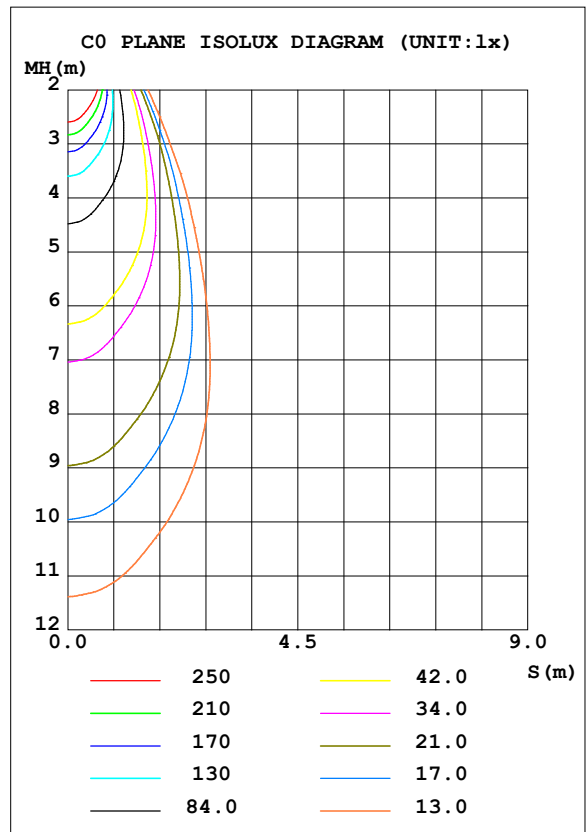
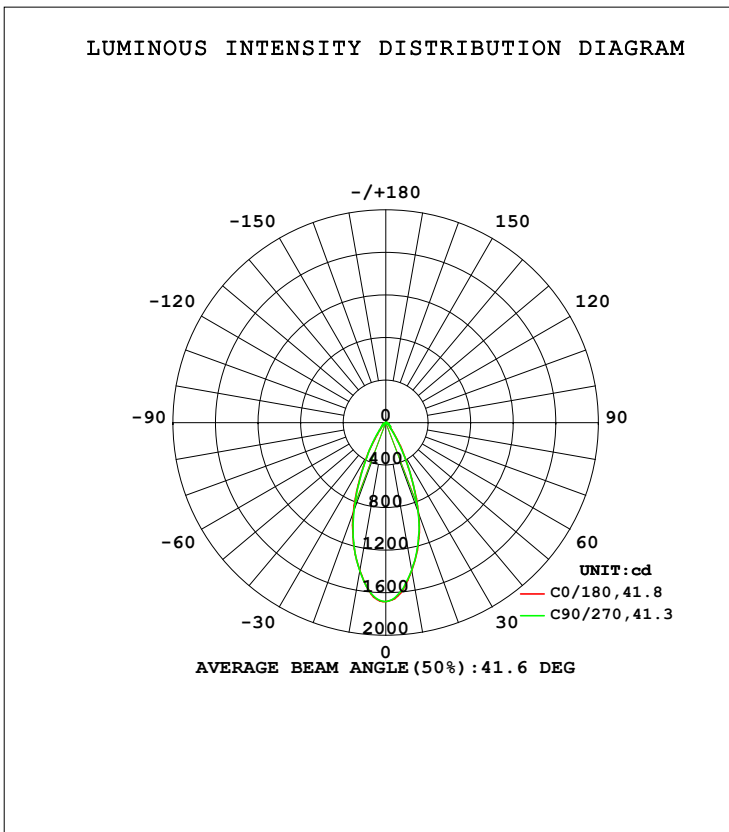


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:119.97V I:0.1104A P:13.037W PF:0.9461 Freq:59.98Hz Lamp Flux:956.714x1 lm		
NAME: ASD-CD-TR-4D15AC-WH	TYPE:	WEIGHT:
SPEC.:3000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 73.39 lm/W			
MODEL		Imax (cd)	1686	S/MH (C0/180)	0.67
NOMINAL POWER (W)	15	LOR (%)	100.0	S/MH (C90/270)	0.66
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	956.71	<input type="checkbox"/> UP, DN (C0-180)	0.0, 48.8
NOMINAL FLUX (lm)	956.714	CIE CLASS	DIRECT	<input type="checkbox"/> UP, DN (C180-360)	0.0, 51.2
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	0.70



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:

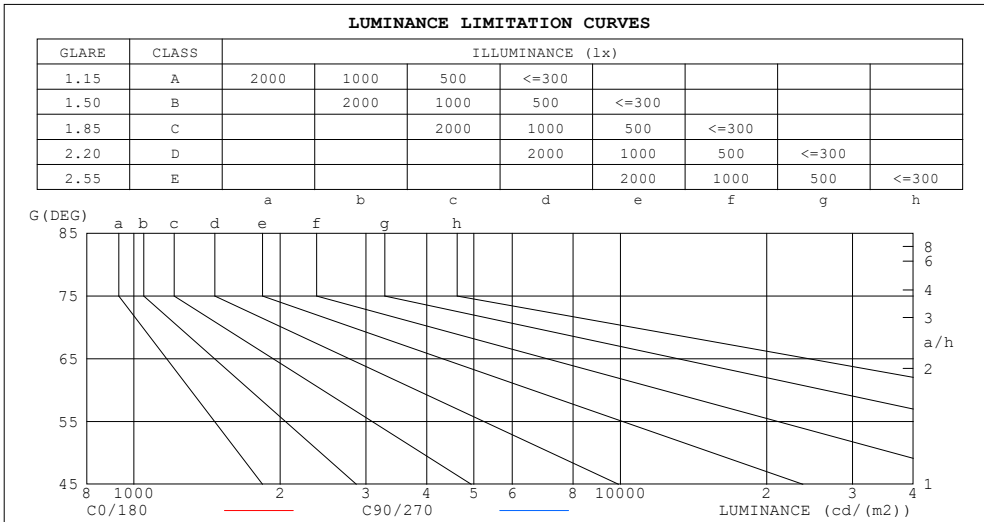
mm	C0	C45	C90	C135	C180	C225	C270	C315	mm	□ zone	□ total	%lum, lamp
10	1412	1379	1406	1413	1411	1461	1416	1403	0- 10	147.0	147.0	15.4,15.4
20	903.5	825.1	890.9	932.0	895.0	1005	876.9	901.0	10- 20	324.9	471.9	49.3,49.3
30	336.5	285.5	324.6	352.2	333.0	390.9	333.9	350.2	20- 30	269.0	740.9	77.4,77.4
40	80.32	76.98	81.17	85.37	84.13	98.35	93.83	90.94	30- 40	112.2	853.1	89.2,89.2
50	44.75	43.31	45.58	46.18	45.68	46.86	45.68	44.88	40- 50	46.24	899.3	94,94
60	25.69	24.24	25.32	25.54	26.90	27.94	27.70	27.01	50- 60	31.39	930.7	97.3,97.3
70	10.30	9.052	9.045	9.707	10.72	11.57	10.76	11.24	60- 70	17.62	948.4	99.1,99.1
80	3.838	2.942	2.590	3.038	4.099	4.023	3.640	3.886	70- 80	7.142	955.5	99.9,99.9
90	0.0290	0.0253	0.0294	0.0227	0.0533	0.0380	0.0427	0.0348	80- 90	1.222	956.7	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:119.97V I:0.1104A P:13.037W PF:0.9461 Freq:59.98Hz Lamp Flux:956.714x1 lm		
NAME: ASD-CD-TR-4D15AC-WH	TYPE:	WEIGHT:
SPEC.:3000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	63	25
80	199	134
75	246	198
70	271	238
65	378	340
60	463	456
55	539	526
50	627	639
45	705	743

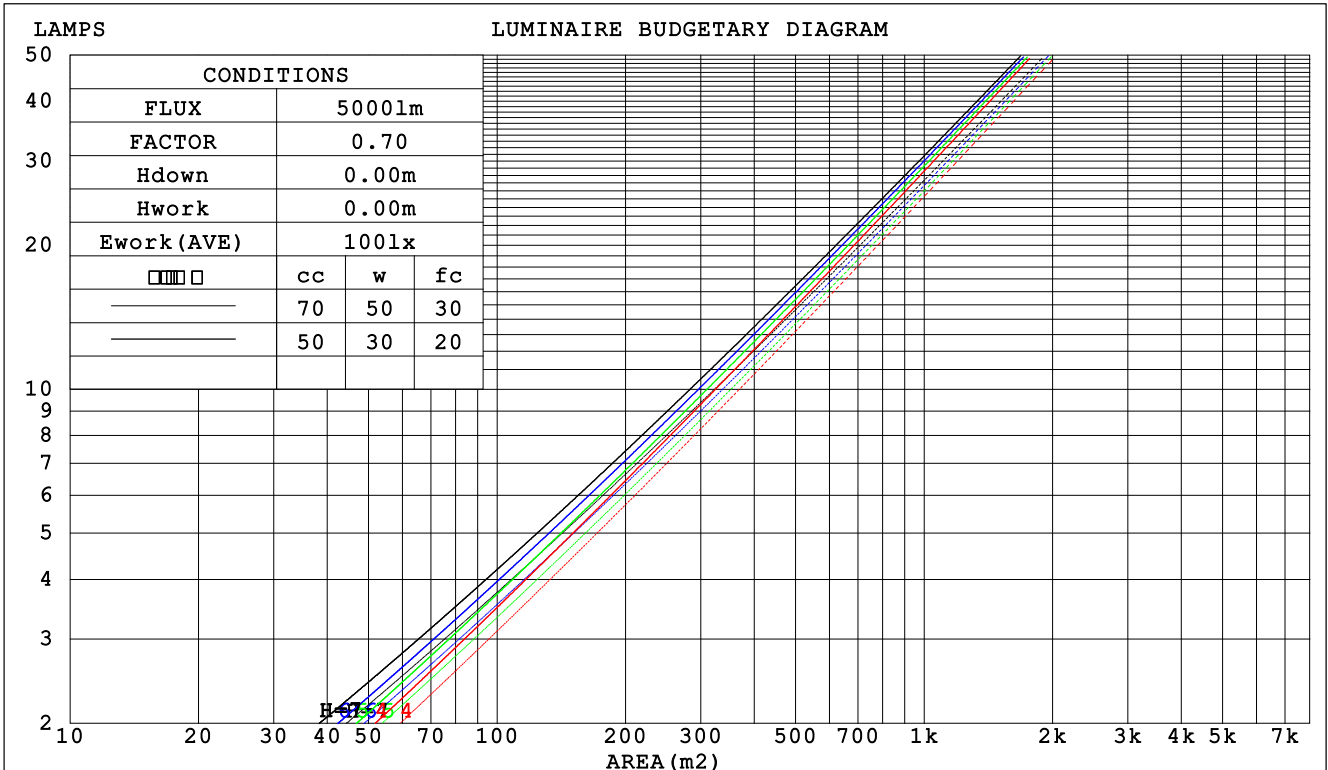
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-09-28

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:119.97V I:0.1104A P:13.037W PF:0.9461 Freq:59.98Hz Lamp Flux:956.714x1 lm		
NAME: ASD-CD-TR-4D15AC-WH	TYPE:	WEIGHT:
SPEC.:3000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

□cc	80%			70%			50%			30%			10%			0
□w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
□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	1.08	1.06	1.09	1.06	1.04	1.05	1.03	1.01	1.01	.99	.98	.97	.96	.95	.93
2.0	1.03	.99	.96	1.01	.98	.95	.98	.95	.93	.95	.93	.91	.92	.91	.89	.87
3.0	.96	.92	.88	.95	.91	.87	.92	.89	.86	.90	.87	.84	.88	.85	.83	.81
4.0	.91	.85	.81	.89	.84	.81	.87	.83	.80	.85	.82	.79	.83	.80	.78	.76
5.0	.85	.80	.76	.84	.79	.75	.83	.78	.75	.81	.77	.74	.79	.76	.73	.72
6.0	.81	.75	.71	.80	.74	.71	.78	.74	.70	.77	.73	.70	.76	.72	.69	.68
7.0	.76	.71	.67	.76	.70	.66	.74	.70	.66	.73	.69	.66	.72	.68	.65	.64
8.0	.73	.67	.63	.72	.67	.63	.71	.66	.63	.70	.66	.62	.69	.65	.62	.61
9.0	.69	.64	.60	.69	.63	.60	.68	.63	.59	.67	.62	.59	.66	.62	.59	.58
10.0	.66	.60	.57	.66	.60	.57	.65	.60	.57	.64	.60	.56	.63	.59	.56	.55



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:119.97V I:0.1104A P:13.037W PF:0.9461 Freq:59.98Hz Lamp Flux:956.714x1 lm		
NAME: ASD-CD-TR-4D15AC-WH	TYPE:	WEIGHT:
SPEC.:3000K 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	.179 .102 .032	.172 .098 .031	.159 .091 .029	.148 .085 .027	.137 .079 .026	
2.0	.170 .093 .029	.164 .090 .028	.153 .085 .026	.144 .081 .025	.135 .076 .024	
3.0	.160 .085 .026	.155 .083 .025	.146 .079 .024	.138 .076 .023	.130 .072 .022	
4.0	.151 .079 .023	.147 .077 .023	.139 .074 .022	.132 .071 .021	.126 .068 .021	
5.0	.143 .073 .021	.140 .072 .021	.133 .069 .020	.127 .067 .020	.121 .065 .019	
6.0	.136 .068 .019	.133 .067 .019	.127 .065 .019	.121 .063 .019	.116 .061 .018	
7.0	.129 .064 .018	.126 .063 .018	.121 .061 .018	.116 .060 .017	.112 .058 .017	
8.0	.123 .060 .017	.121 .059 .017	.116 .058 .017	.112 .057 .016	.107 .055 .016	
9.0	.117 .057 .016	.115 .056 .016	.111 .055 .016	.107 .054 .015	.104 .053 .015	
10.0	.112 .054 .015	.110 .053 .015	.107 .052 .015	.103 .051 .015	.100 .050 .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 .145	.147 .135 .125	.100 .093 .086	.058 .054 .050	.018 .017 .016	
2.0	.156 .133 .113	.134 .114 .097	.092 .079 .068	.053 .046 .040	.017 .015 .013	
3.0	.143 .114 .090	.123 .098 .078	.084 .068 .055	.049 .040 .032	.016 .013 .011	
4.0	.133 .099 .073	.114 .085 .063	.078 .059 .045	.045 .035 .026	.015 .011 .009	
5.0	.124 .087 .060	.106 .075 .052	.073 .053 .037	.042 .031 .022	.014 .010 .007	
6.0	.116 .078 .050	.100 .067 .044	.069 .047 .031	.040 .028 .018	.013 .009 .006	
7.0	.109 .070 .043	.094 .061 .037	.065 .043 .026	.038 .025 .016	.012 .008 .005	
8.0	.103 .064 .037	.089 .055 .032	.061 .039 .023	.036 .023 .014	.012 .008 .004	
9.0	.098 .058 .032	.084 .051 .028	.058 .036 .020	.034 .021 .012	.011 .007 .004	
10.0	.093 .054 .028	.080 .047 .024	.056 .033 .017	.032 .019 .010	.011 .006 .003	

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:119.97V I:0.1104A P:13.037W PF:0.9461 Freq:59.98Hz Lamp Flux:956.714x1 lm										
NAME: ASD-CD-TR-4D15AC-WH					TYPE:			WEIGHT:		
SPEC.:3000K 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	6.6	7.5	6.8	7.7	7.8	6.3	7.2	6.5	7.4	7.6
3H	7.0	7.8	7.2	8.0	8.2	6.6	7.5	6.9	7.7	7.9
4H	7.1	7.9	7.4	8.1	8.3	6.7	7.5	7.0	7.7	8.0
6H	7.2	7.9	7.5	8.2	8.4	6.7	7.5	7.0	7.7	8.0
8H	7.2	7.9	7.5	8.1	8.4	6.7	7.4	7.0	7.7	8.0
12H	7.1	7.8	7.4	8.1	8.4	6.7	7.4	7.0	7.6	7.9
4H 2H	6.7	7.5	7.0	7.7	7.9	6.5	7.3	6.7	7.5	7.7
3H	7.2	7.9	7.5	8.1	8.4	6.9	7.6	7.2	7.8	8.1
4H	7.4	8.0	7.7	8.3	8.6	7.0	7.7	7.4	8.0	8.3
6H	7.5	8.1	7.9	8.4	8.8	7.1	7.6	7.5	8.0	8.3
8H	7.5	8.1	7.9	8.4	8.8	7.1	7.6	7.5	7.9	8.3
12H	7.5	8.0	7.9	8.3	8.7	7.0	7.5	7.4	7.9	8.3
8H 4H	7.4	7.9	7.8	8.2	8.6	7.0	7.5	7.4	7.9	8.3
6H	7.6	8.0	8.0	8.4	8.8	7.1	7.5	7.5	7.9	8.4
8H	7.6	8.0	8.0	8.4	8.8	7.1	7.5	7.6	7.9	8.3
12H	7.6	7.9	8.0	8.3	8.8	7.1	7.4	7.5	7.8	8.3
12H 4H	7.3	7.8	7.7	8.2	8.6	7.0	7.5	7.4	7.8	8.2
6H	7.5	7.9	8.0	8.3	8.8	7.1	7.5	7.5	7.9	8.3
8H	7.6	7.9	8.0	8.3	8.8	7.1	7.4	7.6	7.9	8.3
Variations with the observer position at spacings:										
S = 1.0H	+ 1.1 / - 1.0					+ 1.0 / - 1.0				
1.5H	+ 1.9 / - 0.7					+ 1.5 / - 0.7				
2.0H	+ 0.9 / - 0.9					+ 1.1 / - 1.2				

CIE Pub.117, 956.7 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -0.2)
 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:119.97V I:0.1104A P:13.037W PF:0.9461 Freq:59.98Hz Lamp Flux:956.714x1 lm		
NAME: ASD-CD-TR-4D15AC-WH	TYPE:	WEIGHT:
SPEC.:3000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

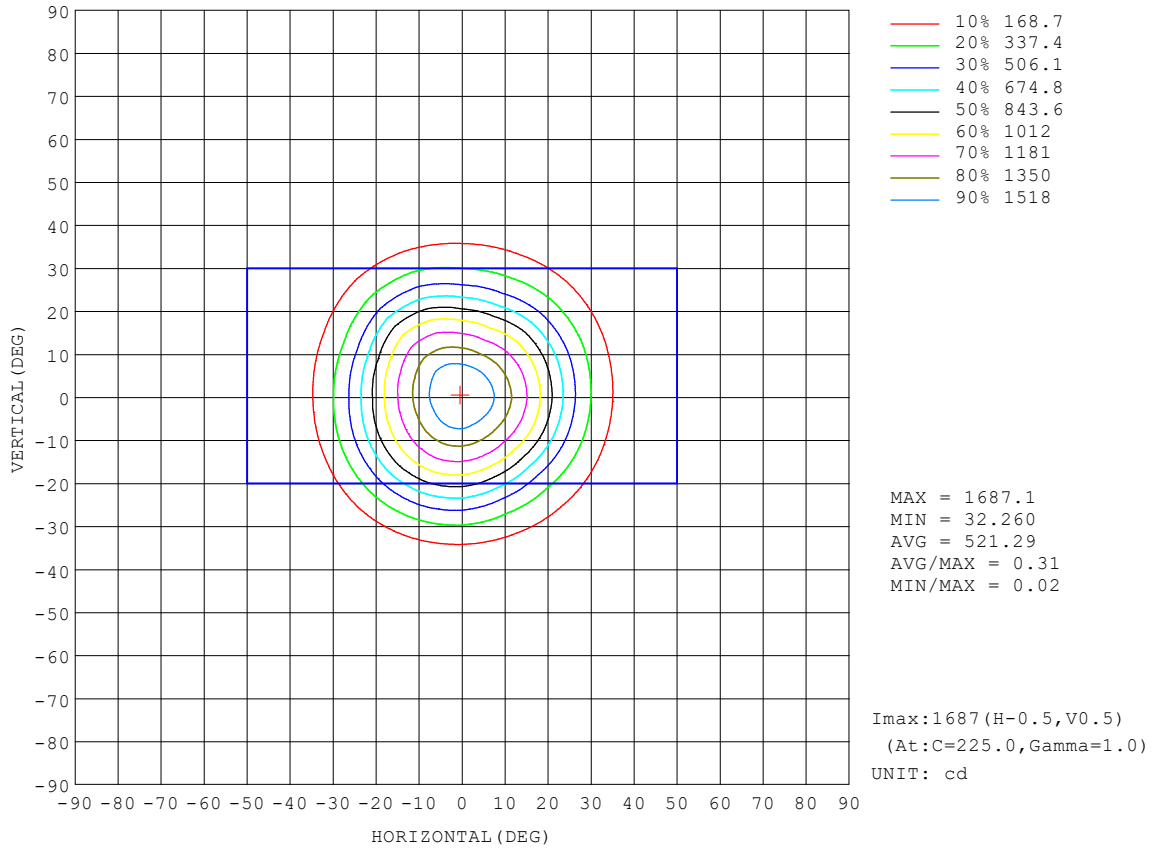
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	85	78	74	84	78	74	83	77	74	70
0.80	92	86	82	92	86	82	91	85	82	78
1.00	97	91	87	96	91	87	95	91	86	82
1.25	101	96	92	100	95	92	98	94	91	86
1.50	104	99	96	103	98	95	101	97	94	89
2.00	107	103	99	106	102	99	103	100	97	92
2.50	109	105	102	108	104	101	105	102	99	93
3.00	111	107	104	109	106	103	106	103	101	95
4.00	113	110	108	111	109	106	107	105	104	97
5.00	115	112	110	112	110	109	108	107	105	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:119.97V I:0.1104A P:13.037W PF:0.9461 Freq:59.98Hz Lamp Flux:956.714x1 lm		
NAME: ASD-CD-TR-4D15AC-WH	TYPE:	WEIGHT:
SPEC.:3000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

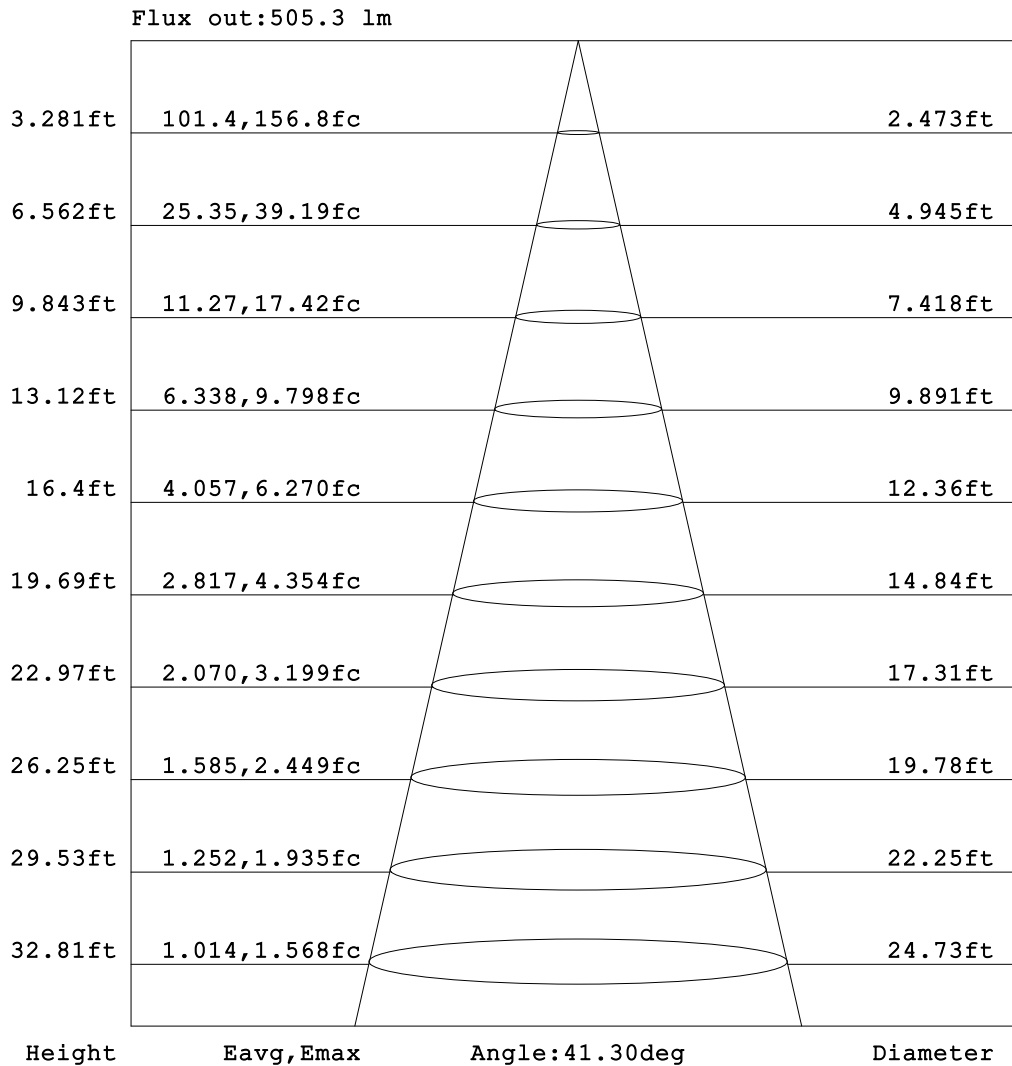


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-09-28

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:119.97V I:0.1104A P:13.037W PF:0.9461 Freq:59.98Hz Lamp Flux:956.714x1 lm		
NAME: ASD-CD-TR-4D15AC-WH	TYPE:	WEIGHT:
SPEC.:3000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



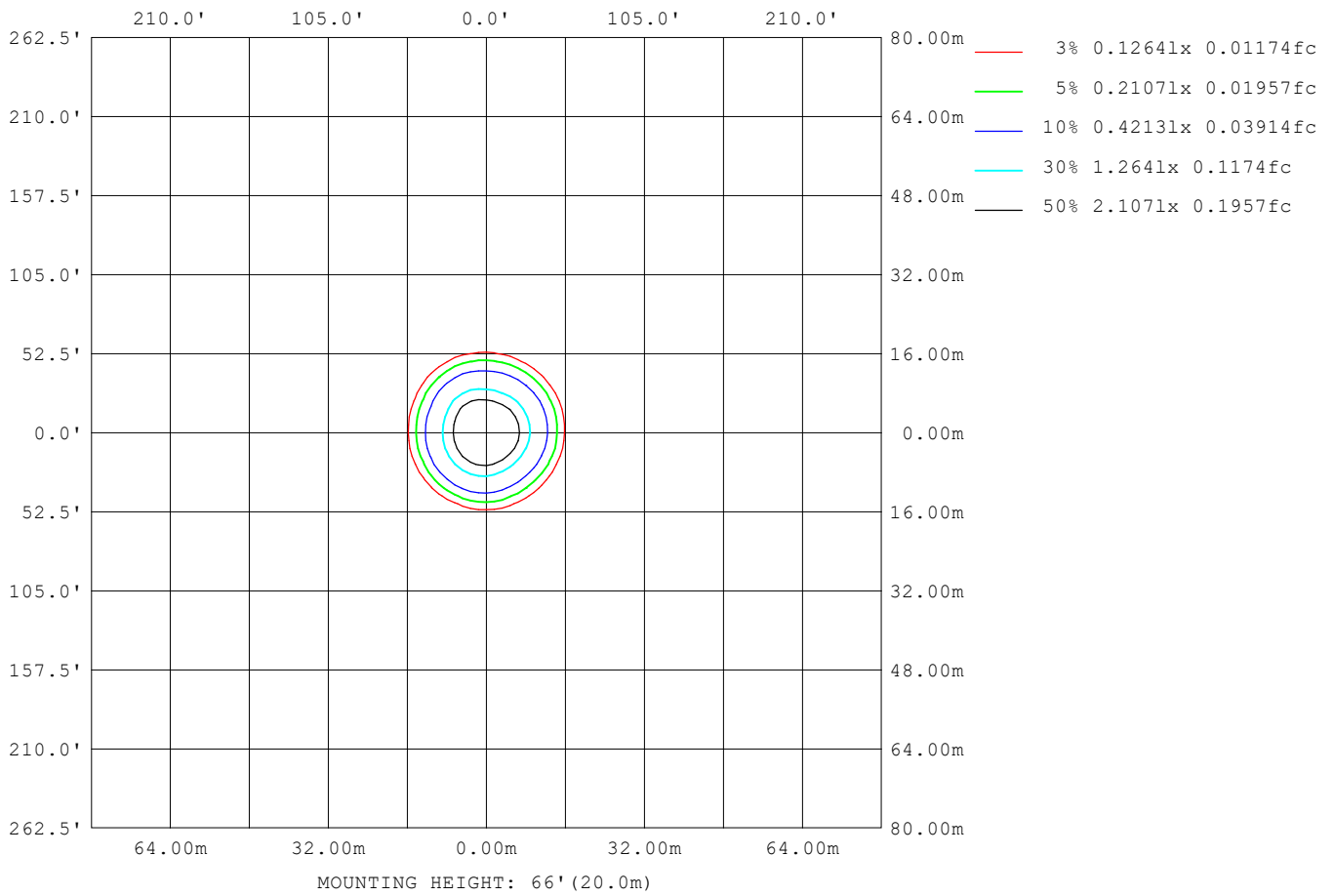
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:119.97V I:0.1104A P:13.037W PF:0.9461 Freq:59.98Hz Lamp Flux:956.714x1 lm		
NAME: ASD-CD-TR-4D15AC-WH	TYPE:	WEIGHT:
SPEC.:3000K 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:119.97V I:0.1104A P:13.037W PF:0.9461 Freq:59.98Hz Lamp Flux:956.714x1 lm		
NAME: ASD-CD-TR-4D15AC-WH	TYPE:	WEIGHT:
SPEC.:3000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

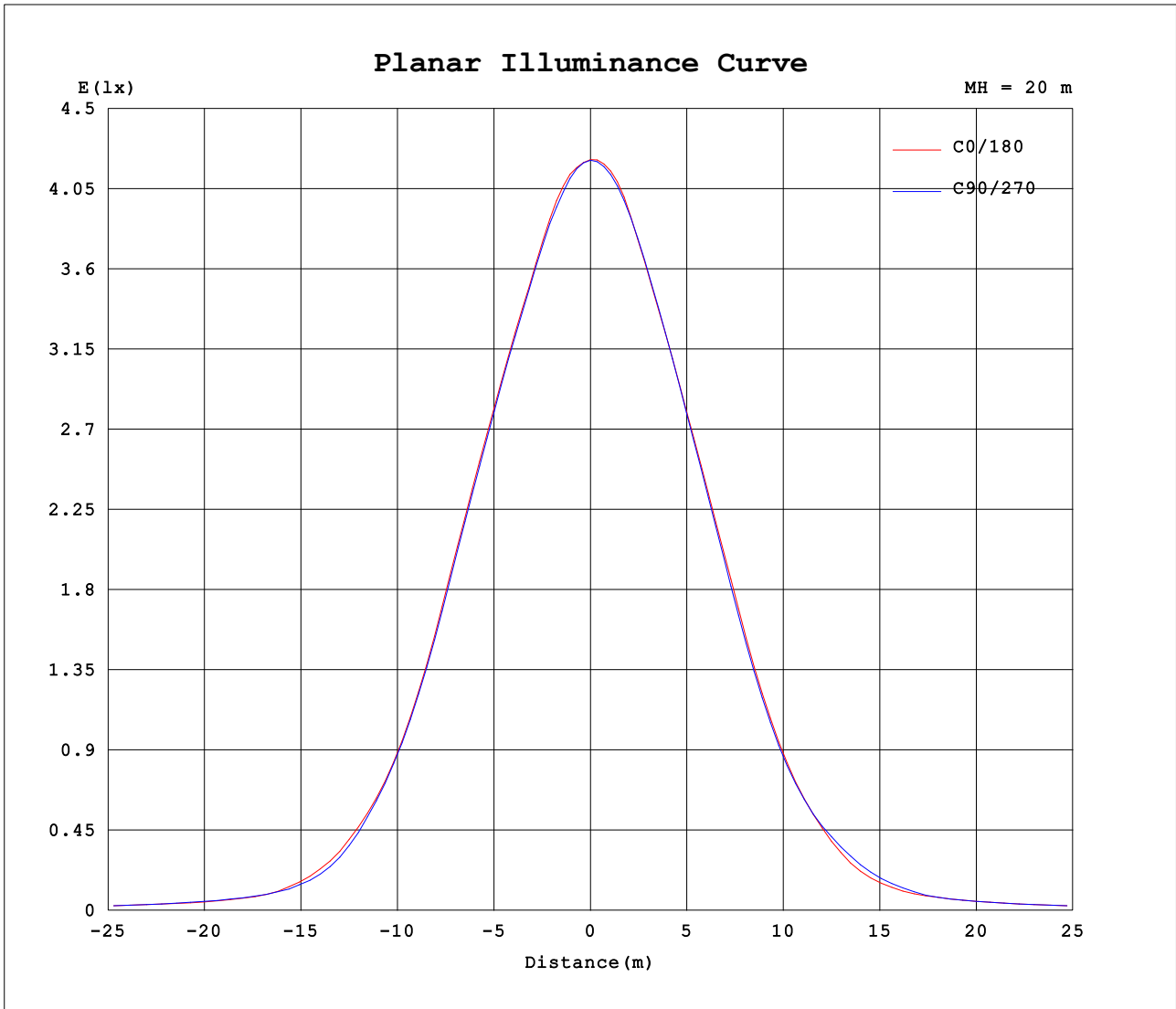
AvgL	cd/m2
L_0~180 (65) av	386
L_0~180 (75) av	250
L_0~180 (85) av	72
L_90~270 (65) av	373
L_90~270 (75) av	223
L_90~270 (85) av	58
L_45 (65) av	380
L_45 (75) av	236
L_45 (85) av	82

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
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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:

