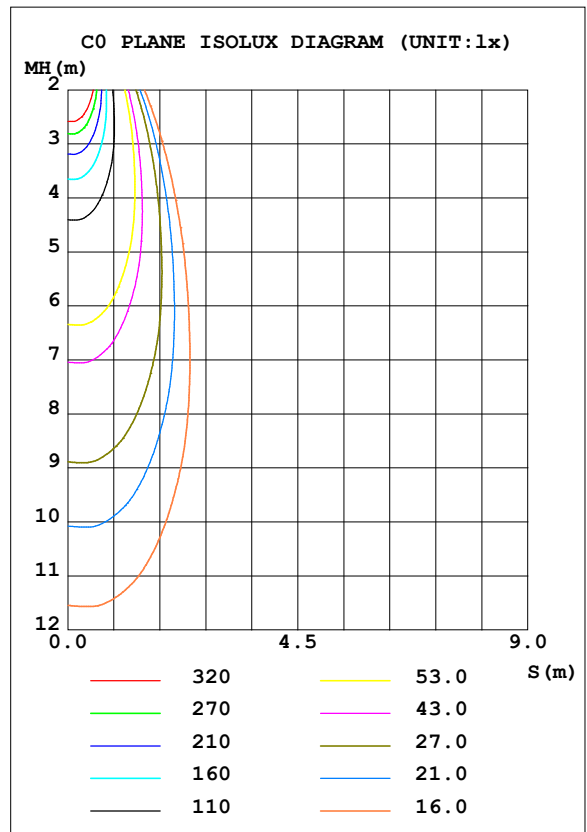
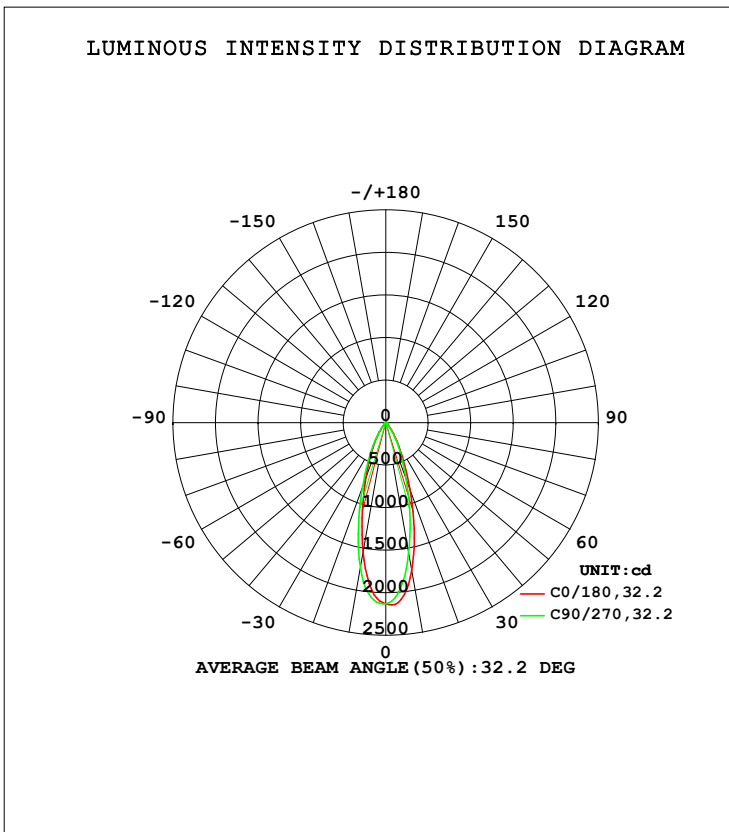


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:120.05V I:0.1241A P:11.455W PF:0.9248 Freq:59.98Hz Lamp Flux:845.487x1 lm		
NAME: ASD-CD-TR-3D12AC-WH	TYPE:	WEIGHT:
SPEC.:5000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 73.81 lm/W			
MODEL		I <sub>max</sub> (cd)	2142	S/MH (C0/180)	0.50
NOMINAL POWER (W)	12	LOR (%)	100.0	S/MH (C90/270)	0.56
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	845.49	<input type="checkbox"/> UP, DN (C0-180)	0.0, 49.1
NOMINAL FLUX (lm)	845.487	CIE CLASS	DIRECT	<input type="checkbox"/> UP, DN (C180-360)	0.0, 50.9
LAMPS INSIDE	1	<input type="checkbox"/> up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	12	<input type="checkbox"/> down (%)	100.0	CIBSE SHR MAX	0.55



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-08-24

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**ZONAL FLUX DIAGRAM**

ZONAL FLUX DIAGRAM:

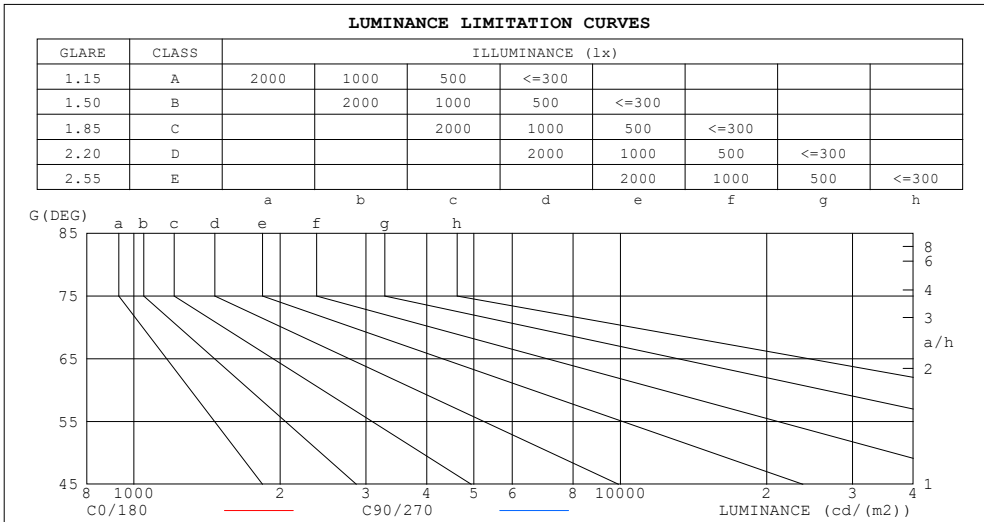
mm	C0	C45	C90	C135	C180	C225	C270	C315	mm	□ zone	□ total	%lum,lamp
10	1763	1686	1557	1500	1541	1616	1728	1797	0- 10	180.5	180.5	21.3,21.3
20	824.9	765.6	699.6	665.2	681.7	725.0	796.5	850.1	10- 20	321.9	502.4	59.4,59.4
30	288.4	278.5	266.3	247.8	248.1	254.5	275.9	296.2	20- 30	213.6	716.0	84.7,84.7
40	75.48	58.89	58.28	46.97	51.03	62.82	60.16	70.48	30- 40	91.51	807.5	95.5,95.5
50	15.01	13.41	14.72	13.86	12.97	13.97	12.86	15.30	40- 50	21.30	828.8	98,98
60	8.921	8.582	8.576	8.255	7.996	8.626	7.170	8.469	50- 60	9.827	838.6	99.2,99.2
70	3.815	3.130	2.439	2.683	3.065	3.065	2.658	3.372	60- 70	5.233	843.9	99.8,99.8
80	0.7097	0.5154	0.4368	0.4478	0.5507	0.4762	0.4467	0.5512	70- 80	1.433	845.3	100,100
90	0.0133	0.0073	0.0300	0.0127	0.0110	0.0107	0.0140	0.0070	80- 90	0.1866	845.5	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:cd									UNIT:lm		

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-08-24

□ Range: 0 - 90DEG  
 □ Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**LUMINANCE LIMITATION CURVES**

Test:U:120.05V I:0.1241A P:11.455W PF:0.9248 Freq:59.98Hz Lamp Flux:845.487x1 lm		
NAME: ASD-CD-TR-3D12AC-WH	TYPE:	WEIGHT:
SPEC.:5000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	14	10
80	37	23
75	59	30
70	101	64
65	127	98
60	161	154
55	175	191
50	210	206
45	350	283

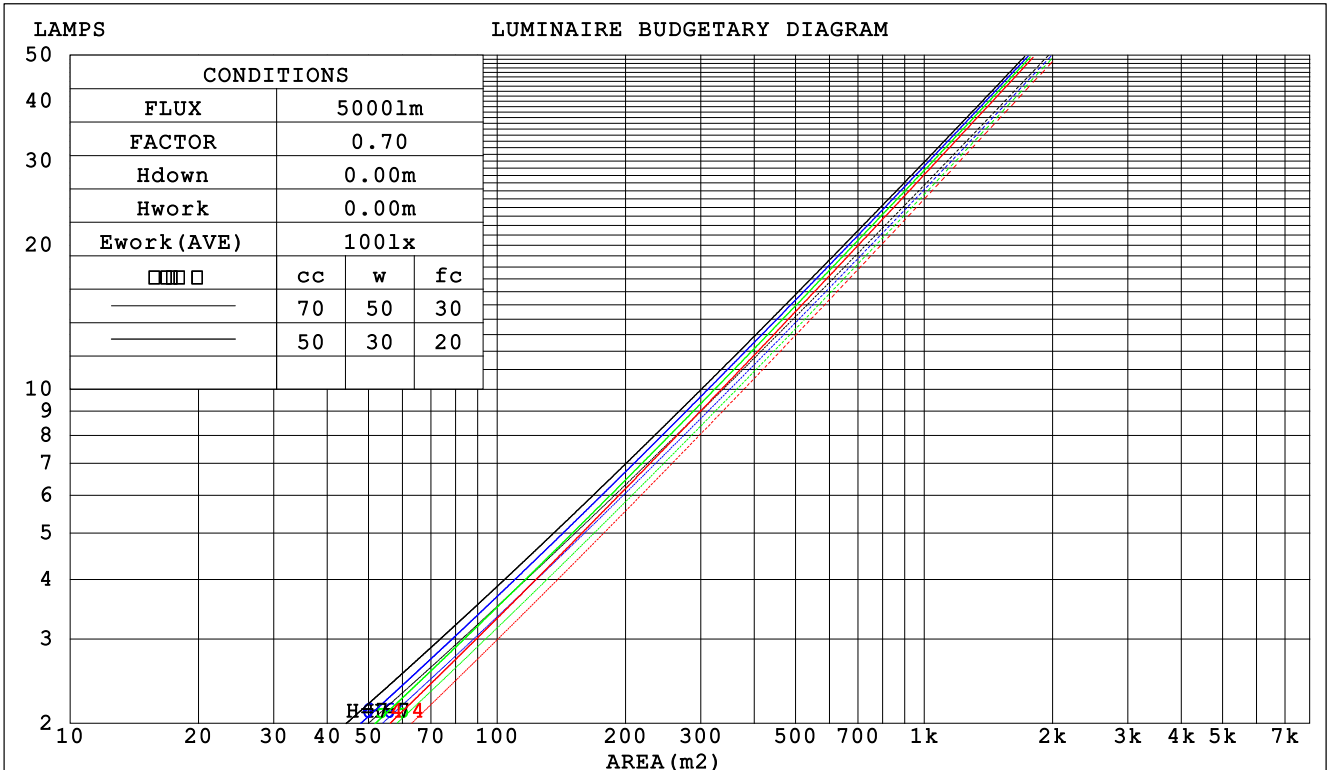
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-08-24

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:120.05V I:0.1241A P:11.455W PF:0.9248 Freq:59.98Hz Lamp Flux:845.487x1 lm		
NAME: ASD-CD-TR-3D12AC-WH	TYPE:	WEIGHT:
SPEC.:5000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

<input type="checkbox"/> cc	80%			70%			50%			30%			10%			0
<input type="checkbox"/> w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
<input type="checkbox"/> 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	1.00
1.0	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.98	.98	.97	.95
2.0	1.05	1.02	.99	1.04	1.00	.98	1.00	.98	.95	.97	.95	.93	.95	.93	.92	.90
3.0	.99	.95	.92	.98	.94	.91	.95	.92	.89	.93	.90	.88	.91	.89	.87	.85
4.0	.94	.89	.86	.93	.89	.85	.91	.87	.84	.89	.86	.83	.87	.85	.82	.81
5.0	.90	.85	.81	.89	.84	.80	.87	.83	.80	.85	.82	.79	.84	.81	.78	.77
6.0	.85	.80	.77	.85	.80	.76	.83	.79	.76	.82	.78	.75	.81	.77	.75	.74
7.0	.81	.76	.73	.81	.76	.73	.80	.75	.72	.79	.75	.72	.77	.74	.71	.70
8.0	.78	.73	.69	.77	.73	.69	.76	.72	.69	.75	.72	.69	.75	.71	.68	.67
9.0	.75	.70	.66	.74	.69	.66	.73	.69	.66	.73	.69	.66	.72	.68	.66	.64
10.0	.72	.67	.64	.71	.67	.63	.71	.66	.63	.70	.66	.63	.69	.66	.63	.62



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-08-24

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:120.05V I:0.1241A P:11.455W PF:0.9248 Freq:59.98Hz Lamp Flux:845.487x1 lm		
NAME: ASD-CD-TR-3D12AC-WH	TYPE:	WEIGHT:
SPEC.:5000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

<input type="checkbox"/> cc	80%	70%	50%	30%	10%	0
<input type="checkbox"/> w	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
<input type="checkbox"/> fc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio		Wall Exitance Coefficients (WEC)			
0.0						
1.0	.159 .090 .029	.152 .087 .028	.140 .080 .026	.128 .074 .024	.118 .068 .022	
2.0	.150 .082 .025	.145 .080 .025	.134 .075 .023	.125 .070 .022	.116 .065 .021	
3.0	.142 .075 .023	.137 .073 .022	.128 .069 .021	.120 .066 .020	.113 .062 .019	
4.0	.134 .070 .020	.130 .068 .020	.123 .065 .019	.116 .062 .019	.109 .059 .018	
5.0	.127 .065 .019	.124 .063 .018	.117 .061 .018	.111 .059 .017	.105 .056 .017	
6.0	.121 .061 .017	.118 .060 .017	.112 .058 .017	.107 .056 .016	.102 .054 .016	
7.0	.115 .057 .016	.113 .056 .016	.108 .054 .016	.103 .053 .015	.099 .051 .015	
8.0	.110 .054 .015	.108 .053 .015	.103 .052 .015	.099 .050 .014	.095 .049 .014	
9.0	.105 .051 .014	.103 .050 .014	.099 .049 .014	.096 .048 .014	.092 .047 .014	
10.0	.101 .048 .013	.099 .048 .013	.096 .047 .013	.092 .046 .013	.089 .045 .013	

<input type="checkbox"/> cc	80%	70%	50%	30%	10%	0
<input type="checkbox"/> w	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
<input type="checkbox"/> fc	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	.170 .157 .146	.145 .135 .126	.099 .093 .087	.057 .054 .051	.018 .017 .016	
2.0	.153 .133 .115	.131 .114 .100	.090 .079 .069	.052 .046 .041	.017 .015 .013	
3.0	.140 .113 .092	.120 .098 .080	.082 .068 .056	.048 .040 .033	.015 .013 .011	
4.0	.128 .098 .075	.110 .085 .066	.076 .059 .046	.044 .035 .027	.014 .011 .009	
5.0	.119 .086 .063	.102 .075 .054	.070 .052 .038	.041 .031 .023	.013 .010 .008	
6.0	.111 .077 .052	.095 .067 .046	.066 .047 .032	.038 .027 .019	.012 .009 .006	
7.0	.104 .069 .045	.089 .060 .039	.062 .042 .028	.036 .025 .016	.012 .008 .005	
8.0	.098 .063 .038	.084 .054 .033	.058 .038 .024	.034 .022 .014	.011 .007 .005	
9.0	.092 .057 .033	.080 .050 .029	.055 .035 .021	.032 .021 .012	.010 .007 .004	
10.0	.088 .053 .029	.076 .046 .025	.052 .032 .018	.031 .019 .011	.010 .006 .004	

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-08-24

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**UGR(Unified Glare Rating) Table**

Test:U:120.05V I:0.1241A P:11.455W PF:0.9248 Freq:59.98Hz Lamp Flux:845.487x1 lm		
NAME: ASD-CD-TR-3D12AC-WH	TYPE:	WEIGHT:
SPEC.:5000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding 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	4.4	5.2	4.6	5.3	5.5	3.8	4.6	4.0	4.7	4.9
3H	4.4	5.1	4.6	5.3	5.5	3.7	4.5	4.0	4.7	4.9
4H	4.3	5.1	4.6	5.3	5.5	3.7	4.4	3.9	4.6	4.8
6H	4.3	4.9	4.6	5.2	5.4	3.6	4.3	3.9	4.5	4.7
8H	4.2	4.9	4.5	5.1	5.4	3.6	4.2	3.9	4.4	4.7
12H	4.2	4.8	4.5	5.1	5.3	3.5	4.1	3.8	4.4	4.7
4H 2H	4.2	4.9	4.5	5.2	5.4	3.7	4.4	3.9	4.6	4.8
3H	4.3	4.9	4.6	5.2	5.4	3.7	4.3	4.0	4.5	4.8
4H	4.3	4.8	4.6	5.1	5.4	3.6	4.1	3.9	4.4	4.7
6H	4.2	4.7	4.6	5.0	5.4	3.5	4.0	3.9	4.3	4.7
8H	4.1	4.6	4.5	4.9	5.3	3.4	3.9	3.8	4.3	4.6
12H	4.1	4.5	4.5	4.9	5.3	3.4	3.8	3.8	4.2	4.6
8H 4H	4.1	4.6	4.5	4.9	5.3	3.5	3.9	3.8	4.3	4.6
6H	4.1	4.4	4.5	4.8	5.2	3.4	3.7	3.8	4.1	4.6
8H	4.0	4.3	4.4	4.8	5.2	3.3	3.7	3.8	4.1	4.5
12H	3.9	4.2	4.4	4.7	5.1	3.3	3.5	3.7	4.0	4.5
12H 4H	4.1	4.5	4.5	4.9	5.3	3.4	3.8	3.8	4.2	4.6
6H	4.0	4.3	4.4	4.7	5.2	3.3	3.6	3.8	4.1	4.5
8H	3.9	4.2	4.4	4.7	5.1	3.3	3.5	3.7	4.0	4.5
Variations with the observer position at spacings:										
S = 1.0H	+ 3.3 / - 4.3					+ 2.9 / - 4.0				
1.5H	+ 5.5 / - 3.9					+ 5.1 / - 3.3				
2.0H	+ 2.7 / - 1.4					+ 1.8 / - 2.1				

CIE Pub.117, 845.5 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.6)  
 Area: 0.111111 m2

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-08-24

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:120.05V I:0.1241A P:11.455W PF:0.9248 Freq:59.98Hz Lamp Flux:845.487x1 lm		
NAME: ASD-CD-TR-3D12AC-WH	TYPE:	WEIGHT:
SPEC.:5000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

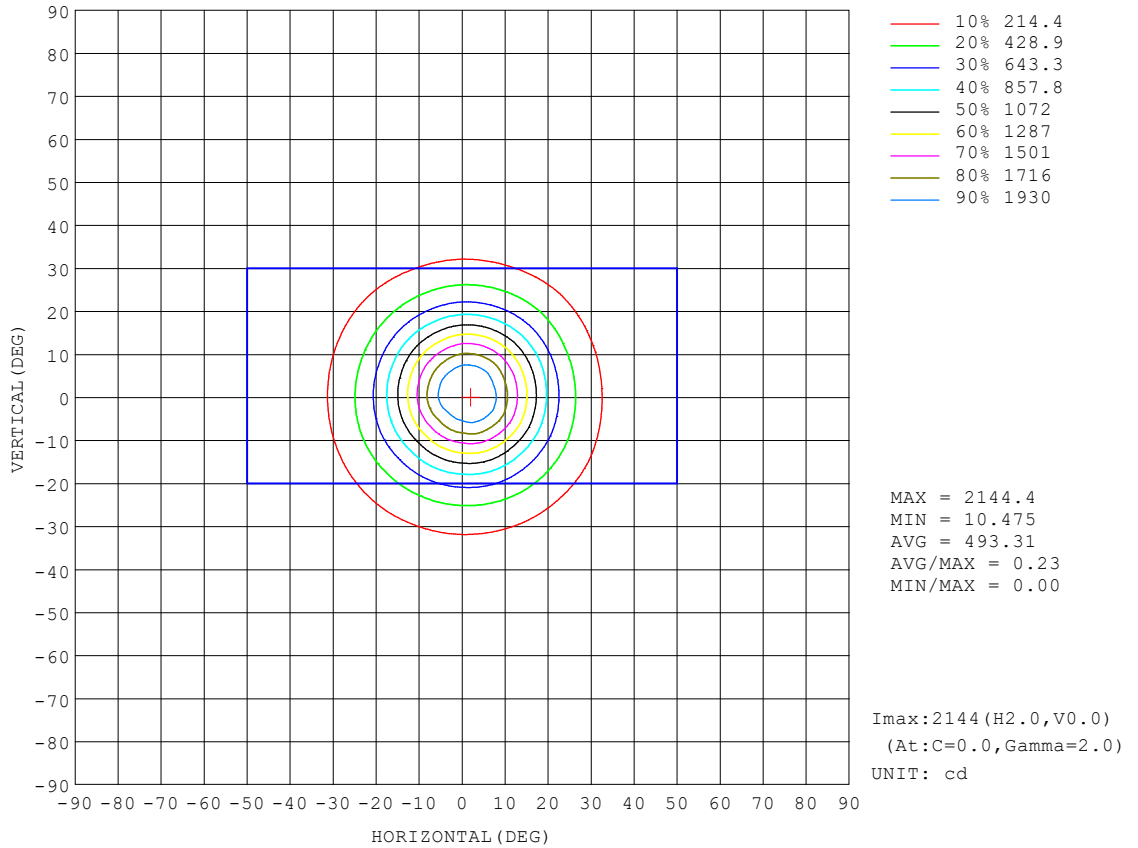
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	89	83	79	88	82	79	87	82	79	75
0.80	96	90	87	95	90	87	94	89	86	83
1.00	100	95	91	99	94	91	98	94	91	87
1.25	104	99	96	103	98	95	101	97	94	90
1.50	107	102	99	105	101	98	103	100	97	93
2.00	109	105	102	108	104	101	105	102	100	95
2.50	111	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	97
4.00	114	111	109	112	110	108	108	107	105	98
5.00	115	113	111	113	111	110	109	108	107	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-08-24

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**ISOCANDELA DIAGRAM**

Test:U:120.05V I:0.1241A P:11.455W PF:0.9248 Freq:59.98Hz Lamp Flux:845.487x1 lm		
NAME: ASD-CD-TR-3D12AC-WH	TYPE:	WEIGHT:
SPEC.:5000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



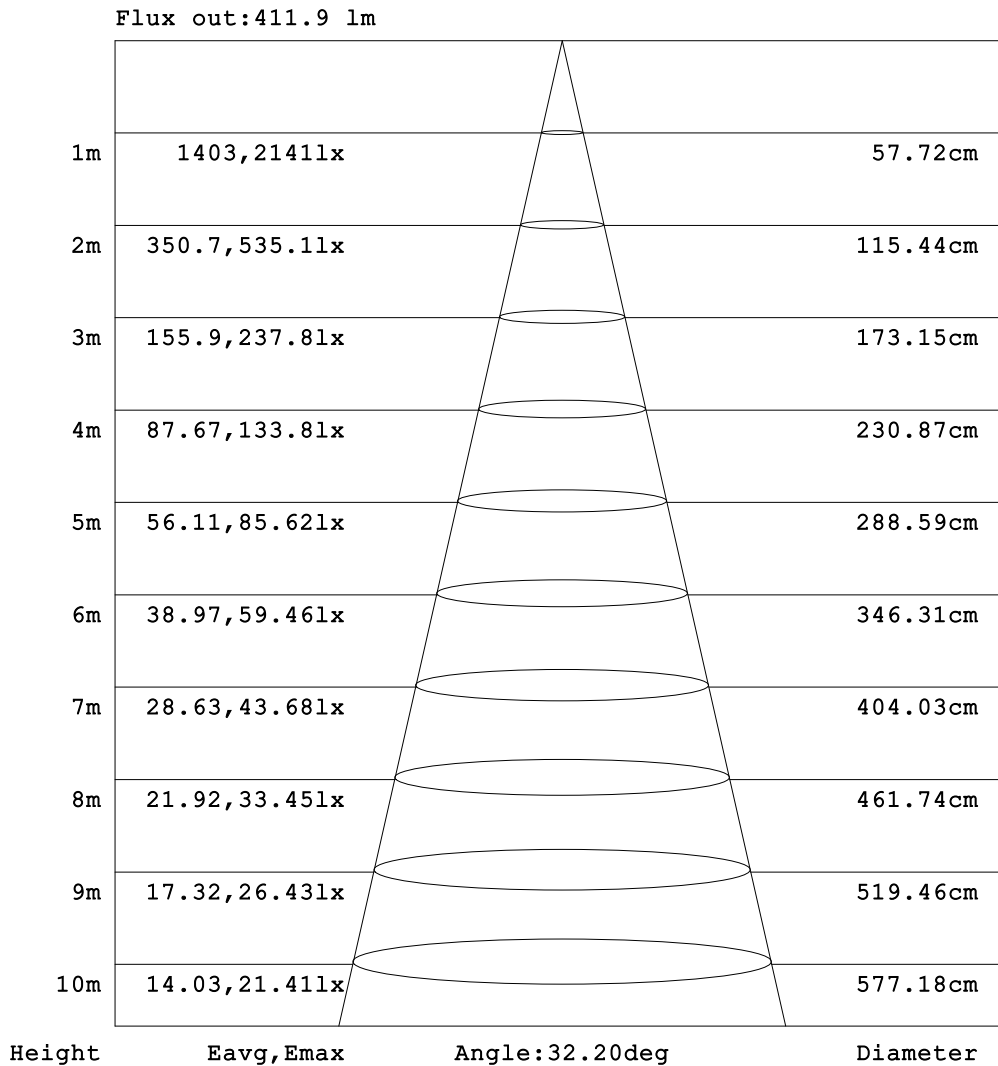
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-08-24

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:



**AAI Figure**

Test:U:120.05V I:0.1241A P:11.455W PF:0.9248 Freq:59.98Hz Lamp Flux:845.487x1 lm		
NAME: ASD-CD-TR-3D12AC-WH	TYPE:	WEIGHT:
SPEC.:5000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



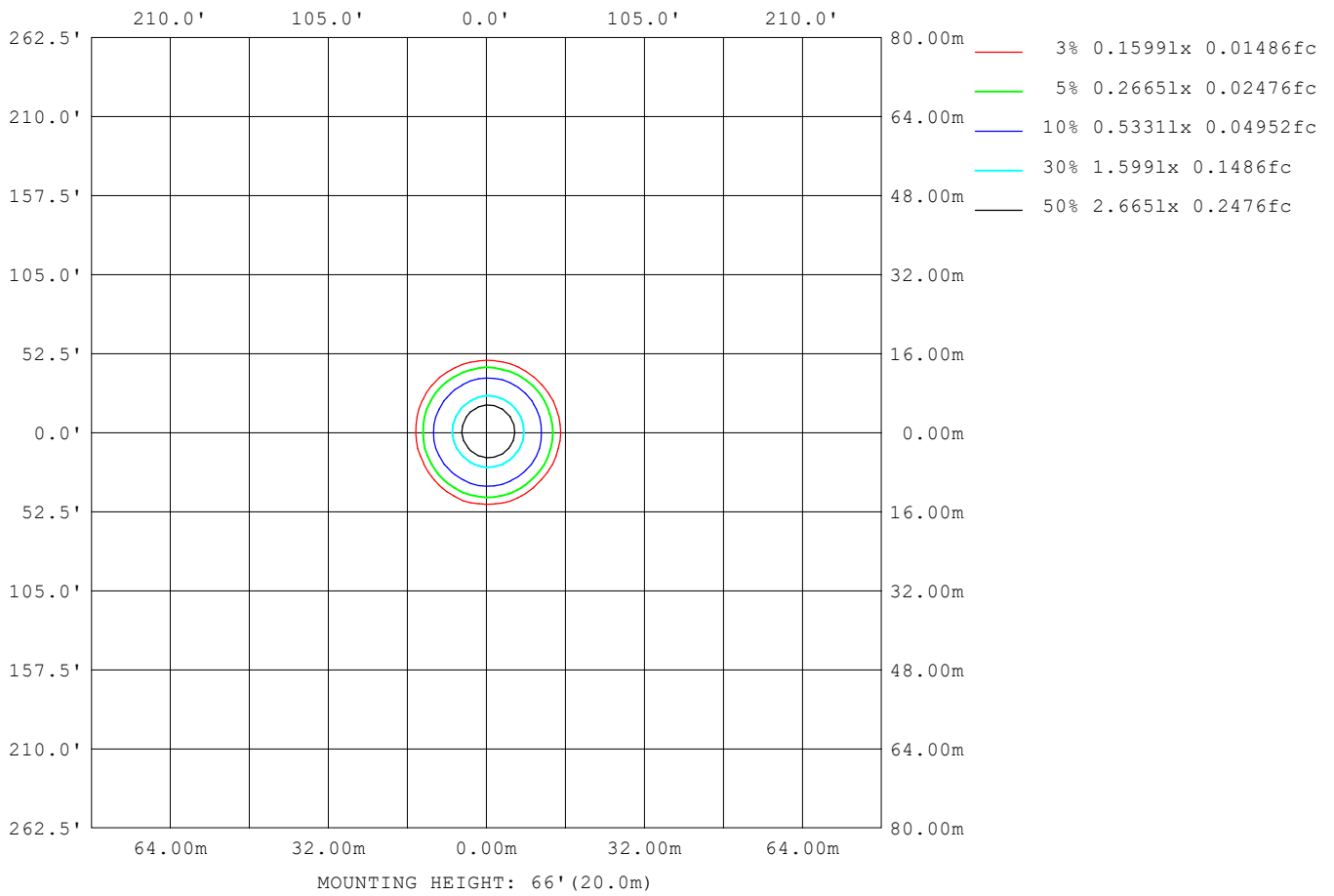
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-08-24

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**ISOLUX DIAGRAM**

Test:U:120.05V I:0.1241A P:11.455W PF:0.9248 Freq:59.98Hz Lamp Flux:845.487x1 lm		
NAME: ASD-CD-TR-3D12AC-WH	TYPE:	WEIGHT:
SPEC.:5000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-08-24

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**LED Avg.L Report**

Test:U:120.05V I:0.1241A P:11.455W PF:0.9248 Freq:59.98Hz Lamp Flux:845.487x1 lm		
NAME: ASD-CD-TR-3D12AC-WH	TYPE:	WEIGHT:
SPEC.:5000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

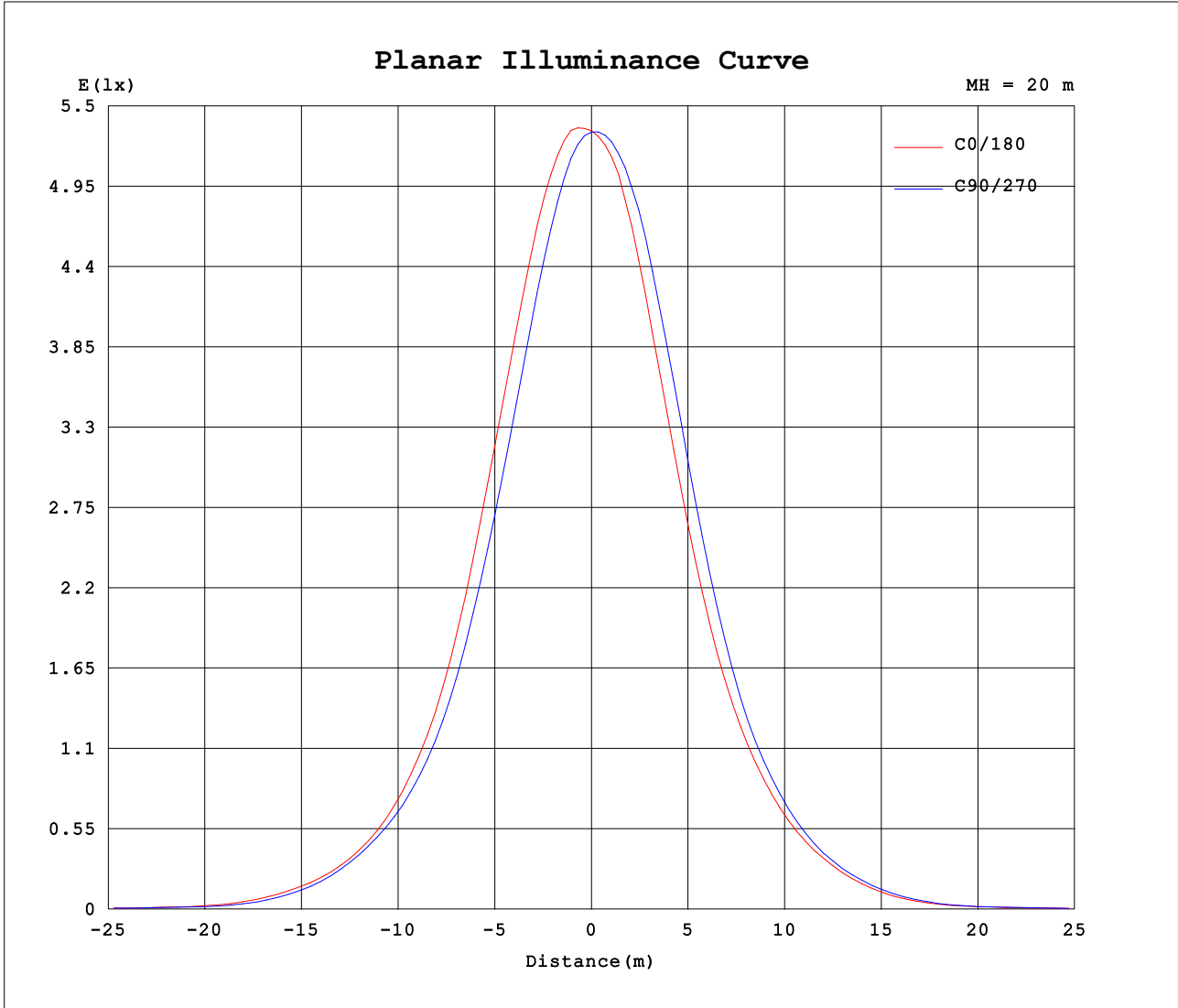
AvgL	cd/m2
L_0~180 (65) av	115
L_0~180 (75) av	47
L_0~180 (85) av	12
L_90~270 (65) av	99
L_90~270 (75) av	31
L_90~270 (85) av	9
L_45 (65) av	111
L_45 (75) av	35
L_45 (85) av	12

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-08-24

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System:EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity:65.0%  
 Test Distance:3.080m [K=1.0000]  
 Remarks:

**Planar Illuminance Curve**



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2021-08-24

Range: 0 - 90DEG  
 Interval: 1.0DEG  
 Test System: EVERFINE GO-SPEX500\_V1 SYSTEM V2.00.421  
 Humidity: 65.0%  
 Test Distance: 3.080m [K=1.0000]  
 Remarks:

