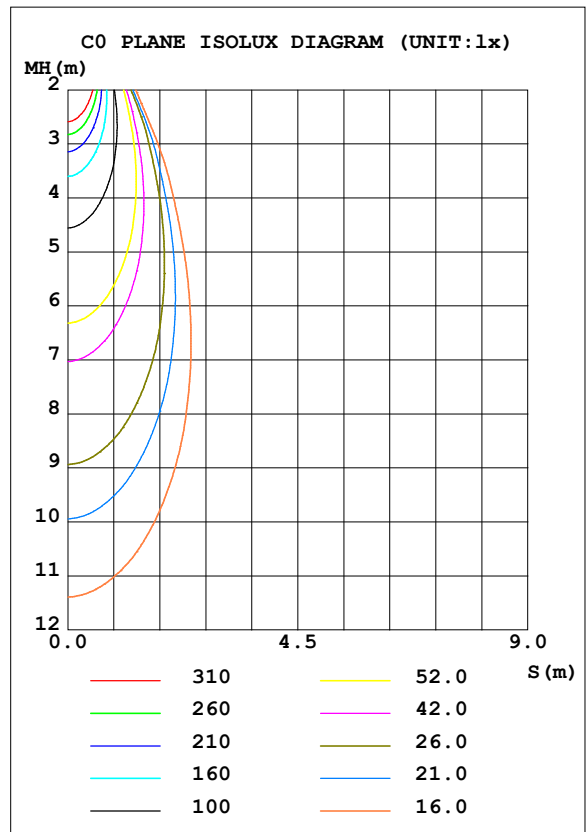
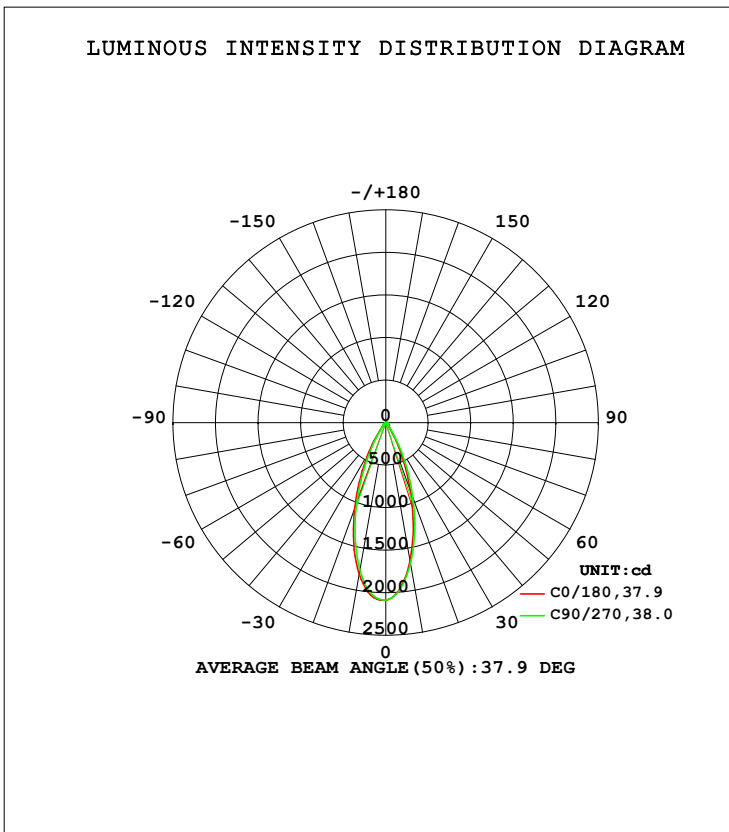


**LUMINAIRE PHOTOMETRIC TEST REPORT**

Test:U:120.02V I:0.1061A P:12.525W PF:0.9462 Freq:59.98Hz Lamp Flux:987.82x1 lm		
NAME: ASD-CD-TS-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:3500K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 78.87 lm/W			
MODEL		I <sub>max</sub> (cd)	2090	S/MH (C0/180)	0.66
NOMINAL POWER (W)	15	LOR (%)	100.0	S/MH (C90/270)	0.63
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	987.82	<input type="checkbox"/> UP, DN (C0-180)	0.0, 49.9
NOMINAL FLUX (lm)	987.82	CIE CLASS	DIRECT	<input type="checkbox"/> UP, DN (C180-360)	0.0, 50.1
LAMPS INSIDE	1	<input type="checkbox"/> up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	120	<input type="checkbox"/> down (%)	100.0	CIBSE SHR MAX	0.65



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2021-09-28

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:

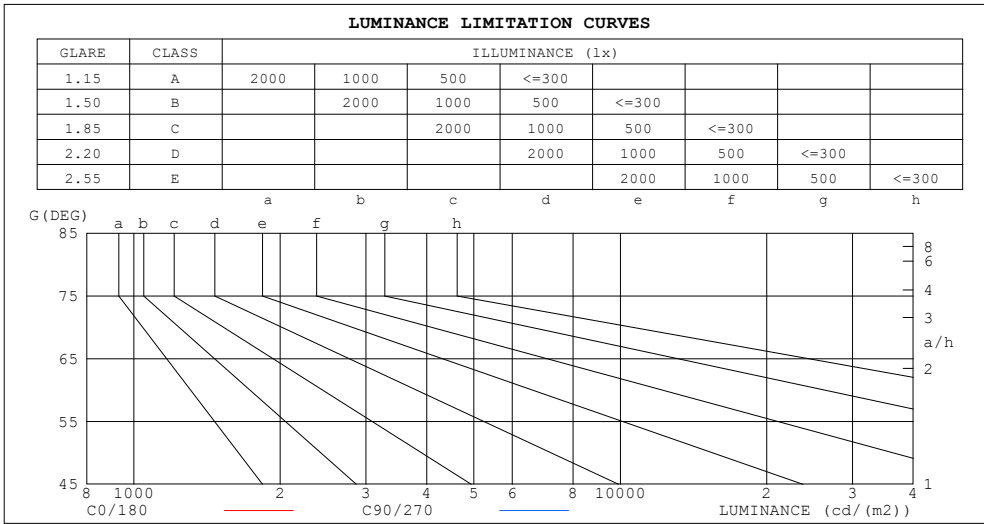
mm	C0	C45	C90	C135	C180	C225	C270	C315	mm	□ zone	□ total	%lum, lamp
10	1647	1774	1681	1785	1808	1679	1761	1639	0- 10	181.6	181.6	18.4,18.4
20	848.9	1002	932.2	1042	1069	890.8	995.0	812.2	10- 20	369.3	550.9	55.8,55.8
30	247.1	340.6	312.9	385.5	398.6	279.5	323.2	236.2	20- 30	270.1	821.0	83.1,83.1
40	56.63	64.61	64.90	71.31	71.43	57.58	67.10	57.11	30- 40	88.72	909.7	92.1,92.1
50	32.95	35.74	33.02	34.90	35.90	33.08	35.35	32.76	40- 50	35.66	945.4	95.7,95.7
60	17.35	18.98	17.54	18.58	18.93	17.23	18.53	17.55	50- 60	22.62	968.0	98,98
70	9.150	9.704	8.975	9.473	9.593	8.275	8.436	9.135	60- 70	13.20	981.2	99.3,99.3
80	3.085	2.629	1.841	2.698	3.290	2.094	1.797	2.305	70- 80	5.859	987.1	99.9,99.9
90	0.0308	0.0220	0.0300	0.0253	0.0355	0.0333	0.0371	0.0350	80- 90	0.7321	987.8	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:2021-09-28

□ 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:120.02V I:0.1061A P:12.525W PF:0.9462 Freq:59.98Hz Lamp Flux:987.82x1 lm		
NAME: ASD-CD-TS-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:3500K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	27	9
80	159	95
75	202	175
70	240	236
65	276	278
60	311	316
55	363	372
50	460	462
45	537	560

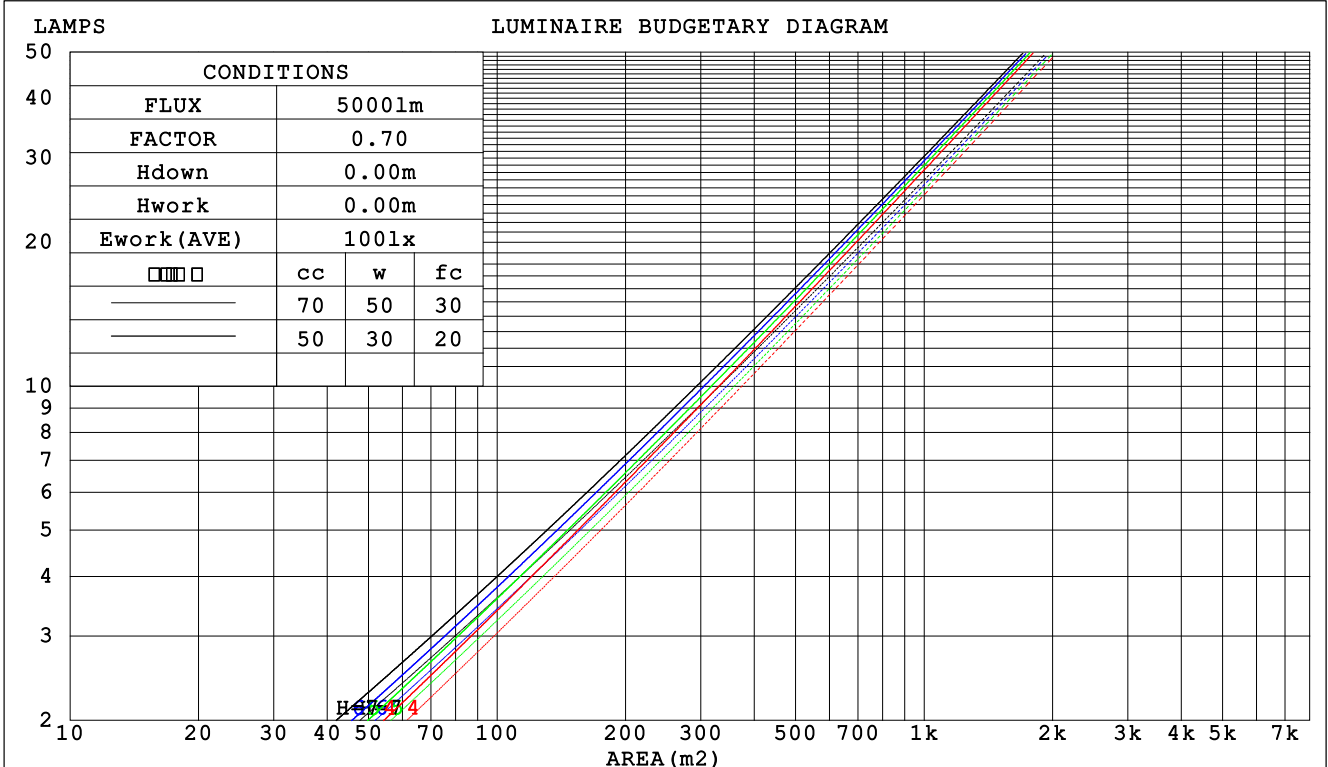
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-09-28

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:120.02V I:0.1061A P:12.525W PF:0.9462 Freq:59.98Hz Lamp Flux:987.82x1 lm		
NAME: ASD-CD-TS-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:3500K 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	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.03	1.02	1.01	1.00	.99	.98	.97	.96	.94
2.0	1.04	1.00	.97	1.03	.99	.96	.99	.97	.94	.96	.94	.92	.94	.92	.90	.89
3.0	.98	.93	.90	.97	.92	.89	.94	.91	.88	.92	.89	.86	.90	.87	.85	.84
4.0	.93	.88	.84	.91	.87	.83	.89	.85	.82	.87	.84	.81	.86	.83	.80	.79
5.0	.88	.82	.79	.87	.82	.78	.85	.81	.78	.83	.80	.77	.82	.79	.76	.75
6.0	.83	.78	.74	.83	.78	.74	.81	.77	.73	.80	.76	.73	.78	.75	.72	.71
7.0	.79	.74	.70	.79	.74	.70	.77	.73	.70	.76	.72	.69	.75	.72	.69	.68
8.0	.76	.70	.67	.75	.70	.67	.74	.70	.66	.73	.69	.66	.72	.69	.66	.65
9.0	.72	.67	.64	.72	.67	.64	.71	.67	.63	.70	.66	.63	.69	.66	.63	.62
10.0	.69	.64	.61	.69	.64	.61	.68	.64	.61	.67	.63	.60	.67	.63	.60	.59



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-09-28

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:120.02V I:0.1061A P:12.525W PF:0.9462 Freq:59.98Hz Lamp Flux:987.82x1 lm		
NAME: ASD-CD-TS-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:3500K 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	.168 .096 .030	.162 .092 .029	.149 .086 .027	.138 .079 .025	.127 .074 .024	
2.0	.159 .087 .027	.154 .085 .026	.143 .080 .025	.134 .075 .023	.125 .070 .022	
3.0	.150 .080 .024	.145 .078 .023	.137 .074 .022	.128 .070 .022	.121 .067 .021	
4.0	.142 .074 .022	.138 .072 .021	.130 .069 .021	.123 .066 .020	.116 .063 .019	
5.0	.134 .068 .020	.131 .067 .020	.124 .065 .019	.118 .062 .018	.112 .060 .018	
6.0	.127 .064 .018	.124 .063 .018	.118 .061 .018	.113 .059 .017	.108 .057 .017	
7.0	.121 .060 .017	.118 .059 .017	.113 .057 .016	.109 .056 .016	.104 .054 .016	
8.0	.115 .056 .016	.113 .056 .016	.109 .054 .015	.104 .053 .015	.100 .052 .015	
9.0	.110 .053 .015	.108 .053 .015	.104 .052 .015	.100 .050 .014	.097 .049 .014	
10.0	.106 .051 .014	.104 .050 .014	.100 .049 .014	.097 .048 .014	.094 .047 .014	

<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	.171 .157 .146	.146 .135 .125	.100 .093 .087	.057 .054 .050	.018 .017 .016	
2.0	.155 .133 .114	.132 .114 .099	.091 .079 .069	.052 .046 .040	.017 .015 .013	
3.0	.141 .113 .091	.121 .098 .079	.083 .068 .055	.048 .040 .033	.015 .013 .011	
4.0	.130 .099 .074	.112 .085 .065	.077 .059 .045	.044 .035 .027	.014 .011 .009	
5.0	.121 .087 .061	.104 .075 .053	.072 .052 .038	.041 .031 .022	.013 .010 .007	
6.0	.113 .077 .052	.097 .067 .045	.067 .047 .032	.039 .028 .019	.013 .009 .006	
7.0	.106 .069 .044	.091 .060 .038	.063 .042 .027	.037 .025 .016	.012 .008 .005	
8.0	.100 .063 .038	.086 .055 .033	.060 .038 .023	.035 .023 .014	.011 .007 .005	
9.0	.095 .058 .033	.082 .050 .029	.056 .035 .020	.033 .021 .012	.011 .007 .004	
10.0	.090 .053 .029	.077 .046 .025	.054 .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:2021-09-28

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:120.02V I:0.1061A P:12.525W PF:0.9462 Freq:59.98Hz Lamp Flux:987.82x1 lm										
NAME: ASD-CD-TS-2D15AC-WH					TYPE:			WEIGHT:		
SPEC.:3500K 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	3.9	4.7	4.1	4.9	5.1	5.1	5.9	5.3	6.1	6.3
3H	4.5	5.3	4.7	5.5	5.7	5.5	6.3	5.8	6.5	6.7
4H	4.7	5.5	5.0	5.7	5.9	5.6	6.4	5.9	6.6	6.8
6H	4.8	5.6	5.1	5.8	6.0	5.6	6.3	5.9	6.6	6.8
8H	4.8	5.5	5.1	5.8	6.0	5.6	6.3	5.9	6.5	6.8
12H	4.8	5.5	5.1	5.7	6.0	5.6	6.2	5.9	6.5	6.8
4H 2H	4.2	4.9	4.4	5.1	5.4	5.2	6.0	5.5	6.2	6.4
3H	4.9	5.6	5.3	5.9	6.1	5.8	6.5	6.1	6.7	7.0
4H	5.2	5.8	5.6	6.1	6.4	6.0	6.6	6.3	6.9	7.2
6H	5.4	6.0	5.8	6.3	6.6	6.0	6.6	6.4	6.9	7.2
8H	5.4	5.9	5.8	6.3	6.6	6.0	6.5	6.4	6.8	7.2
12H	5.4	5.8	5.8	6.2	6.6	6.0	6.4	6.4	6.8	7.2
8H 4H	5.3	5.8	5.7	6.1	6.5	6.0	6.5	6.4	6.9	7.2
6H	5.6	6.0	6.0	6.4	6.8	6.1	6.5	6.5	6.9	7.3
8H	5.6	5.9	6.0	6.4	6.8	6.1	6.4	6.5	6.8	7.3
12H	5.5	5.9	6.0	6.3	6.8	6.0	6.3	6.5	6.8	7.2
12H 4H	5.3	5.7	5.7	6.1	6.5	6.0	6.4	6.4	6.8	7.2
6H	5.5	5.9	6.0	6.3	6.7	6.1	6.4	6.5	6.8	7.3
8H	5.6	5.9	6.0	6.3	6.8	6.0	6.3	6.5	6.8	7.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.6 / - 0.8					+ 0.8 / - 1.1				
1.5H	+ 0.5 / - 0.4					+ 1.1 / - 0.8				
2.0H	+ 1.0 / - 0.8					+ 1.2 / - 1.2				

CIE Pub.117, 987.8 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.0)  
 Area: 0.111111 m2

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-09-28

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:120.02V I:0.1061A P:12.525W PF:0.9462 Freq:59.98Hz Lamp Flux:987.82x1 lm		
NAME: ASD-CD-TS-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:3500K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

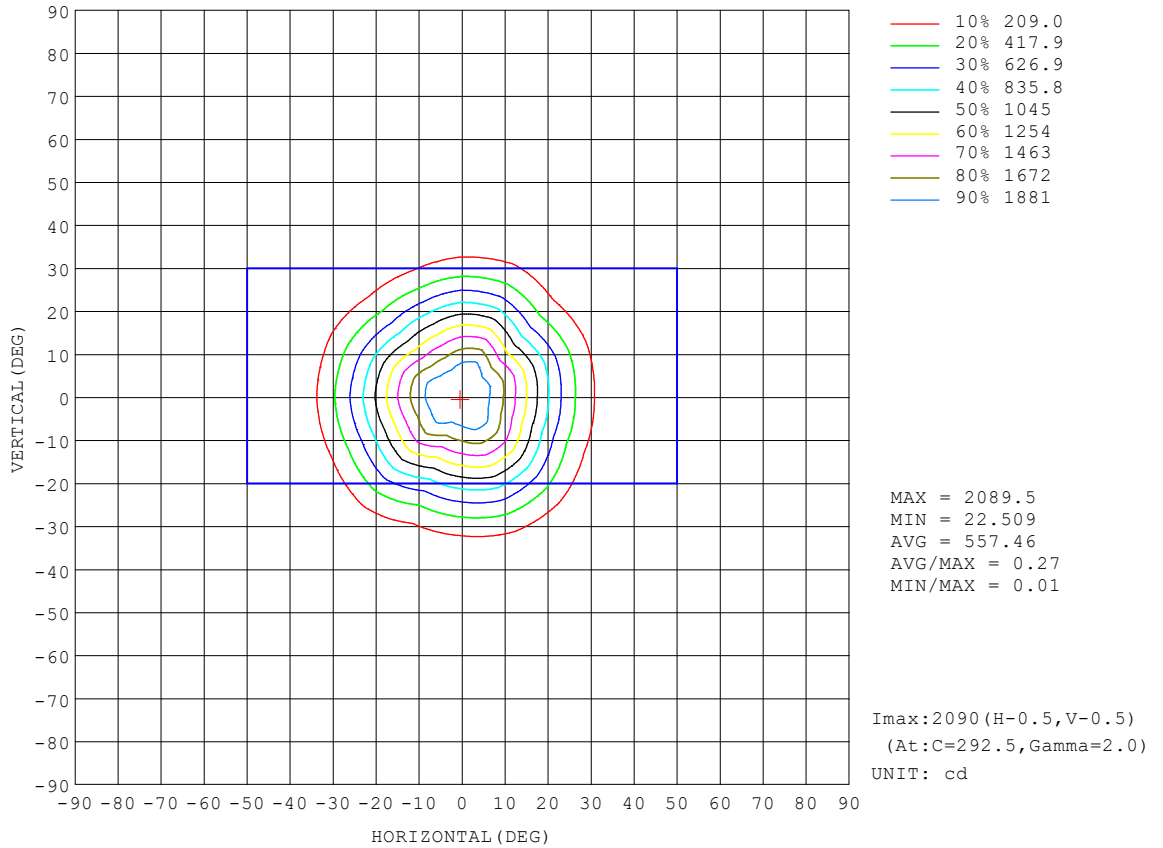
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	87	80	76	86	80	76	85	80	76	72
0.80	94	88	84	93	88	84	92	87	84	80
1.00	99	93	89	98	92	89	96	92	88	84
1.25	103	97	94	102	97	93	100	95	92	88
1.50	105	100	97	104	100	97	102	98	95	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	111	108	105	110	107	104	106	104	102	95
4.00	114	111	108	112	109	107	108	106	104	97
5.00	115	113	111	113	111	109	109	107	106	98
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:2021-09-28

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:120.02V I:0.1061A P:12.525W PF:0.9462 Freq:59.98Hz Lamp Flux:987.82x1 lm		
NAME: ASD-CD-TS-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:3500K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



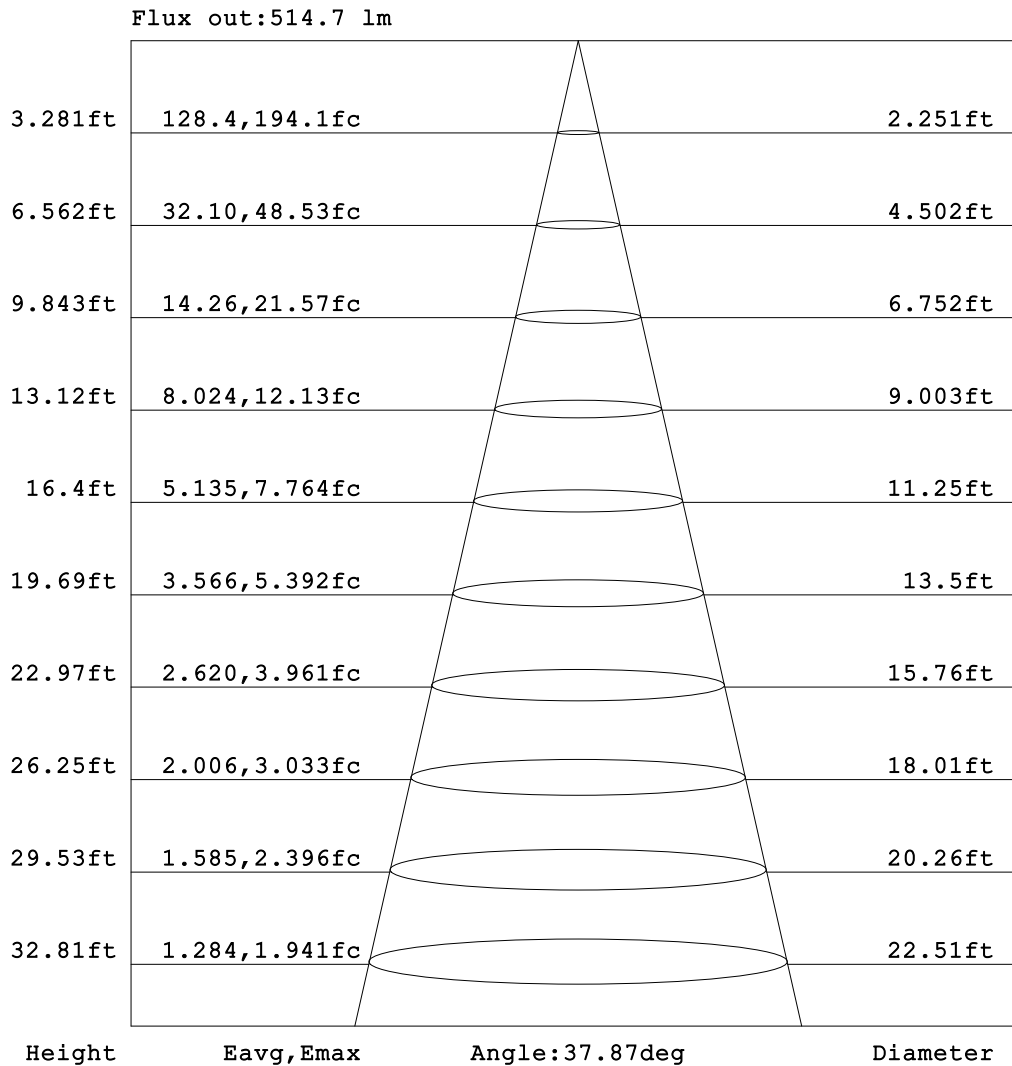
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-09-28

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:120.02V I:0.1061A P:12.525W PF:0.9462 Freq:59.98Hz Lamp Flux:987.82x1 lm		
NAME: ASD-CD-TS-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:3500K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



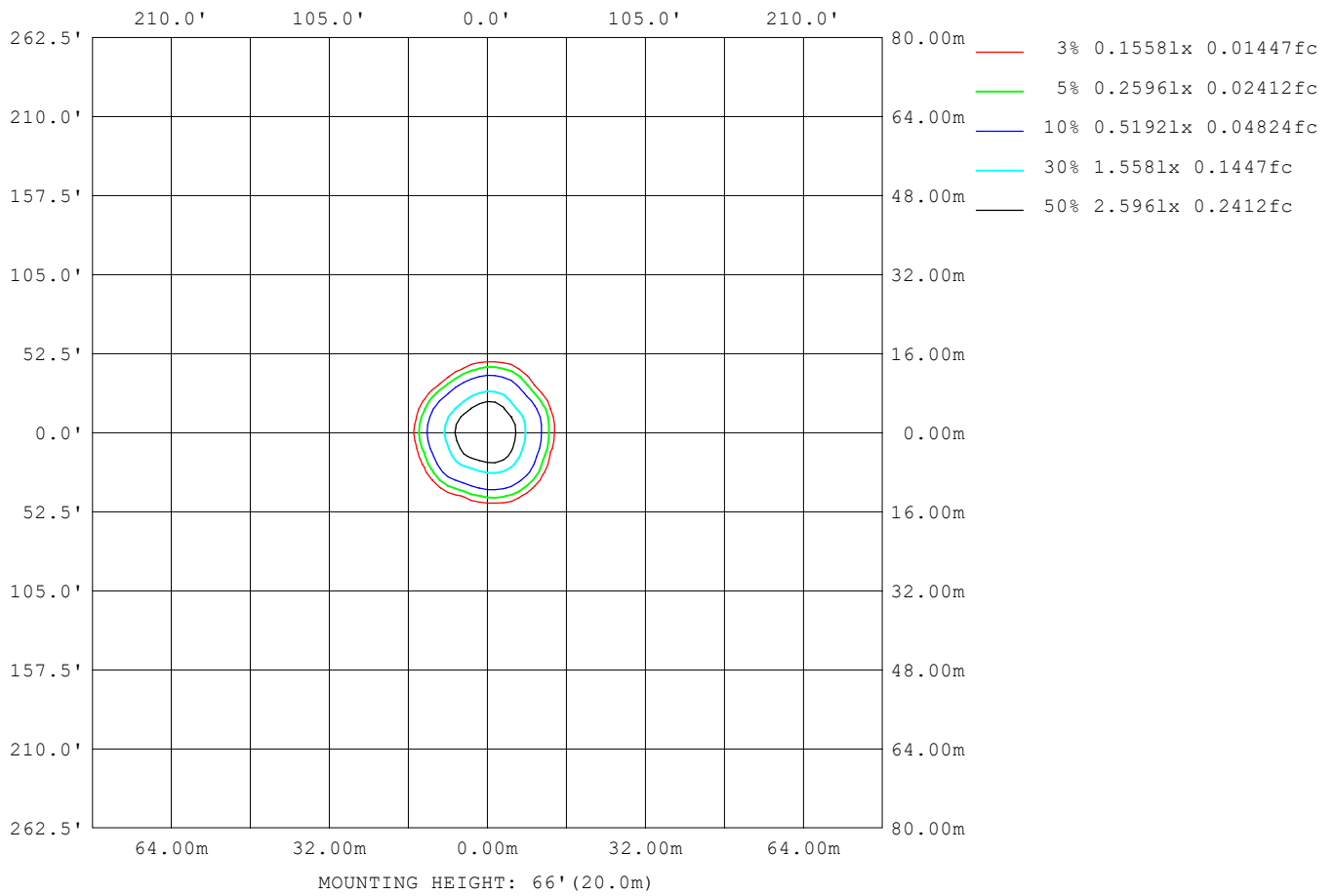
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-09-28

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:120.02V I:0.1061A P:12.525W PF:0.9462 Freq:59.98Hz Lamp Flux:987.82x1 lm		
NAME: ASD-CD-TS-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:3500K 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:2021-09-28

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:120.02V I:0.1061A P:12.525W PF:0.9462 Freq:59.98Hz Lamp Flux:987.82x1 lm		
NAME: ASD-CD-TS-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:3500K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

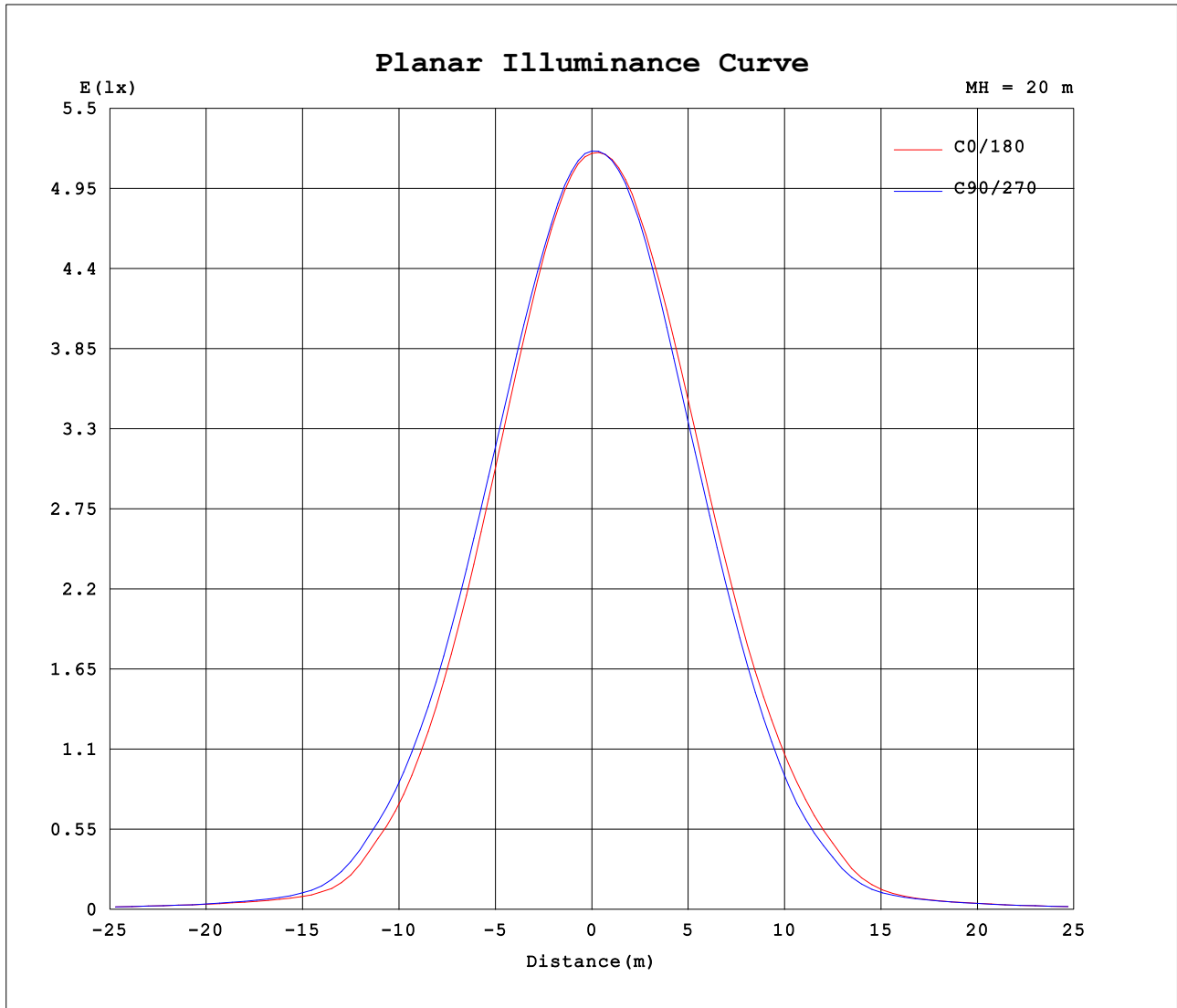
AvgL	cd/m2
L_0~180 (65) av	286
L_0~180 (75) av	207
L_0~180 (85) av	39
L_90~270 (65) av	278
L_90~270 (75) av	169
L_90~270 (85) av	9
L_45 (65) av	283
L_45 (75) av	191
L_45 (85) av	25

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2021-09-28

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: 2021-09-28

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:

