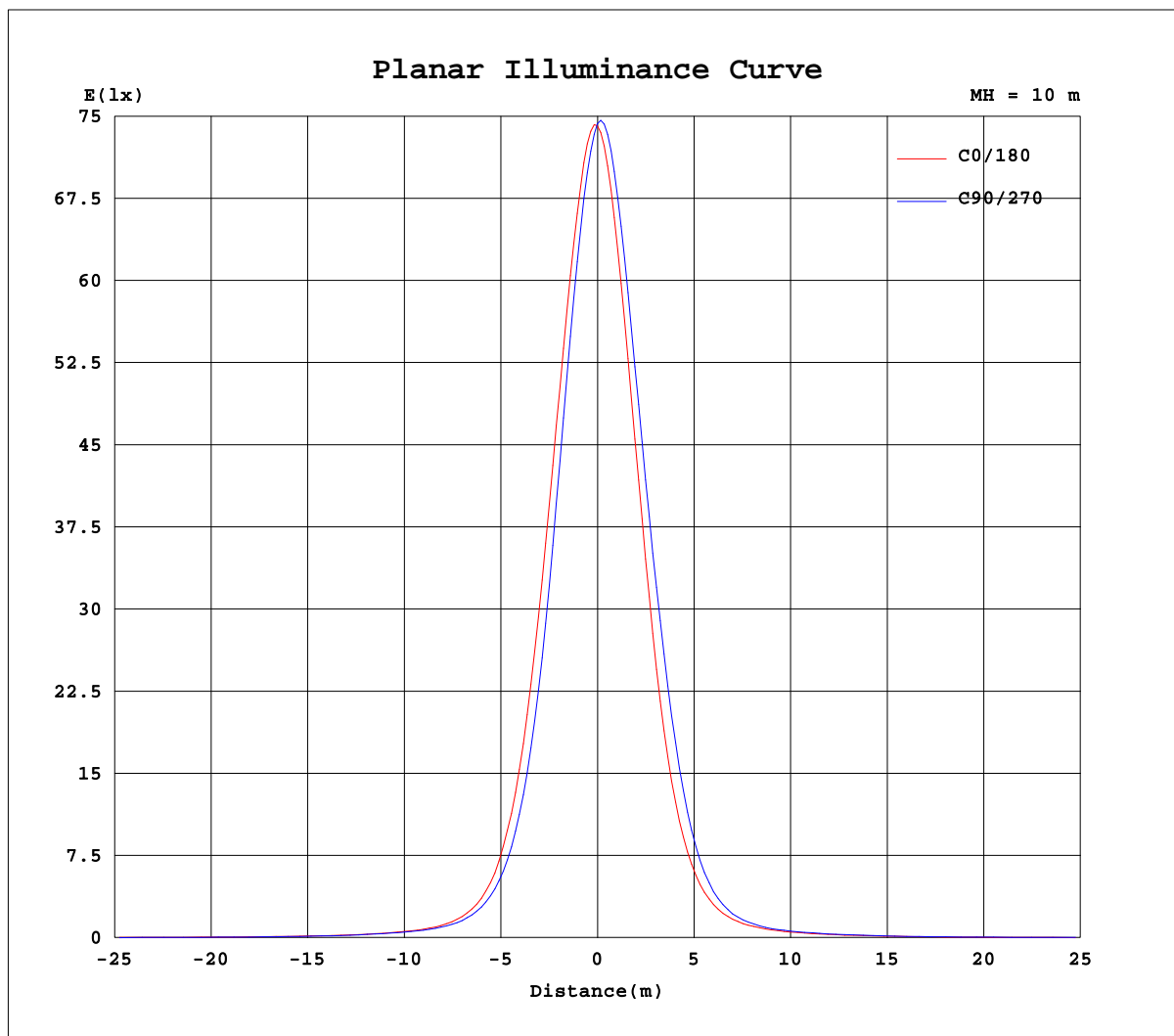
Test:U:228.6V I:0.1449A P:32.98W PF:0.9951 Lamp Flux:2762.89x1 lm		
NAME: S1-CN002(180528)	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



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

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:228.6V I:0.1449A P:32.98W PF:0.9951 Lamp Flux:2762.89x1 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	7416	7428	7432	7462	7416	7428	7432	7462										
5	6942	6769	6549	6528	6652	6827	7079	7194										
10	5637	5335	4970	4943	5148	5472	5816	5944										
15	3999	3618	3188	3191	3458	3879	4270	4342										
20	2454	2112	1815	1788	1992	2390	2771	2810										
25	1324	1122	959	934	1054	1277	1542	1553										
30	657	587	505	490	548	636	776	778										
35	357	323	291	285	310	345	400	400										
40	222	205	194	192	205	221	242	239										
45	163	154	149	148	153	164	176	171										
50	127	123	119	118	121	129	138	134										
55	103	97.6	93.9	94.5	96.5	103	109	108										
60	83.0	77.9	75.4	74.4	76.9	83.0	87.7	85.0										
65	64.7	61.0	59.5	58.0	60.3	64.4	68.5	68.1										
70	48.5	46.1	45.0	44.1	46.7	49.0	52.3	51.8										
75	34.8	34.4	31.2	32.3	35.1	43.2	36.8	35.0										
80	20.4	19.2	18.1	18.7	20.4	21.7	22.7	21.2										
85	4.63	3.76	2.51	2.88	4.07	4.99	6.37	5.68										
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	0.34	0.37	0.00	0.00	0.00	0.00										
135	1.55	2.05	2.66	2.72	1.56	1.10	0.53	0.49										
140	3.90	4.39	4.93	5.04	3.88	3.42	2.85	2.81										
145	6.01	6.42	6.85	6.99	5.98	5.59	5.09	5.07										
150	7.67	7.95	8.20	8.41	7.63	7.34	6.97	6.96										
155	8.73	8.81	8.89	9.24	8.64	8.50	8.34	8.31										
160	9.15	8.94	8.98	9.39	8.91	9.01	9.07	9.07										
165	8.98	8.55	8.54	9.12	8.60	8.95	9.15	9.26										
170	8.43	7.97	8.02	8.68	8.02	8.37	8.79	9.06										
175	8.05	7.77	7.84	8.58	7.80	7.91	8.34	8.77										
180	8.07	7.96	8.12	8.78	8.06	7.94	8.11	8.78										

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: