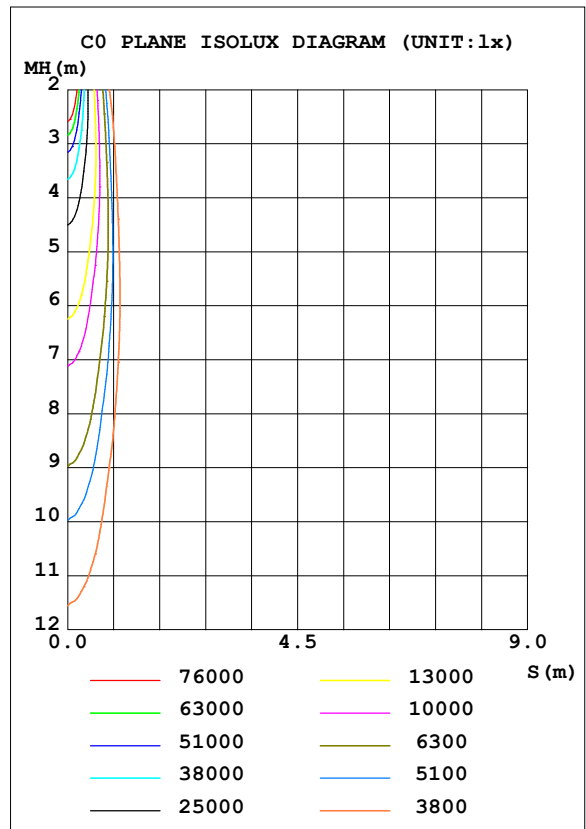
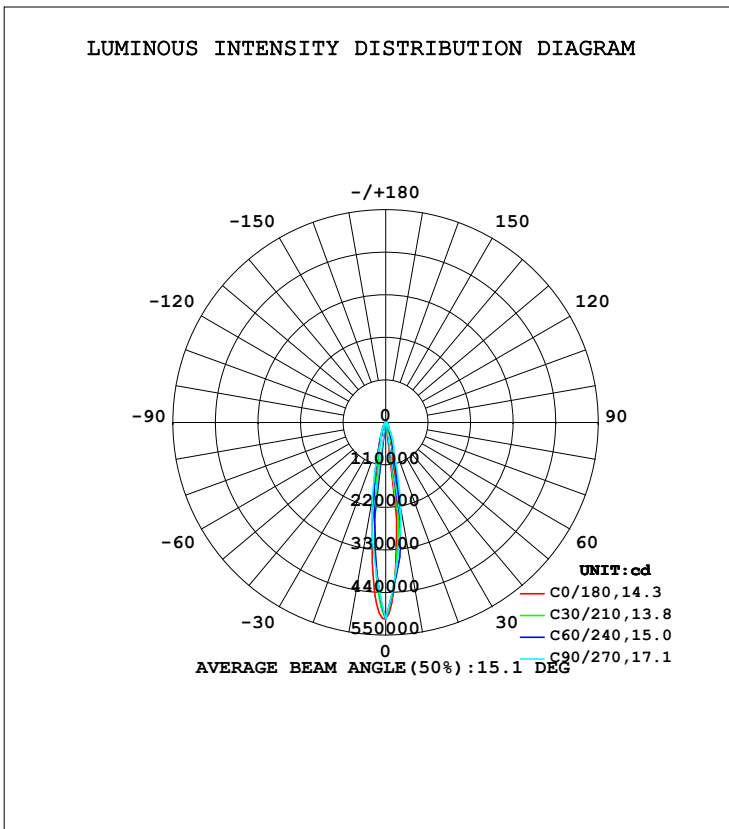


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:117.59V I:4.4236A P:518.51W PF:0.9968 Freq:0Hz Lamp Flux:66286x1 lm		
NAME: ASD-SPFL-500D50-PRM	TYPE:0	
MFR.: ASD LIGHTING CORP		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 127.49 lm/W			
MODEL	ASD-SPFL-500D50-PRM	I _{max} (cd)	507483	S/MH (C0/180)	0.27
NOMINAL POWER (W)	500	LOR (%)	100.0	S/MH (C90/270)	0.28
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	66286	η UP, DN (C0-180)	0.0, 52.8
NOMINAL FLUX (lm)	66286	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 47.2
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.00
TEST VOLTAGE (V)	120	η down (%)	100.0	CIBSE SHR MAX	1.00



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:18 March 2019

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

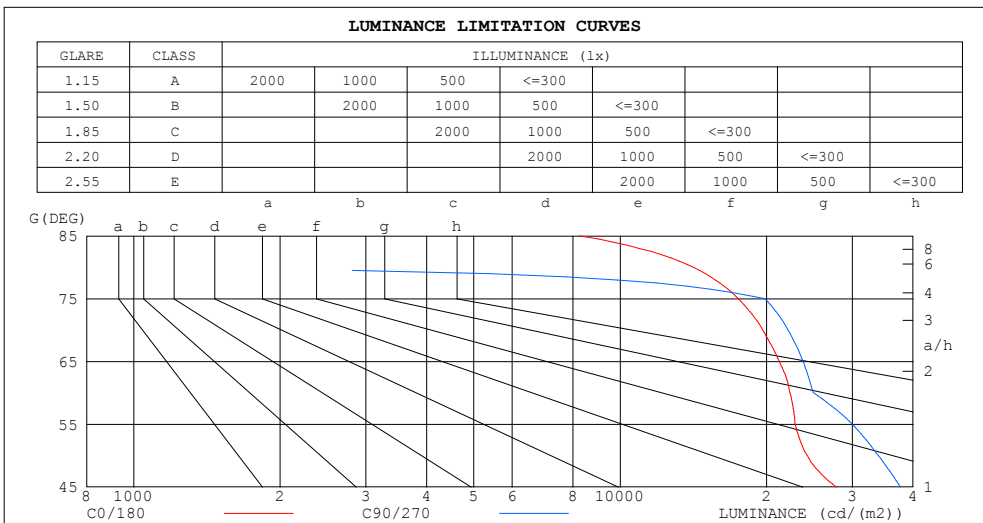
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1337	1827	2238	1497	1728	1400	2031	1736	0- 10	26968	26968	40.8, 40.8
20	258.3	372.9	584.3	371.4	392.7	286.6	364.6	284.6	10- 20	20998	47966	72.6, 72.6
30	73.19	106.2	113.5	139.9	120.9	108.7	75.55	83.88	20- 30	9539	57505	87, 87
40	27.11	32.87	54.95	43.45	41.30	34.21	38.50	26.95	30- 40	3845	61350	92.8, 92.8
50	15.11	17.56	21.15	22.05	19.68	18.87	17.05	15.75	40- 50	1967	63317	95.8, 95.8
60	10.84	11.44	12.10	13.14	13.38	11.93	11.19	10.68	50- 60	1311	64628	97.8, 97.8
70	6.516	7.114	7.349	7.642	8.145	7.041	6.640	6.672	60- 70	939.0	65567	99.2, 99.2
80	2.382	2.518	0	2.387	3.179	2.102	0	2.228	70- 80	490.9	66057	99.9, 99.9
90	0.0303	0	0	0	0.0381	0	0	0	80- 90	48.65	66106	100, 100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY: *100cd									UNIT: lm		

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:18 March 2019

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:117.59V I:4.4236A P:518.51W PF:0.9968 Freq:0Hz Lamp Flux:66286x1 lm		
NAME: ASD-SPFL-500D50-PRM	TYPE:0	
MFR.: ASD LIGHTING CORP		



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	8253	0
80	14144	0
75	17495	19829
70	19639	22151
65	21235	23778
60	22342	24952
55	22895	30024
50	24228	33928
45	27846	37686

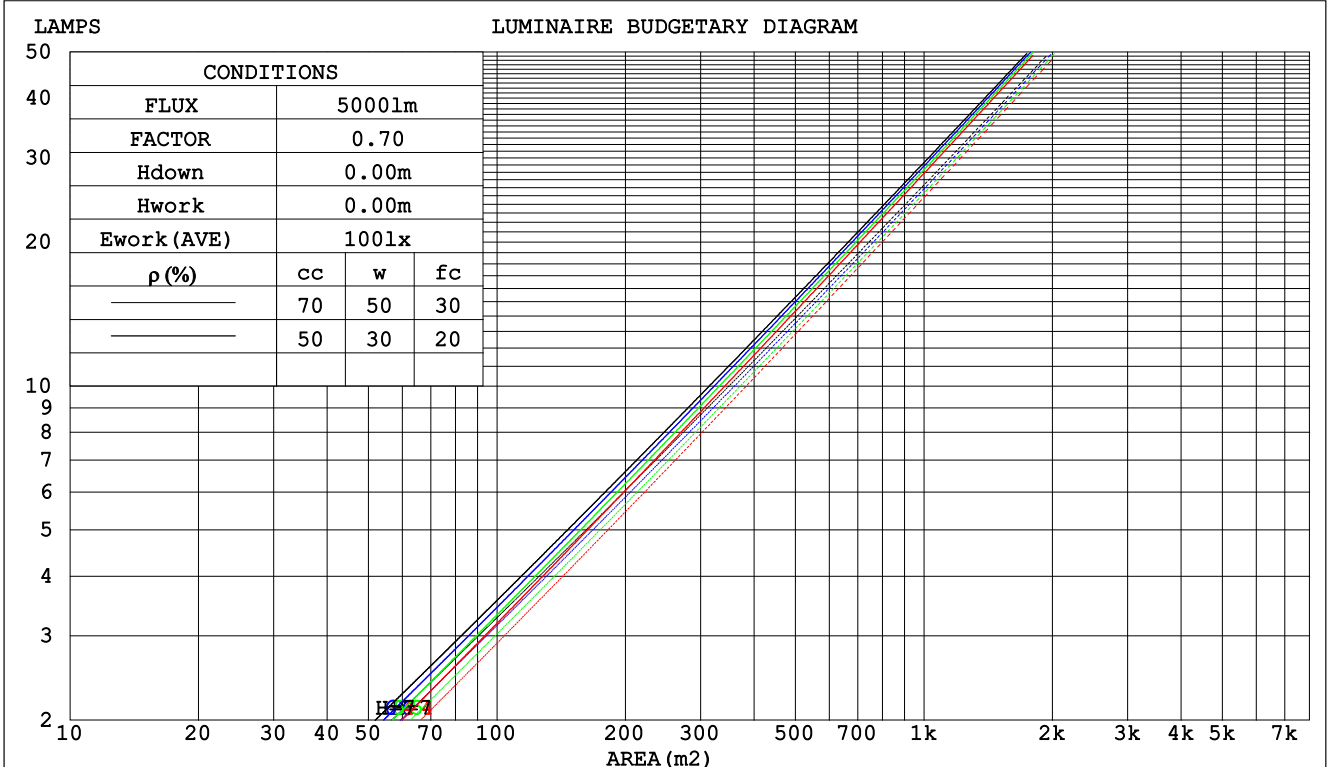
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:18 March 2019

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:117.59V I:4.4236A P:518.51W PF:0.9968 Freq:0Hz Lamp Flux:66286 x1 lm		
NAME: ASD-SPFL-500D50-PRM	TYPE:0	
MFR.: ASD LIGHTING CORP		

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	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	1.00		
1.0	1.12	1.10	1.08	1.10	1.08	1.07	1.06	1.05	1.03	1.02	1.01	1.00	.99	.98	.97	.96		
2.0	1.06	1.03	1.00	1.05	1.02	.99	1.02	.99	.97	.99	.97	.95	.96	.94	.93	.92		
3.0	1.01	.97	.94	.90	.96	.93	.97	.94	.92	.95	.93	.91	.93	.91	.89	.88		
4.0	.97	.93	.89	.96	.92	.89	.94	.90	.88	.92	.89	.87	.90	.88	.86	.85		
5.0	.93	.89	.85	.92	.88	.85	.91	.87	.84	.89	.86	.84	.88	.85	.83	.82		
6.0	.90	.85	.82	.89	.85	.82	.88	.84	.81	.86	.83	.81	.85	.82	.80	.79		
7.0	.87	.82	.79	.86	.82	.79	.85	.81	.79	.84	.81	.78	.83	.80	.78	.77		
8.0	.84	.80	.77	.84	.79	.77	.83	.79	.76	.82	.78	.76	.81	.78	.76	.75		
9.0	.82	.77	.74	.81	.77	.74	.80	.77	.74	.80	.76	.74	.79	.76	.74	.73		
10.0	.79	.75	.72	.79	.75	.72	.78	.75	.72	.78	.74	.72	.77	.74	.72	.71		



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:18 March 2019

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:117.59V I:4.4236A P:518.51W PF:0.9968 Freq:0Hz Lamp Flux:66286 x1 lm															
NAME: ASD-SPFL-500D50-PRM										TYPE:0					
MFR.: ASD LIGHTING CORP															

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	.149	.085	.027	.143	.081	.026	.130	.075	.024	.119	.068	.022	.108	.063	.020	
2.0	.139	.076	.023	.134	.074	.023	.123	.069	.021	.114	.064	.020	.105	.059	.019	
3.0	.129	.069	.021	.125	.067	.020	.116	.063	.019	.108	.059	.018	.101	.056	.017	
4.0	.121	.063	.018	.117	.061	.018	.110	.058	.017	.103	.055	.017	.096	.052	.016	
5.0	.113	.058	.017	.110	.056	.016	.104	.054	.016	.098	.052	.015	.092	.049	.015	
6.0	.106	.053	.015	.104	.052	.015	.098	.050	.015	.093	.048	.014	.088	.047	.014	
7.0	.100	.050	.014	.098	.049	.014	.093	.047	.014	.089	.046	.013	.085	.044	.013	
8.0	.095	.047	.013	.093	.046	.013	.089	.044	.013	.085	.043	.012	.081	.042	.012	
9.0	.090	.044	.012	.089	.043	.012	.085	.042	.012	.081	.041	.012	.078	.040	.011	
10.0	.086	.041	.011	.084	.041	.011	.081	.040	.011	.078	.039	.011	.075	.038	.011	

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.169	.158	.147	.145	.135	.127	.099	.093	.088	.057	.054	.051	.018	.017	.016	
2.0	.152	.133	.116	.130	.114	.101	.089	.079	.070	.051	.046	.041	.016	.015	.013	
3.0	.137	.113	.094	.118	.098	.082	.081	.068	.057	.047	.040	.034	.015	.013	.011	
4.0	.125	.098	.077	.107	.085	.067	.074	.059	.047	.043	.035	.028	.014	.011	.009	
5.0	.115	.086	.065	.099	.074	.056	.068	.052	.040	.039	.030	.024	.013	.010	.008	
6.0	.106	.076	.055	.091	.066	.048	.063	.046	.034	.036	.027	.020	.012	.009	.007	
7.0	.098	.068	.047	.085	.059	.041	.058	.041	.029	.034	.024	.017	.011	.008	.006	
8.0	.092	.061	.040	.079	.053	.035	.055	.037	.025	.032	.022	.015	.010	.007	.005	
9.0	.086	.056	.035	.074	.048	.031	.051	.034	.022	.030	.020	.013	.010	.007	.004	
10.0	.081	.051	.031	.070	.044	.027	.048	.031	.019	.028	.018	.011	.009	.006	.004	

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:18 March 2019

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:117.59V I:4.4236A P:518.51W PF:0.9968 Freq:0Hz Lamp Flux:66286x1 lm										
NAME: ASD-SPFL-500D50-PRM					TYPE:0					
MFR.: ASD LIGHTING CORP										

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	2.9	3.6	3.1	3.7	3.9	4.3	5.0	4.5	5.2	5.3
3H	4.1	4.8	4.3	4.9	5.1	5.2	5.8	5.4	6.0	6.2
4H	4.6	5.2	4.9	5.4	5.6	5.6	6.2	5.8	6.4	6.6
6H	4.9	5.5	5.2	5.8	6.0	5.6	6.2	5.9	6.4	6.7
8H	5.0	5.6	5.3	5.8	6.1	5.5	6.1	5.8	6.4	6.6
12H	5.0	5.6	5.3	5.8	6.1	5.5	6.1	5.8	6.3	6.6
4H 2H	3.4	4.0	3.7	4.3	4.5	4.6	5.2	4.9	5.4	5.6
3H	4.8	5.4	5.1	5.6	5.9	5.7	6.2	6.0	6.5	6.8
4H	5.4	6.0	5.8	6.2	6.5	6.2	6.7	6.5	7.0	7.3
6H	5.9	6.3	6.3	6.7	7.0	6.2	6.7	6.6	7.0	7.3
8H	6.0	6.4	6.4	6.8	7.1	6.2	6.6	6.5	6.9	7.3
12H	6.0	6.4	6.4	6.8	7.2	6.1	6.5	6.5	6.9	7.2
8H 4H	5.7	6.1	6.0	6.4	6.8	6.3	6.7	6.7	7.1	7.4
6H	6.2	6.6	6.6	6.9	7.4	6.4	6.7	6.8	7.1	7.5
8H	6.4	6.7	6.8	7.1	7.5	6.3	6.6	6.8	7.0	7.5
12H	6.5	6.7	6.9	7.2	7.6	6.3	6.5	6.7	7.0	7.4
12H 4H	5.6	6.0	6.0	6.4	6.8	6.3	6.7	6.7	7.0	7.4
6H	6.2	6.5	6.6	6.9	7.3	6.4	6.7	6.8	7.1	7.5
8H	6.4	6.6	6.8	7.1	7.5	6.3	6.6	6.8	7.0	7.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.5					+ 1.1 / - 0.9				
1.5H	+ 0.4 / - 0.6					+ 2.2 / - 0.8				
2.0H	+ 0.4 / - 0.5					+ 0.6 / - 0.7				

CIE Pub.117, 66106 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 14.6)

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:18 March 2019

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:117.59V I:4.4236A P:518.51W PF:0.9968 Freq:0Hz Lamp Flux:66286x1 lm		
NAME: ASD-SPFL-500D50-PRM	TYPE:0	
MFR.: ASD LIGHTING CORP		

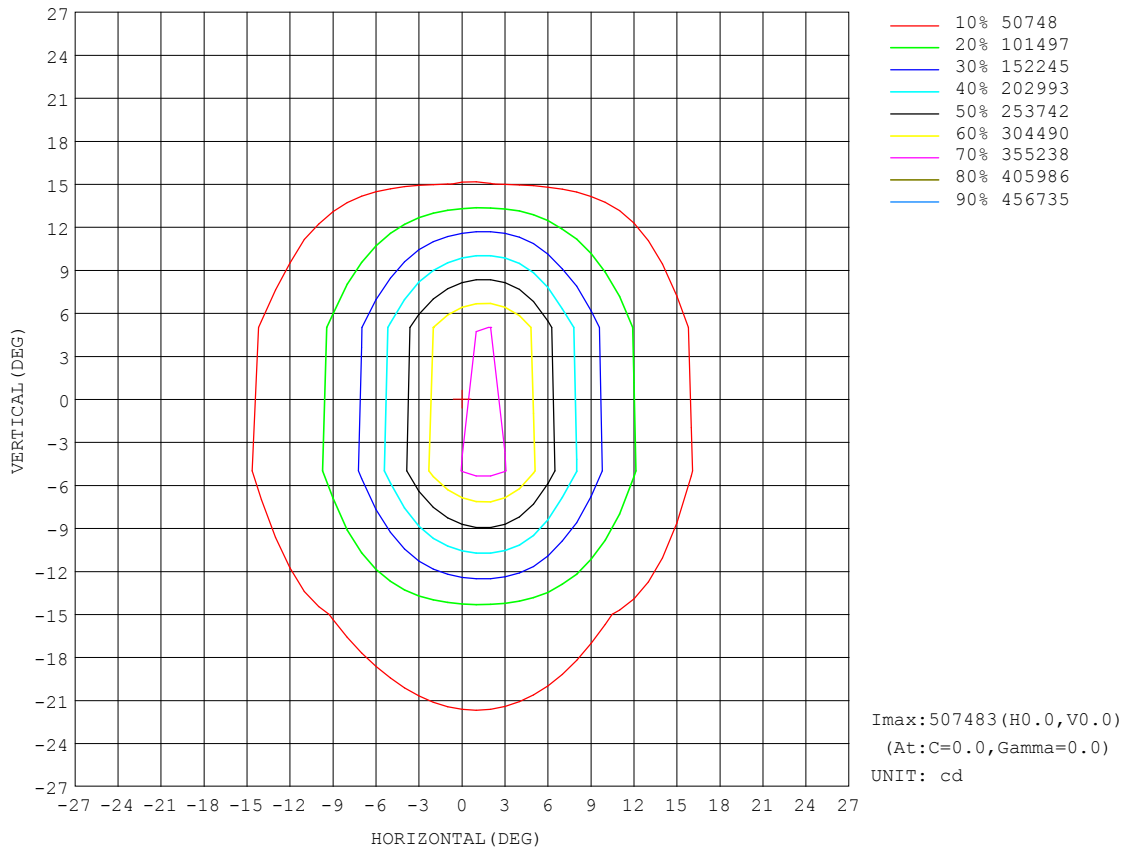
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	87	81	77	87	81	77	86	80	77	73
0.80	94	89	85	94	88	85	93	88	84	81
1.00	99	93	89	98	93	89	96	93	89	85
1.25	103	97	94	102	97	94	100	96	93	89
1.50	105	101	97	104	100	97	102	98	96	91
2.00	108	104	101	107	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	102	100	94
3.00	112	108	105	110	107	104	106	104	102	96
4.00	114	111	109	112	109	107	108	106	104	97
5.00	115	113	111	113	111	109	109	107	106	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:18 March 2019

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:117.59V I:4.4236A P:518.51W PF:0.9968 Freq:0Hz Lamp Flux:66286x1 lm		
NAME: ASD-SPFL-500D50-PRM	TYPE:0	
MFR.: ASD LIGHTING CORP		

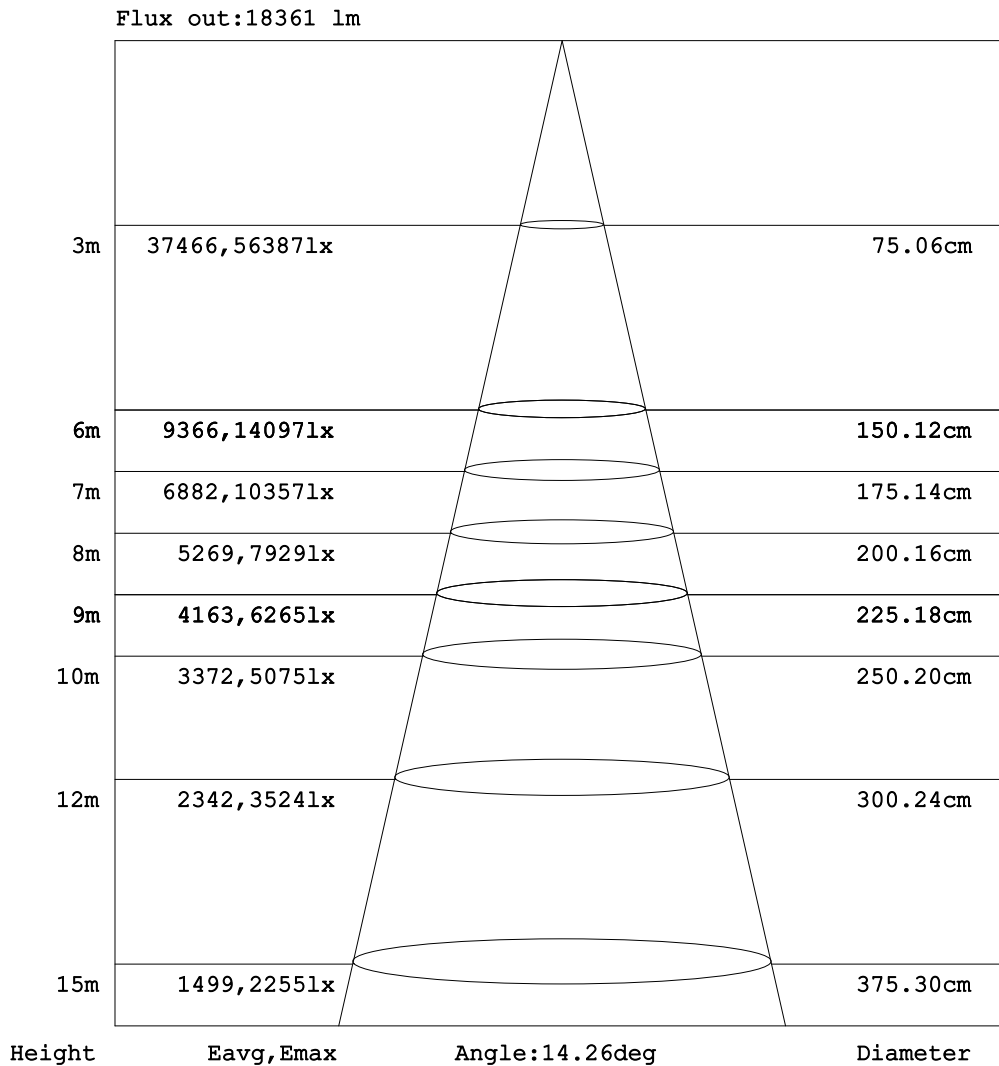


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:18 March 2019

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

AAI Figure

Test:U:117.59V I:4.4236A P:518.51W PF:0.9968 Freq:0Hz Lamp Flux:66286x1 lm		
NAME: ASD-SPFL-500D50-PRM	TYPE:0	
MFR.: ASD LIGHTING CORP		



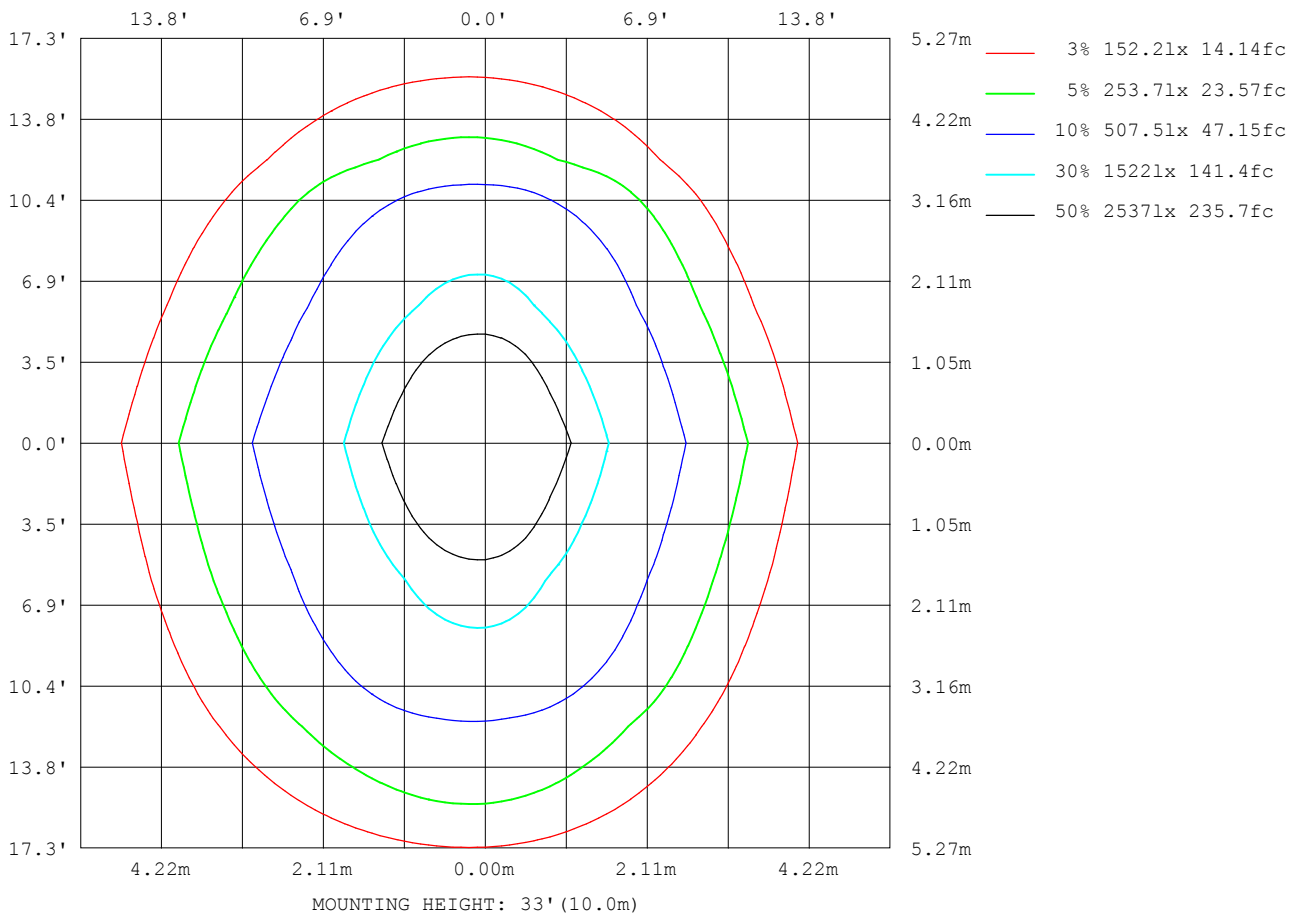
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:18 March 2019

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:117.59V I:4.4236A P:518.51W PF:0.9968 Freq:0Hz Lamp Flux:66286x1 lm		
NAME: ASD-SPFL-500D50-PRM	TYPE:0	
MFR.: ASD LIGHTING CORP		



H(β) Range:-90 - 90DEG
 H(β) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:18 March 2019

V(B) Range:-75 - 75DEG
 V(B) Interval: 5.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:7.890m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:117.59V I:4.4236A P:518.51W PF:0.9968 Freq:0Hz Lamp Flux:66286x1 lm		
NAME: ASD-SPFL-500D50-PRM	TYPE:0	
MFR.: ASD LIGHTING CORP		

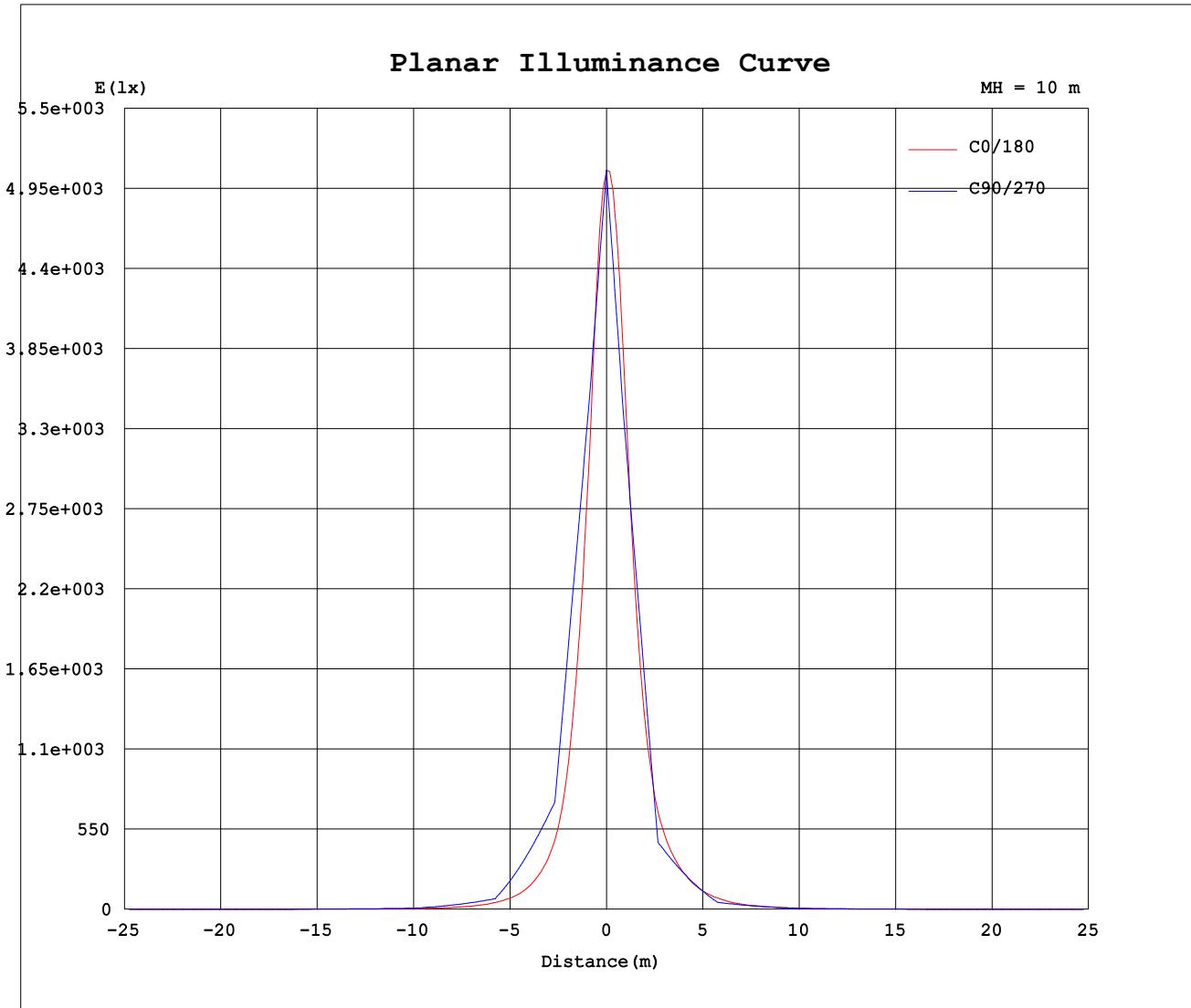
AvgL	cd/m2
L_0~180 (65) av	23846
L_0~180 (75) av	19856
L_0~180 (85) av	10949
L_90~270 (65) av	22794
L_90~270 (75) av	18611
L_90~270 (85) av	0
L_45 (65) av	23023
L_45 (75) av	19197
L_45 (85) av	0

Standard: GB/T 29293-2012

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:18 March 2019

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks:

Planar Illuminance Curve



H(β) Range:-90 - 90DEG
 H(β) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:18 March 2019

V(B) Range:-75 - 75DEG
 V(B) Interval: 5.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
 Humidity:65.0%
 Test Distance:7.890m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:117.59V I:4.4236A P:518.51W PF:0.9968 Freq:0Hz Lamp Flux:66286x1 lm		
NAME: ASD-SPFL-500D50-PRM	TYPE:0	
MFR.: ASD LIGHTING CORP		

Table--4

UNIT: ×100cd

C (DEG) \ γ (DEG)	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355				
0	5075	5075	5075	5075	5075	5075	5075	5075	5075	5075	5075	5075	5075	5075	5075				
5	3595	3624	3643	3635	3626	3590	3539	3486	3427	3362	3303	3252	3212	3185	3174				
10	1911	1864	1822	1790	1773	1755	1736	1744	1755	1768	1650	1553	1472	1408	1362				
15	600	627	643	642	629	605	572	555	591	616	643	667	625	579	547				
20	337	326	317	308	301	293	285	269	251	234	250	273	295	284	268				
25	214	205	193	178	162	150	150	149	149	136	125	126	141	152	140				
30	86.8	93.4	98.5	101	101	92.6	83.9	76.1	78.0	81.2	77.2	68.8	71.4	81.8	78.8				
35	53.5	50.6	47.3	43.9	41.7	47.9	51.1	50.2	44.9	42.5	45.8	44.1	39.3	44.6	45.9				
40	36.1	35.3	34.5	33.6	32.1	29.5	26.9	28.6	30.5	28.5	26.8	29.3	27.3	27.2	29.5				
45	21.4	21.9	22.1	22.0	21.9	22.0	21.8	20.2	18.9	20.5	20.0	19.4	20.6	18.6	20.9				
50	16.3	16.0	15.8	15.6	15.8	16.0	15.7	16.1	16.0	15.1	15.8	15.3	15.6	15.2	15.8				
55	13.8	13.6	13.3	13.1	12.9	12.9	13.1	13.0	12.8	13.2	12.8	13.2	12.6	13.2	13.0				
60	11.1	11.2	11.2	11.2	11.1	10.9	10.7	10.8	11.2	10.7	11.0	10.8	11.2	11.2	10.9				
65	8.89	8.91	8.94	8.88	8.77	8.76	8.83	8.87	8.68	8.94	8.81	9.01	8.74	8.59	8.67				
70	6.59	6.62	6.66	6.68	6.72	6.75	6.67	6.58	6.72	6.82	6.54	6.82	7.02	7.10	6.99				
75	4.39	4.41	4.42	4.42	4.43	4.42	4.46	4.58	4.73	4.56	4.63	4.55	4.82	4.74	4.64				
80	0.29	0.51	0.77	1.09	1.44	1.83	2.23	2.54	2.53	2.50	2.65	2.64	2.80	2.88	2.86				
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.87	0.88	0.97	1.14				
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:18 March 2019

V(B) Range:-75 - 75DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.404.7
Humidity:65.0%
Test Distance:7.890m [K=1.0000]
Remarks: