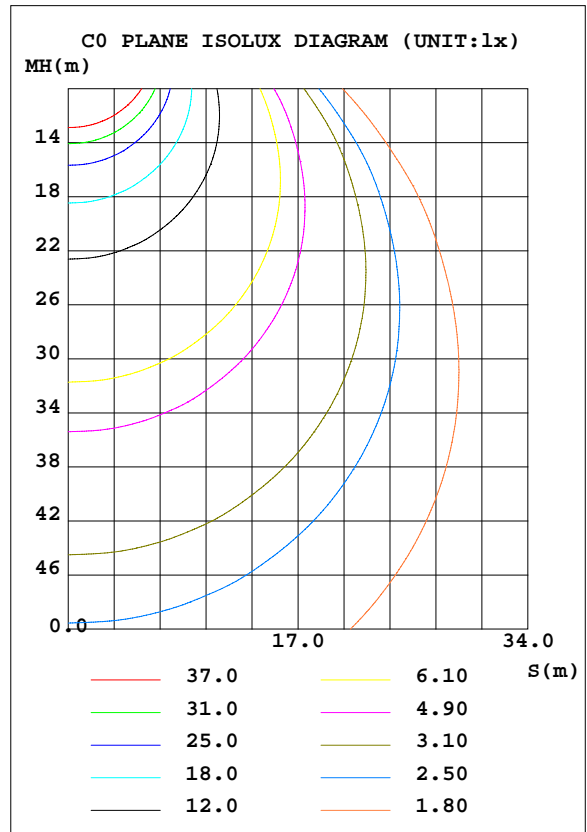
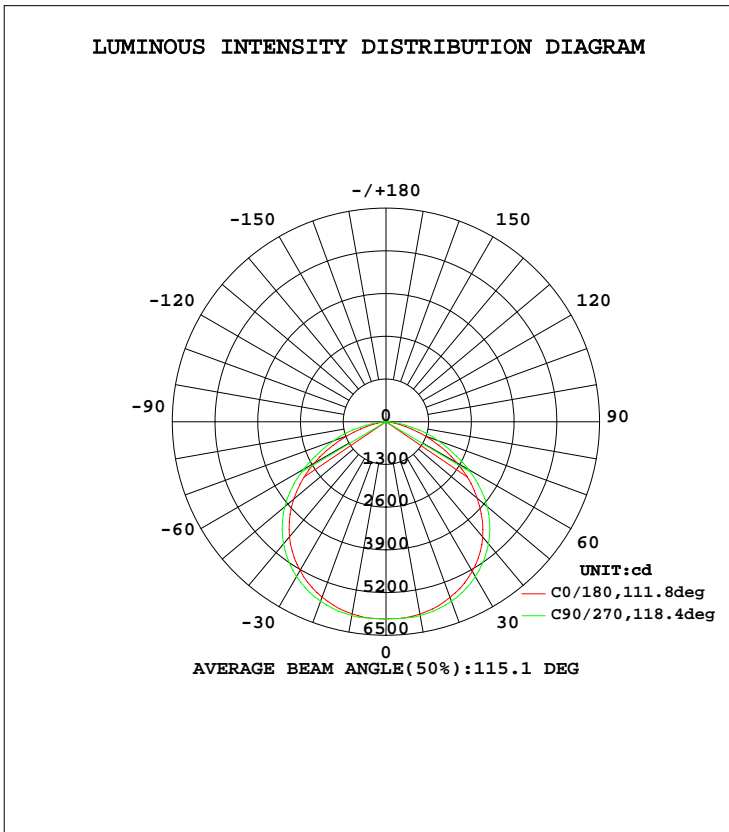


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:110.2V I:1.666A P:182.0W PF:0.9911 Lamp Flux:17476.3x1 lm		
NAME: ASD-FLSL-200N50Y-XX	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:027
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 96.04 lm/W			
MODEL	ASD-FLSL-200N50Y-XX	I _{max} (cd)	6005	S/MH(C0/180)	1.30
NOMINAL POWER(W)	196	LOR(%)	100.0	S/MH(C90/270)	1.34
RATED VOLTAGE(V)	110	TOTAL FLUX(lm)	17476	η UP, DN(C0-180)	0.1, 50.3
NOMINAL FLUX(lm)	17476.3	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.1, 49.5
LAMPS INSIDE	1	η up(%)	0.2	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	110.2	η down(%)	99.8	CIBSE SHR MAX	1.50



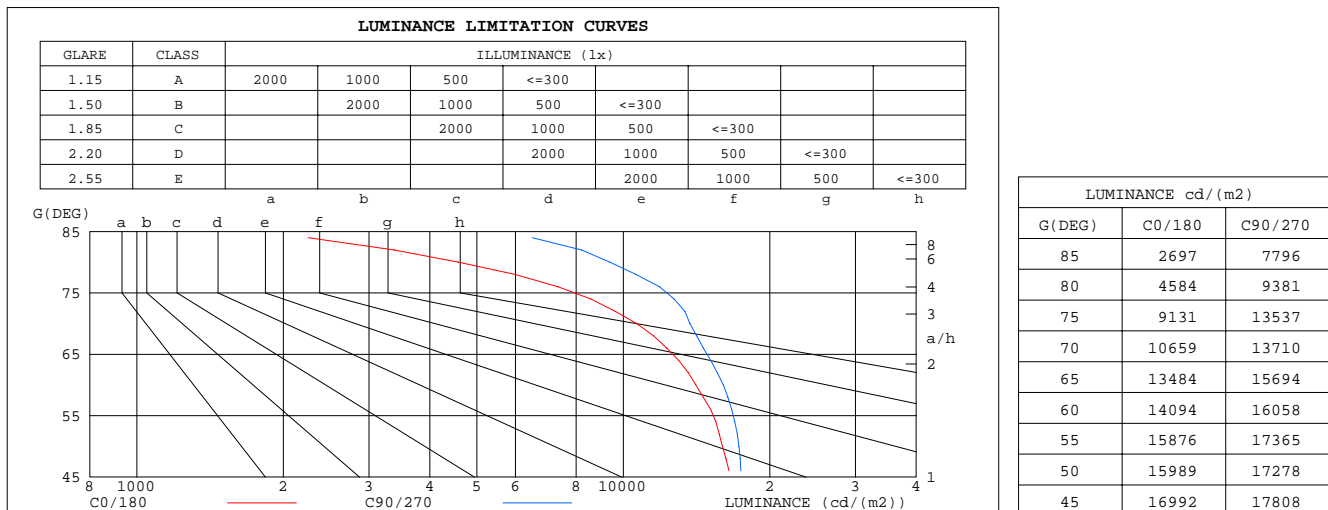
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2019-07-09

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.400m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM
AND LUMINANCE LIMITATION CURVES

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270				γ	Φ zone	Φ total	Φ lum,lamp	
10	5943	5991	5937	5991				0- 10	571.6	571.6	3.27,3.27	
20	5691	5813	5681	5813				10- 20	1662	2233	12.8,12.8	
30	5256	5442	5228	5442				20- 30	2569	4803	27.5,27.5	
40	4581	4850	4569	4850				30- 40	3162	7965	45.6,45.6	
50	3617	4018	3666	4018				40- 50	3315	11279	64.5,64.5	
60	2480	2905	2523	2905				50- 60	2938	14217	81.4,81.4	
70	1283	1696	1264	1696				60- 70	2061	16278	93.1,93.1	
80	280.1	589.3	276.1	589.3				70- 80	992.2	17271	98.8,98.8	
90	3.592	26.31	1.264	26.31				80- 90	172.1	17443	99.8,99.8	
100	1.251	1.009	1.296	1.009				90-100	2.959	17446	99.8,99.8	
110	2.941	2.471	2.985	2.471				100-110	1.984	17448	99.8,99.8	
120	4.863	4.423	4.930	4.423				110-120	3.656	17451	99.9,99.9	
130	6.658	6.333	6.792	6.333				120-130	5.016	17456	99.9,99.9	
140	8.118	8.048	8.371	8.048				130-140	5.684	17462	99.9,99.9	
150	9.329	9.334	9.583	9.334				140-150	5.517	17468	99.9,99.9	
160	10.41	10.47	10.60	10.47				150-160	4.595	17472	100,100	
170	11.17	11.37	11.36	11.37				160-170	3.089	17475	100,100	
180	11.58	11.78	11.60	11.78				170-180	1.095	17476	100,100	
DEG	LUMINOUS INTENSITY:cd							UNIT:lm				



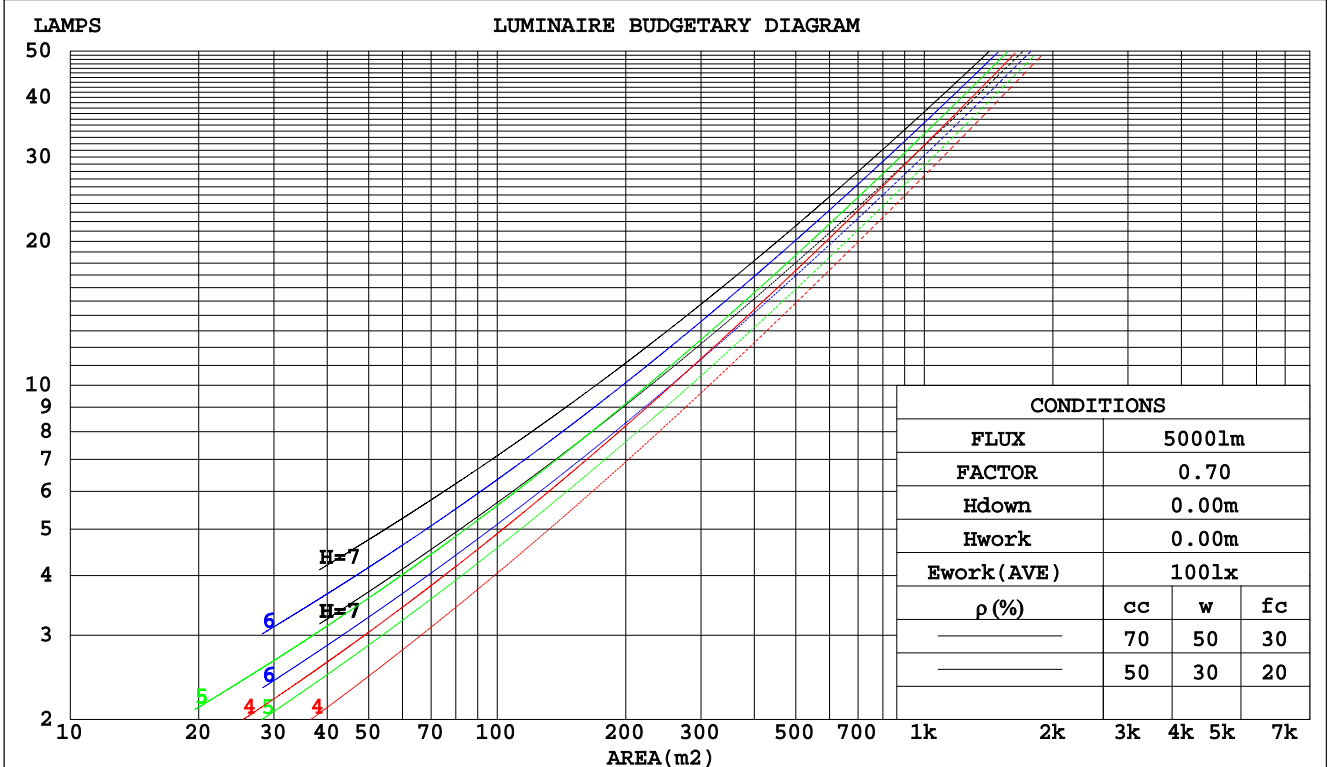
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2019-07-09

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:65.0%
Test Distance:18.400m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:110.2V I:1.666A P:182.0W PF:0.9911 Lamp Flux:17476.3x1 lm		
NAME: ASD-FLSL-200N50Y-XX	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:027
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc																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	1.05	1.01	.97	1.02	.99	.95	.98	.95	.92	.94	.92	.89	.91	.89	.87	.85
2.0	.91	.85	.79	.90	.83	.78	.86	.81	.76	.83	.78	.75	.80	.76	.73	.71
3.0	.80	.72	.66	.79	.71	.65	.76	.69	.64	.73	.68	.63	.70	.66	.62	.60
4.0	.71	.63	.56	.70	.62	.56	.67	.60	.55	.65	.59	.54	.63	.58	.53	.51
5.0	.64	.55	.48	.62	.54	.48	.60	.53	.47	.58	.52	.47	.56	.51	.46	.44
6.0	.57	.48	.42	.56	.48	.42	.54	.47	.41	.53	.46	.41	.51	.45	.41	.39
7.0	.52	.43	.37	.51	.43	.37	.49	.42	.37	.48	.41	.36	.47	.41	.36	.34
8.0	.47	.39	.33	.47	.38	.33	.45	.38	.33	.44	.37	.32	.43	.37	.32	.30
9.0	.43	.35	.30	.43	.35	.29	.42	.34	.29	.40	.34	.29	.39	.33	.29	.27
10.0	.40	.32	.27	.39	.32	.27	.38	.31	.27	.37	.31	.26	.36	.31	.26	.25



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2019-07-09

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity: 65.0%
 Test Distance: 18.400m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:110.2V I:1.666A P:182.0W PF:0.9911 Lamp Flux:17476.3x1 lm		
NAME: ASD-FLSL-200N50Y-XX	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:027
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.294	.167	.053	.287	.163	.052	.273	.157	.050	.261	.151	.048	.250	.145	.047	
2.0	.281	.154	.047	.275	.152	.047	.263	.147	.046	.253	.142	.044	.243	.137	.043	
3.0	.263	.140	.042	.258	.138	.042	.247	.134	.041	.238	.130	.040	.229	.127	.039	
4.0	.244	.127	.037	.239	.125	.037	.230	.122	.036	.222	.119	.036	.214	.116	.035	
5.0	.227	.116	.033	.223	.114	.033	.214	.112	.033	.207	.109	.032	.200	.107	.032	
6.0	.211	.106	.030	.207	.105	.030	.200	.103	.030	.193	.100	.030	.187	.098	.029	
7.0	.197	.097	.028	.194	.096	.027	.187	.095	.027	.181	.093	.027	.175	.091	.027	
8.0	.184	.090	.025	.181	.089	.025	.175	.088	.025	.170	.086	.025	.165	.085	.025	
9.0	.173	.084	.023	.170	.083	.023	.165	.082	.023	.160	.080	.023	.155	.079	.023	
10.0	.163	.078	.022	.160	.077	.022	.156	.076	.021	.151	.075	.021	.147	.074	.021	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	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	.181	.158	.137	.155	.135	.118	.106	.093	.082	.061	.054	.047	.019	.017	.015	
2.0	.172	.133	.101	.148	.115	.087	.101	.079	.061	.058	.046	.036	.019	.015	.012	
3.0	.165	.116	.077	.141	.100	.067	.097	.069	.047	.056	.041	.028	.018	.013	.009	
4.0	.157	.102	.061	.135	.088	.053	.093	.062	.037	.054	.036	.022	.017	.012	.007	
5.0	.150	.092	.049	.129	.080	.043	.089	.056	.030	.051	.033	.018	.017	.011	.006	
6.0	.143	.084	.041	.123	.072	.036	.085	.051	.025	.049	.030	.015	.016	.010	.005	
7.0	.136	.077	.035	.117	.066	.030	.081	.047	.022	.047	.027	.013	.015	.009	.004	
8.0	.130	.071	.030	.112	.062	.026	.077	.043	.019	.045	.025	.011	.015	.008	.004	
9.0	.124	.066	.027	.107	.057	.023	.074	.040	.017	.043	.024	.010	.014	.008	.003	
10.0	.118	.062	.024	.102	.054	.021	.071	.038	.015	.041	.022	.009	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2019-07-09

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.400m [K=1.0000]
 Remarks:

Uncorrected UGR Table

Test:U:110.2V I:1.666A P:182.0W PF:0.9911 Lamp Flux:17476.3x1 lm										
NAME: ASD-FLSL-200N50Y-XX					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:027		
MFR.: ASD Lighting corp					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	22.4	23.9	22.6	24.1	24.3	22.8	24.3	23.1	24.5	24.7
3H	23.5	24.9	23.8	25.1	25.3	24.1	25.5	24.4	25.8	26.0
4H	23.8	25.1	24.1	25.3	25.6	24.6	26.0	25.0	26.2	26.5
6H	23.8	25.1	24.2	25.3	25.6	24.9	26.2	25.3	26.4	26.7
8H	23.8	25.0	24.2	25.3	25.6	25.0	26.2	25.3	26.4	26.7
12H	23.8	24.9	24.1	25.2	25.5	25.0	26.1	25.3	26.4	26.7
4H 2H	22.9	24.3	23.3	24.5	24.8	23.3	24.6	23.6	24.8	25.1
3H	24.2	25.4	24.6	25.7	26.0	24.8	25.9	25.1	26.2	26.5
4H	24.6	25.6	25.0	26.0	26.3	25.4	26.4	25.8	26.8	27.1
6H	24.7	25.7	25.1	26.0	26.4	25.8	26.7	26.2	27.0	27.4
8H	24.7	25.6	25.1	26.0	26.3	25.8	26.7	26.3	27.1	27.5
12H	24.7	25.5	25.1	25.9	26.3	25.9	26.6	26.3	27.0	27.4
8H 4H	24.8	25.6	25.2	26.0	26.4	25.5	26.4	25.9	26.7	27.1
6H	25.0	25.7	25.4	26.1	26.5	26.0	26.7	26.4	27.1	27.5
8H	25.0	25.6	25.5	26.1	26.5	26.1	26.7	26.5	27.1	27.6
12H	25.0	25.5	25.5	26.0	26.5	26.1	26.7	26.6	27.1	27.6
12H 4H	24.8	25.6	25.2	26.0	26.4	25.5	26.3	25.9	26.7	27.1
6H	25.0	25.6	25.5	26.1	26.5	26.0	26.6	26.4	27.0	27.5
8H	25.0	25.6	25.5	26.0	26.5	26.1	26.6	26.6	27.1	27.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.5					+ 0.2 / - 0.4				
2.0H	+ 0.3 / - 0.5					+ 0.3 / - 0.3				

CIE Pub.117 Corrected 17476 lm Total Lamp Luminous Flux. (8log(F/F0) = 9.9)

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2019-07-09

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.400m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:110.2V I:1.666A P:182.0W PF:0.9911 Lamp Flux:17476.3x1 lm		
NAME: ASD-FLSL-200N50Y-XX	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:027
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:

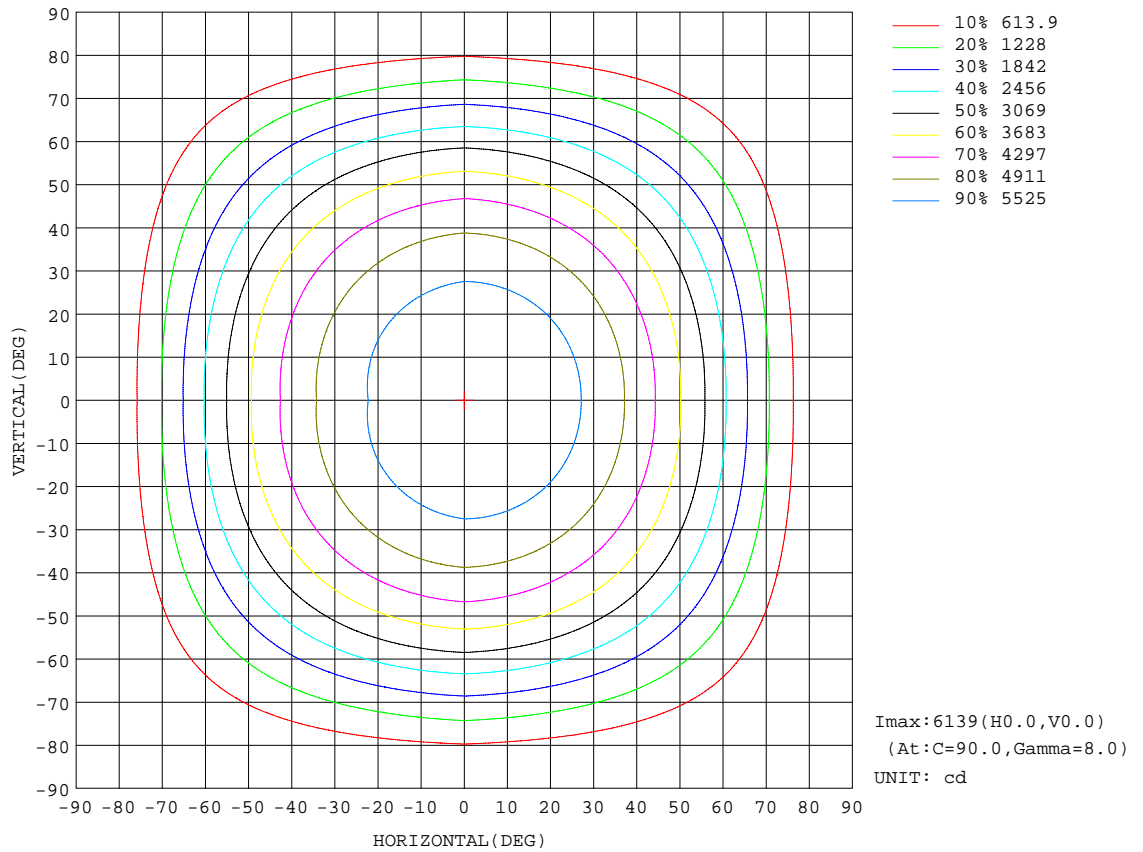
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	58	46	39	57	46	39	56	46	39	33
0.80	68	57	49	67	56	49	65	55	49	42
1.00	77	66	59	76	65	58	73	67	58	51
1.25	84	74	67	83	73	66	80	72	66	58
1.50	89	79	73	87	78	72	84	77	71	64
2.00	96	88	81	94	86	81	91	84	79	71
2.50	100	92	86	98	91	85	94	88	84	75
3.00	103	96	91	101	95	90	97	92	88	79
4.00	107	101	97	104	100	96	100	96	93	84
5.00	109	105	101	107	103	99	102	99	96	87
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2019-07-09

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.400m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:110.2V I:1.666A P:182.0W PF:0.9911 Lamp Flux:17476.3x1 lm		
NAME: ASD-FLSL-200N50Y-XX	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:027
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:

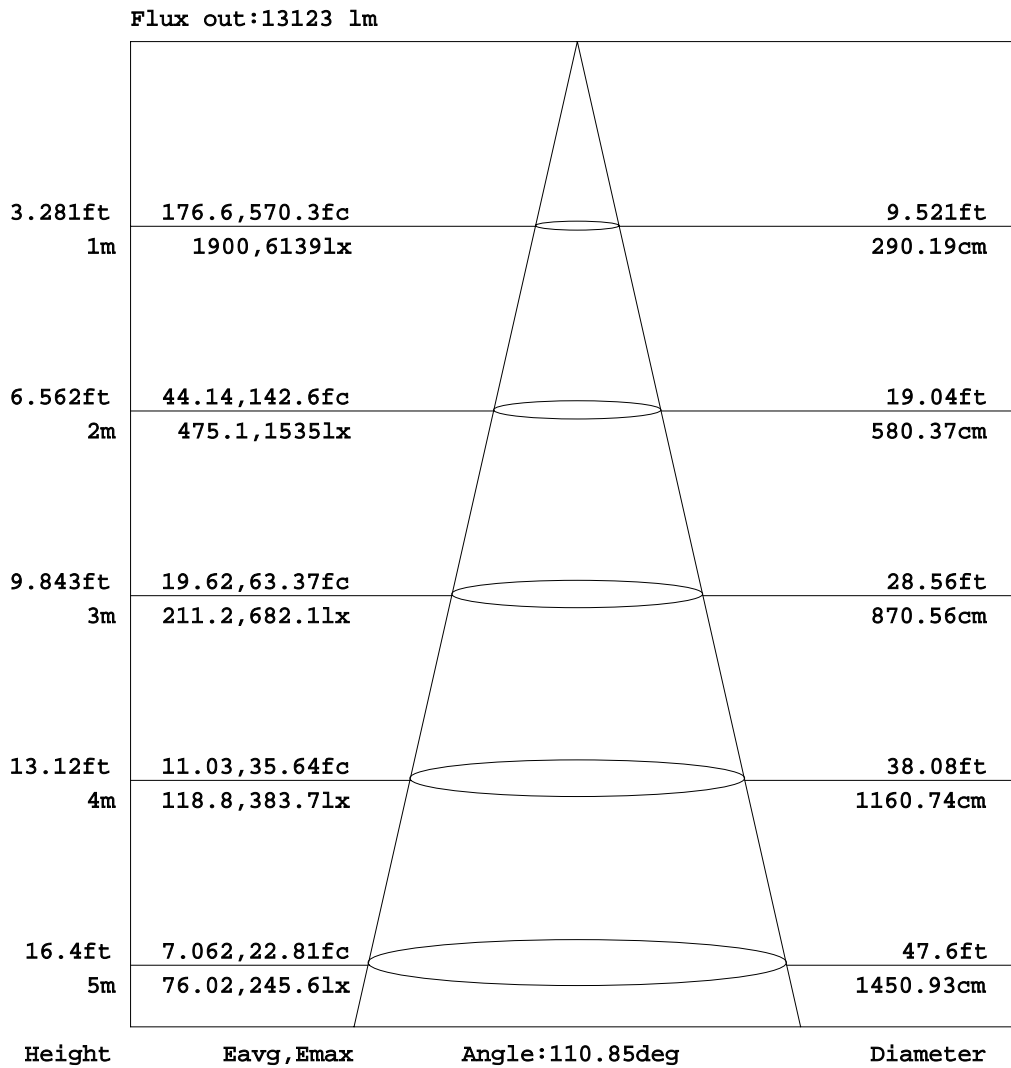


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2019-07-09

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity: 65.0%
 Test Distance: 18.400m [K=1.0000]
 Remarks:

AAI Figure

Test:U:110.2V I:1.666A P:182.0W PF:0.9911 Lamp Flux:17476.3x1 lm		
NAME: ASD-FLSL-200N50Y-XX	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:027
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:



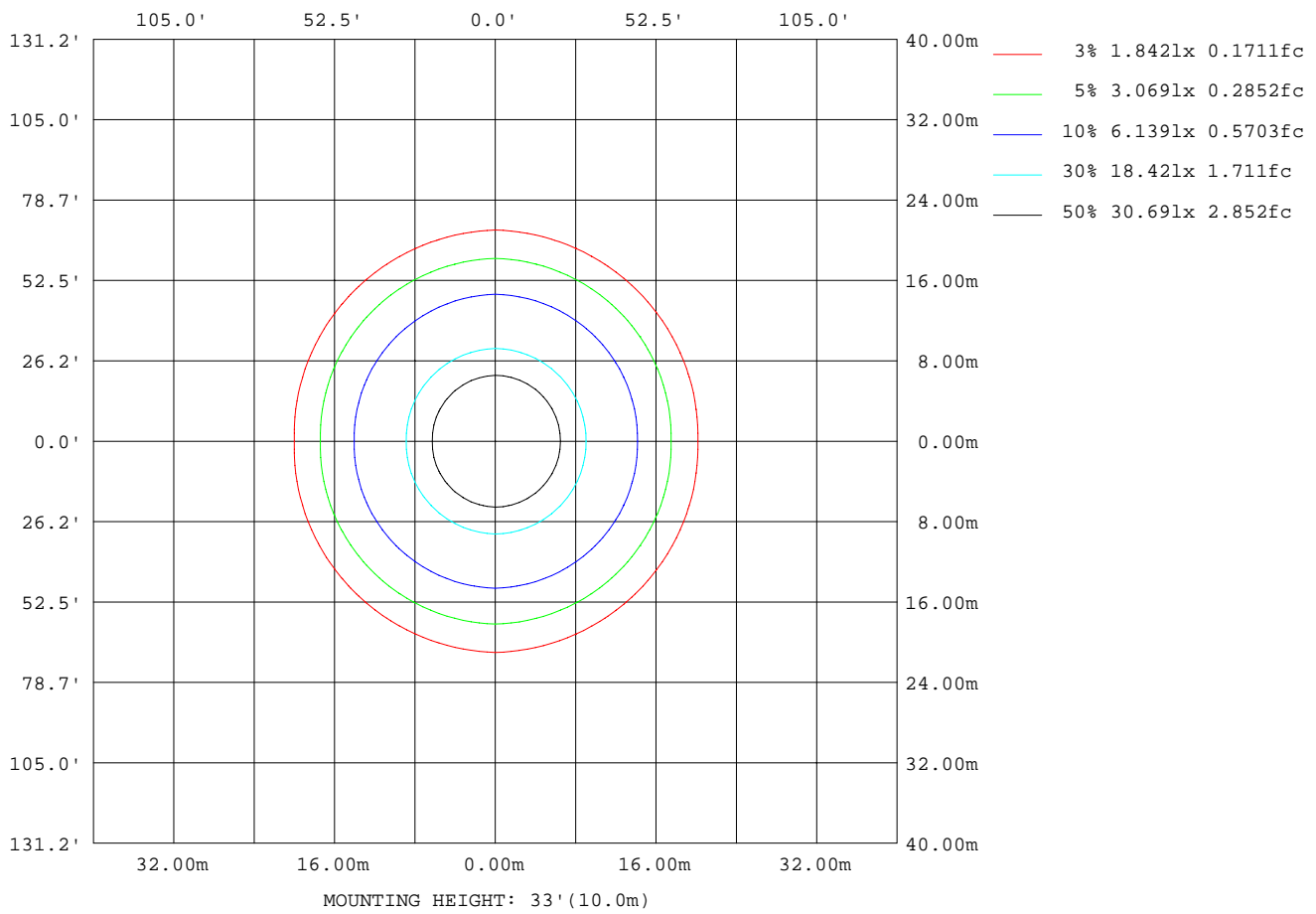
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2019-07-09

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.400m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

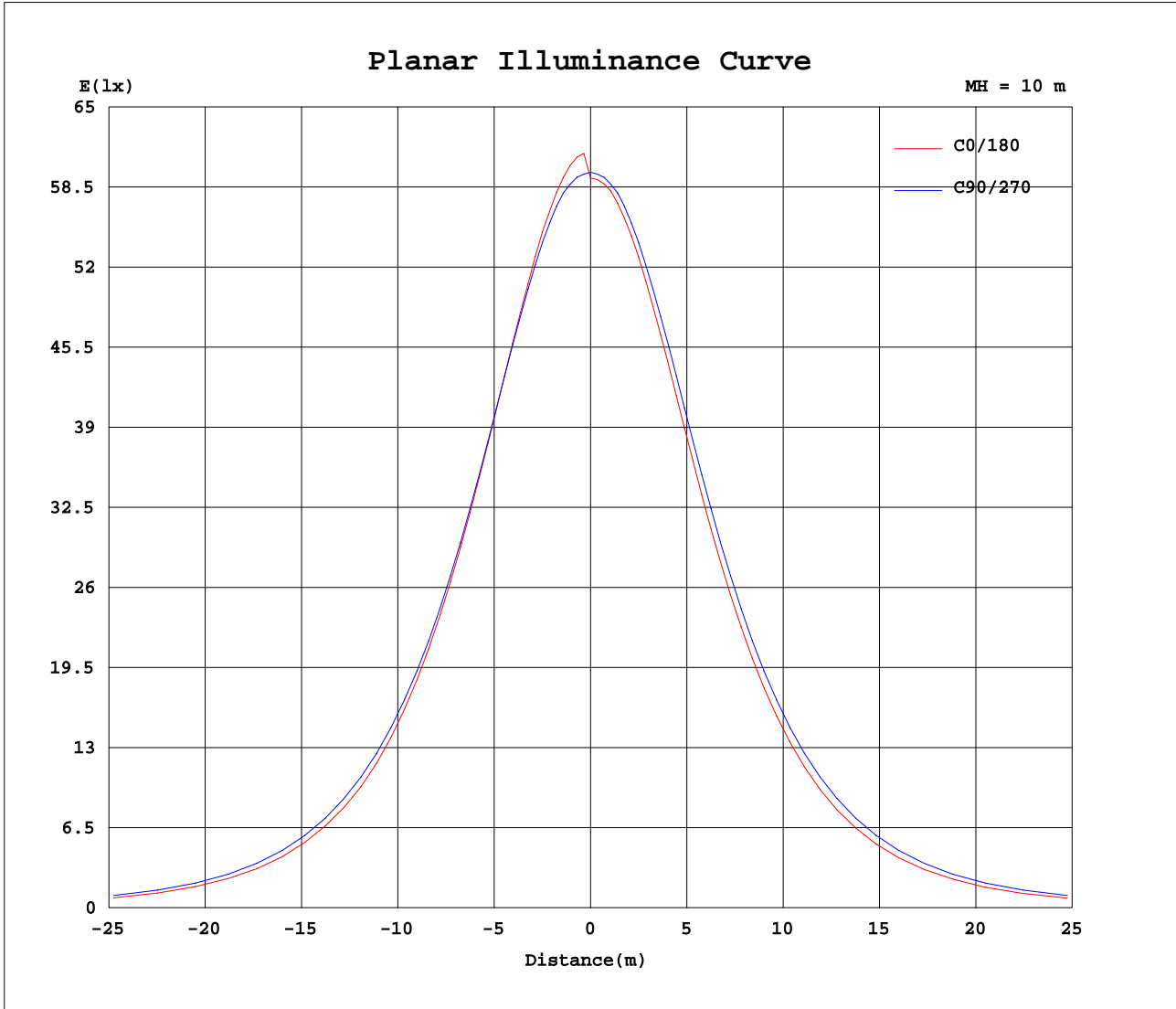
Test:U:110.2V I:1.666A P:182.0W PF:0.9911 Lamp Flux:17476.3x1 lm		
NAME: ASD-FLSL-200N50Y-XX	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:027
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2019-07-09

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.400m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2019-07-09

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity: 65.0%
 Test Distance: 18.400m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:110.2V I:1.666A P:182.0W PF:0.9911 Lamp Flux:17476.3x1 lm		
NAME: ASD-FLSL-200N50Y-XX	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:027
MFR.: ASD Lighting corp	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	90	180	270																
0	6001	6001	6001	6001																
5	5999	6003	5997	6003																
10	5943	5991	5937	5991																
15	5872	5942	5862	5942																
20	5691	5813	5681	5813																
25	5545	5695	5527	5695																
30	5256	5442	5228	5442																
35	5019	5231	4993	5231																
40	4581	4850	4569	4850																
45	4228	4556	4240	4556																
50	3617	4018	3666	4018																
55	3205	3604	3234	3604																
60	2480	2905	2523	2905																
65	2005	2400	2010	2400																
70	1283	1696	1264	1696																
75	832	1268	800	1268																
80	280	589	276	589																
85	82.7	246	81.5	246																
90	3.59	26.3	1.26	26.3																
95	0.74	0.56	0.82	0.56																
100	1.25	1.01	1.30	1.01																
105	1.90	1.48	1.92	1.48																
110	2.94	2.47	2.98	2.47																
115	3.73	3.26	3.76	3.26																
120	4.86	4.42	4.93	4.42																
125	5.61	5.22	5.69	5.22																
130	6.66	6.33	6.79	6.33																
135	7.26	7.06	7.44	7.06																
140	8.12	8.05	8.37	8.05																
145	8.70	8.60	8.91	8.60																
150	9.33	9.33	9.58	9.33																
155	9.81	9.83	10.0	9.83																
160	10.4	10.5	10.6	10.5																
165	10.8	10.9	10.9	10.9																
170	11.2	11.4	11.4	11.4																
175	11.4	11.6	11.5	11.6																
180	11.6	11.8	11.6	11.8																

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2019-07-09

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.400m [K=1.0000]
 Remarks: