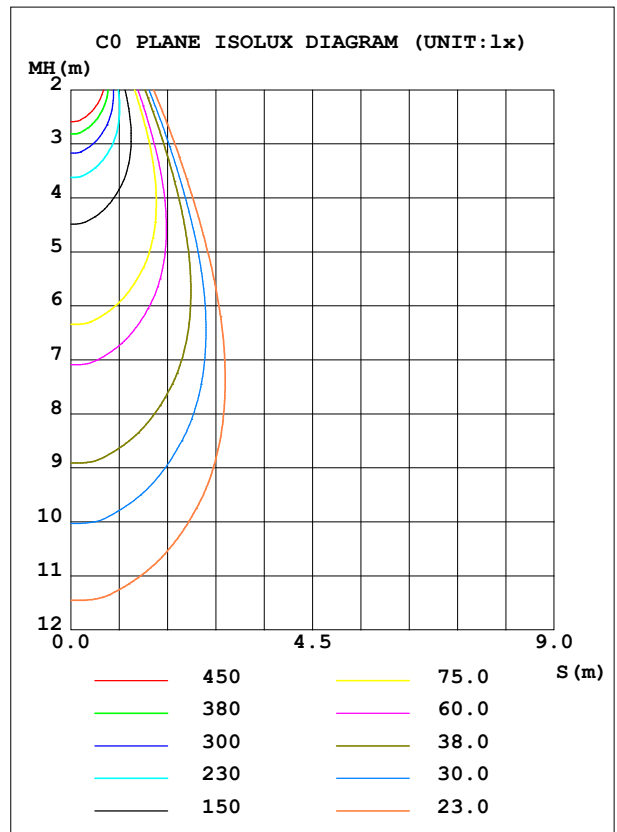
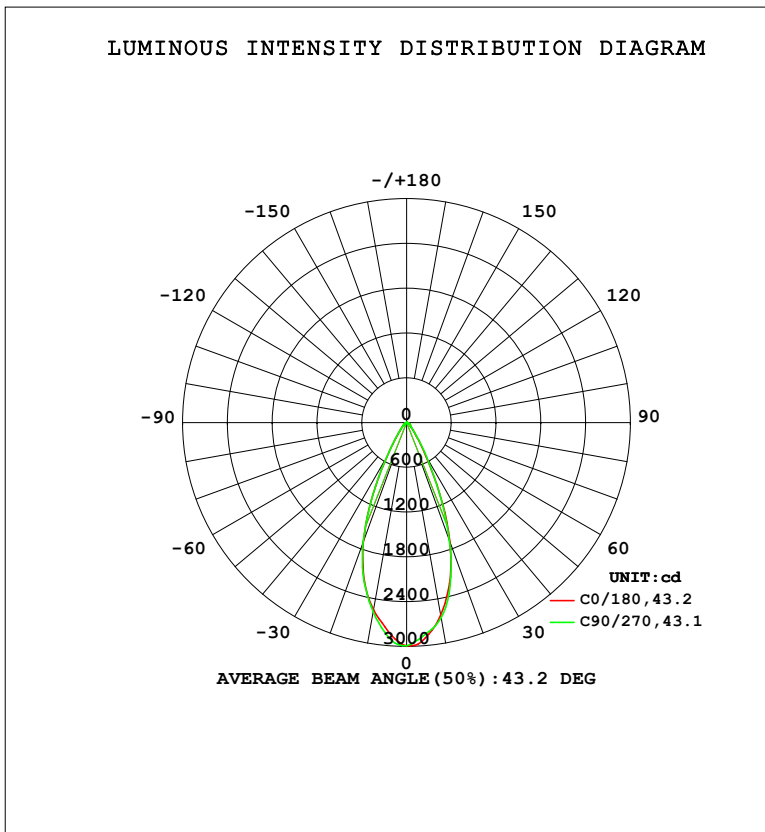


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:277.02V I:0.0783A P:21.015W PF:0.9691 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1683.49x1 lm		
NAME: ASD-CD-TR-MV-6D24AC-WH	TYPE:	WEIGHT:
SPEC.: 2700K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax (cd)	2997	S/MH (C0/180)	0.67
NOMINAL POWER (W)	24	LOR (%)	100.0	S/MH (C90/270)	0.67
RATED VOLTAGE (V)	277	TOTAL FLUX (lm)	1683.5	η UP, DN (C0-180)	0.0, 50.9
NOMINAL FLUX (lm)	1683.49	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 49.1
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	277	η down (%)	100.0	CIBSE SHR MAX	0.70



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators:
 Test Date: 2022-11-30

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.090m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

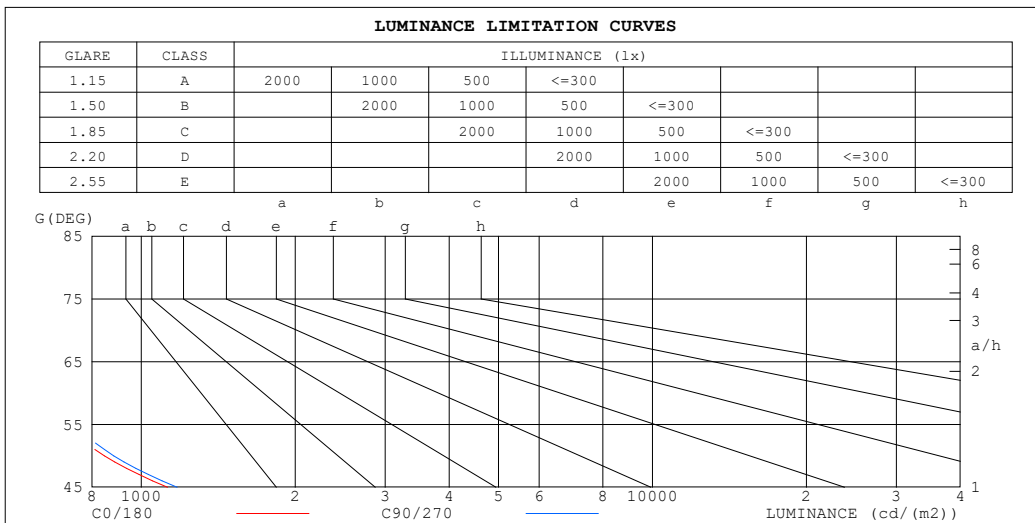
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	2623	2648	2661	2741	2547	2574	2580	2607	0- 10	265.9	265.9	15.8,15.8
20	1695	1657	1675	1861	1692	1653	1707	1676	10- 20	611.8	877.7	52.1,52.1
30	522.1	524.4	552.3	601.4	536.2	513.9	537.5	546.1	20- 30	485.3	1363	81,81
40	141.0	146.9	151.1	173.5	139.4	139.5	144.7	137.1	30- 40	181.0	1544	91.7,91.7
50	59.91	62.59	63.21	67.58	59.34	59.60	61.14	59.25	40- 50	72.52	1616	96,96
60	32.73	34.20	34.04	35.09	32.48	32.40	33.16	32.64	50- 60	41.10	1658	98.5,98.5
70	8.723	8.776	8.135	8.233	8.826	9.146	9.453	8.993	60- 70	20.28	1678	99.7,99.7
80	2.342	2.237	2.153	2.228	2.299	2.336	2.435	2.356	70- 80	4.588	1682	99.9,99.9
90	0.0777	0.0671	0.0742	0.0648	0.0642	0.0504	0.0623	0.0513	80- 90	1.111	1683	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:25.3°C
 Operators:
 Test Date:2022-11-30

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:277.02V I:0.0783A P:21.015W PF:0.9691 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1683.49x1 lm		
NAME: ASD-CD-TR-MV-6D24AC-WH	TYPE:	WEIGHT:
SPEC.: 2700K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	109	92
80	122	111
75	133	126
70	232	214
65	444	441
60	594	612
55	704	732
50	846	884
45	1126	1175

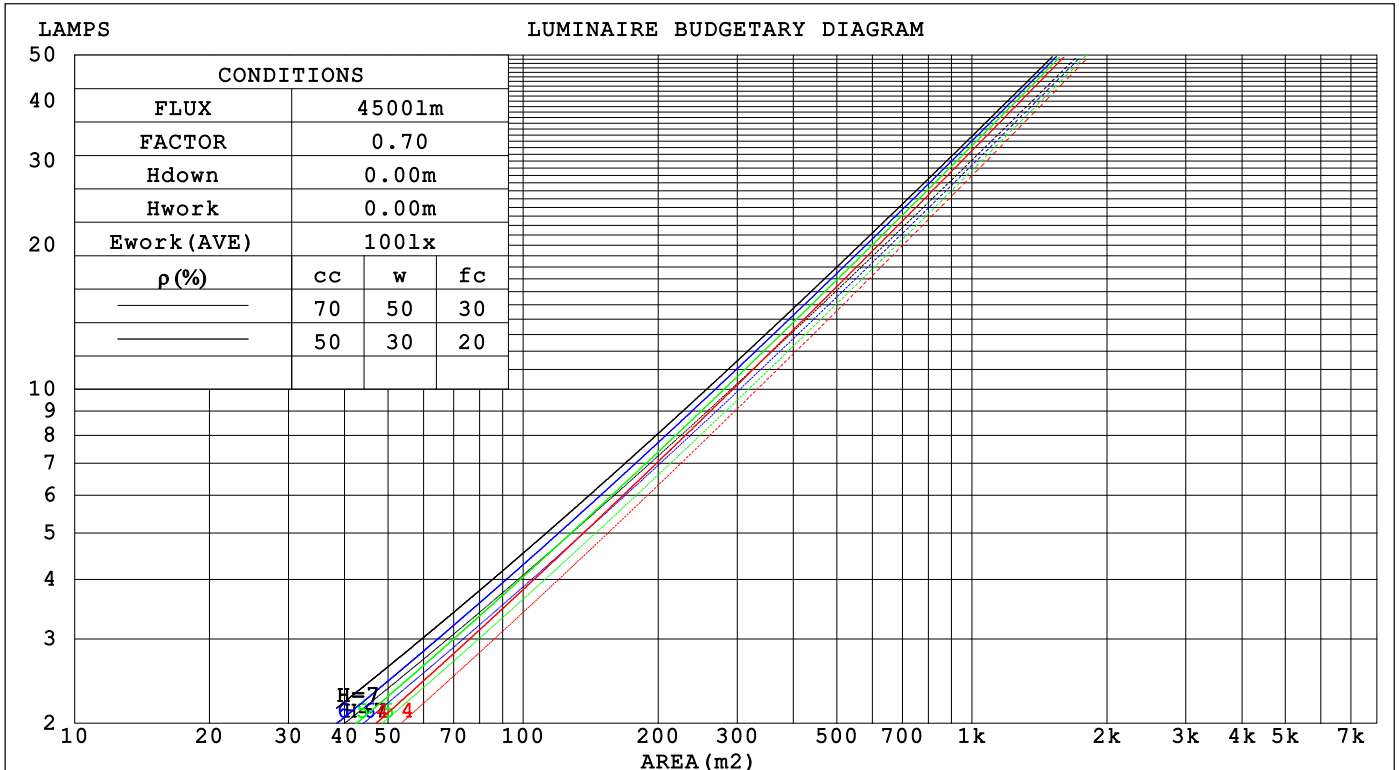
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2022-11-30

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:277.02V I:0.0783A P:21.015W PF:0.9691 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1683.49x1 lm		
NAME: ASD-CD-TR-MV-6D24AC-WH	TYPE:	WEIGHT:
SPEC.: 2700K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding 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															
	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	.00	.99	.98	.97	.96	.94
2.0	1.04	1.00	.97	1.02	.99	.96	.99	.96	.94	.96	.94	.92	.93	.92	.90	.88
3.0	.98	.93	.89	.96	.92	.88	.94	.90	.87	.91	.88	.86	.89	.87	.84	.83
4.0	.92	.87	.83	.91	.86	.82	.89	.85	.81	.87	.83	.80	.85	.82	.79	.78
5.0	.87	.81	.77	.86	.81	.77	.84	.80	.76	.82	.79	.76	.81	.78	.75	.74
6.0	.82	.77	.73	.81	.76	.72	.80	.75	.72	.79	.75	.72	.77	.74	.71	.70
7.0	.78	.73	.69	.77	.72	.68	.76	.71	.68	.75	.71	.68	.74	.70	.67	.66
8.0	.74	.69	.65	.74	.68	.65	.73	.68	.65	.72	.67	.64	.71	.67	.64	.63
9.0	.71	.65	.62	.70	.65	.62	.69	.65	.61	.69	.64	.61	.68	.64	.61	.60
10.0	.68	.62	.59	.67	.62	.59	.66	.62	.59	.66	.61	.58	.65	.61	.58	.57



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2022-11-30

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:277.02V I:0.0783A P:21.015W PF:0.9691 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1683.49x1 lm		
NAME: ASD-CD-TR-MV-6D24AC-WH	TYPE:	WEIGHT:
SPEC.: 2700K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

ρ_{CC}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.170	.097	.031	.164	.093	.030	.151	.087	.028	.140	.081	.026	.129	.075	.024	
2.0	.162	.089	.027	.156	.086	.027	.146	.081	.025	.136	.076	.024	.127	.072	.023	
3.0	.153	.082	.024	.148	.080	.024	.140	.076	.023	.131	.072	.022	.124	.068	.021	
4.0	.145	.075	.022	.141	.074	.022	.133	.071	.021	.126	.068	.020	.120	.065	.020	
5.0	.138	.070	.020	.134	.069	.020	.127	.066	.020	.121	.064	.019	.115	.062	.019	
6.0	.131	.066	.019	.128	.065	.019	.122	.062	.018	.116	.061	.018	.111	.059	.017	
7.0	.125	.062	.017	.122	.061	.017	.117	.059	.017	.112	.057	.017	.107	.056	.016	
8.0	.119	.058	.016	.117	.057	.016	.112	.056	.016	.108	.055	.016	.104	.053	.016	
9.0	.114	.055	.015	.112	.054	.015	.108	.053	.015	.104	.052	.015	.100	.051	.015	
10.0	.109	.052	.015	.107	.052	.014	.103	.051	.014	.100	.050	.014	.097	.049	.014	

ρ_{CC}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{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	.146	.135	.125	.100	.093	.087	.057	.054	.050	.018	.017	.016	
2.0	.155	.133	.114	.133	.114	.098	.091	.079	.069	.052	.046	.040	.017	.015	.013	
3.0	.142	.114	.091	.122	.098	.079	.084	.068	.055	.048	.040	.033	.016	.013	.011	
4.0	.131	.099	.074	.113	.085	.064	.077	.059	.045	.045	.035	.027	.014	.011	.009	
5.0	.122	.087	.061	.105	.075	.053	.072	.053	.037	.042	.031	.022	.013	.010	.007	
6.0	.114	.077	.051	.098	.067	.044	.068	.047	.031	.039	.028	.019	.013	.009	.006	
7.0	.107	.070	.043	.092	.060	.038	.064	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.101	.063	.037	.087	.055	.032	.060	.039	.023	.035	.023	.014	.011	.007	.005	
9.0	.096	.058	.032	.083	.050	.028	.057	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.091	.054	.028	.079	.047	.025	.055	.033	.018	.032	.019	.010	.010	.006	.003	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2022-11-30

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:277.02V I:0.0783A P:21.015W PF:0.9691 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1683.49x1 lm		
NAME: ASD-CD-TR-MV-6D24AC-WH	TYPE:	WEIGHT:
SPEC.: 2700K 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	5.6	6.4	5.8	6.6	6.8	5.7	6.5	5.9	6.7	6.9
3H	5.7	6.5	5.9	6.7	6.9	5.8	6.6	6.0	6.8	7.0
4H	5.6	6.4	5.9	6.6	6.8	5.7	6.5	6.0	6.7	6.9
6H	5.6	6.3	5.9	6.5	6.8	5.6	6.4	5.9	6.6	6.8
8H	5.5	6.2	5.8	6.5	6.7	5.6	6.3	5.9	6.6	6.8
12H	5.5	6.2	5.8	6.4	6.7	5.6	6.2	5.9	6.5	6.8
4H 2H	5.6	6.4	5.9	6.6	6.8	5.7	6.5	6.0	6.7	6.9
3H	5.8	6.4	6.1	6.7	7.0	5.8	6.5	6.2	6.8	7.0
4H	5.7	6.3	6.1	6.6	6.9	5.8	6.4	6.1	6.7	7.0
6H	5.7	6.2	6.0	6.5	6.9	5.7	6.3	6.1	6.6	6.9
8H	5.6	6.1	6.0	6.5	6.9	5.7	6.2	6.1	6.5	6.9
12H	5.6	6.1	6.0	6.4	6.8	5.7	6.1	6.1	6.5	6.9
8H 4H	5.6	6.1	6.0	6.5	6.8	5.7	6.2	6.1	6.5	6.9
6H	5.6	6.0	6.0	6.4	6.8	5.6	6.0	6.0	6.4	6.8
8H	5.5	5.9	6.0	6.3	6.8	5.6	6.0	6.0	6.4	6.8
12H	5.5	5.8	6.0	6.3	6.7	5.6	5.9	6.0	6.3	6.8
12H 4H	5.6	6.0	6.0	6.4	6.8	5.6	6.1	6.0	6.4	6.8
6H	5.5	5.9	6.0	6.3	6.7	5.6	5.9	6.0	6.4	6.8
8H	5.5	5.8	6.0	6.3	6.7	5.5	5.9	6.0	6.3	6.8

Variations with the observer position at spacings(CIE Pub.117):		
S = 1.0H	+ 1.4 / - 2.1	+ 1.7 / - 2.1
1.5H	+ 2.4 / - 1.4	+ 2.8 / - 1.3
2.0H	+ 1.7 / - 1.4	+ 1.8 / - 1.5

CIE Pub.117, 1683 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 1.8)
 Area: 0.111111 m2

C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 22.5DEG	γ Interval: 1.0DEG
Test Speed: HIGH	Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
Temperature:25.3°C	Humidity:65.0%
Operators:	Test Distance:3.090m [K=1.0000]
Test Date:2022-11-30	Remarks:

UTILIZATION FACTORS TABLE

Test:U:277.02V I:0.0783A P:21.015W PF:0.9691 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1683.49x1 lm		
NAME: ASD-CD-TR-MV-6D24AC-WH	TYPE:	WEIGHT:
SPEC.: 2700K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

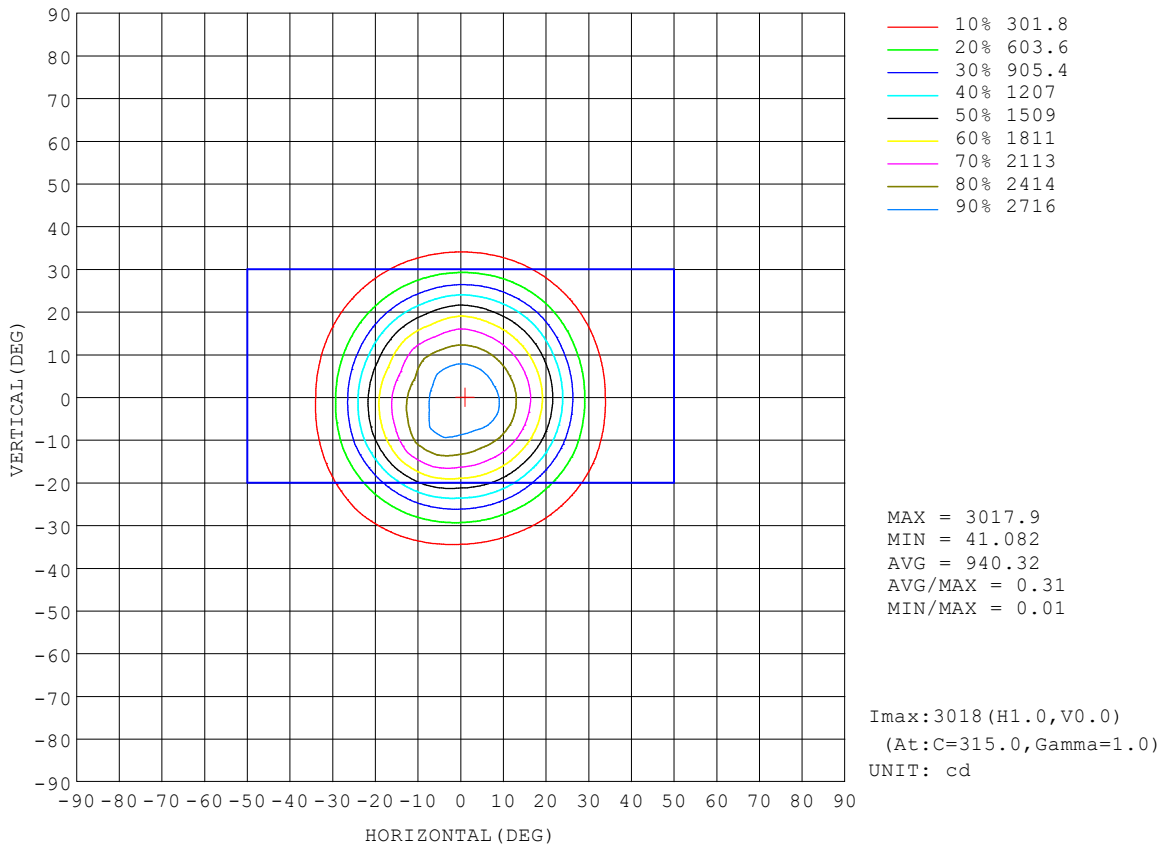
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	86	80	76	86	80	76	85	79	76	72
0.80	94	88	84	93	87	84	92	87	83	80
1.00	98	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	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	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:25.3°C
 Operators:
 Test Date:2022-11-30

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:277.02V I:0.0783A P:21.015W PF:0.9691 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1683.49x1 lm		
NAME: ASD-CD-TR-MV-6D24AC-WH	TYPE:	WEIGHT:
SPEC.: 2700K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

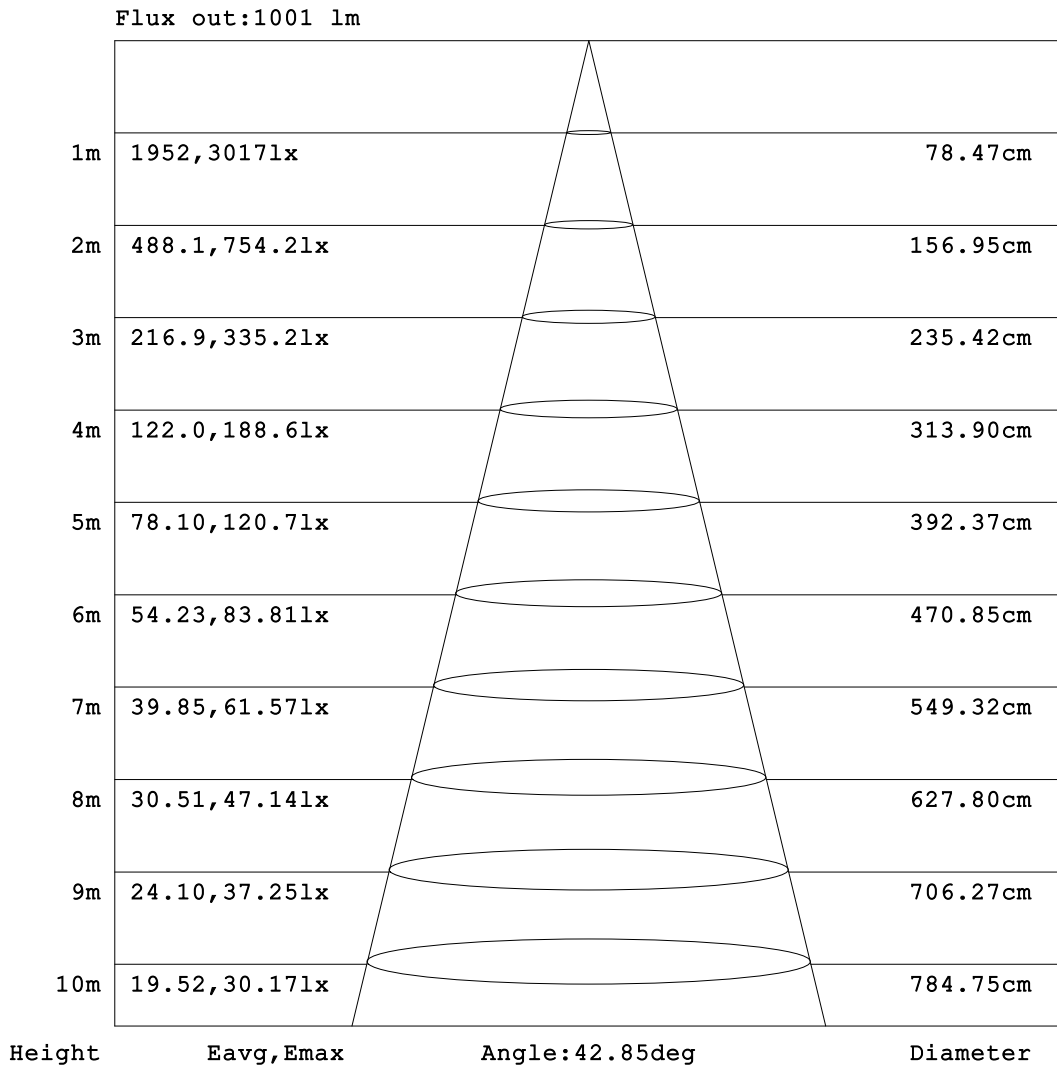


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2022-11-30

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

AAI Figure

Test:U:277.02V I:0.0783A P:21.015W PF:0.9691 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1683.49x1 lm		
NAME: ASD-CD-TR-MV-6D24AC-WH	TYPE:	WEIGHT:
SPEC.: 2700K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



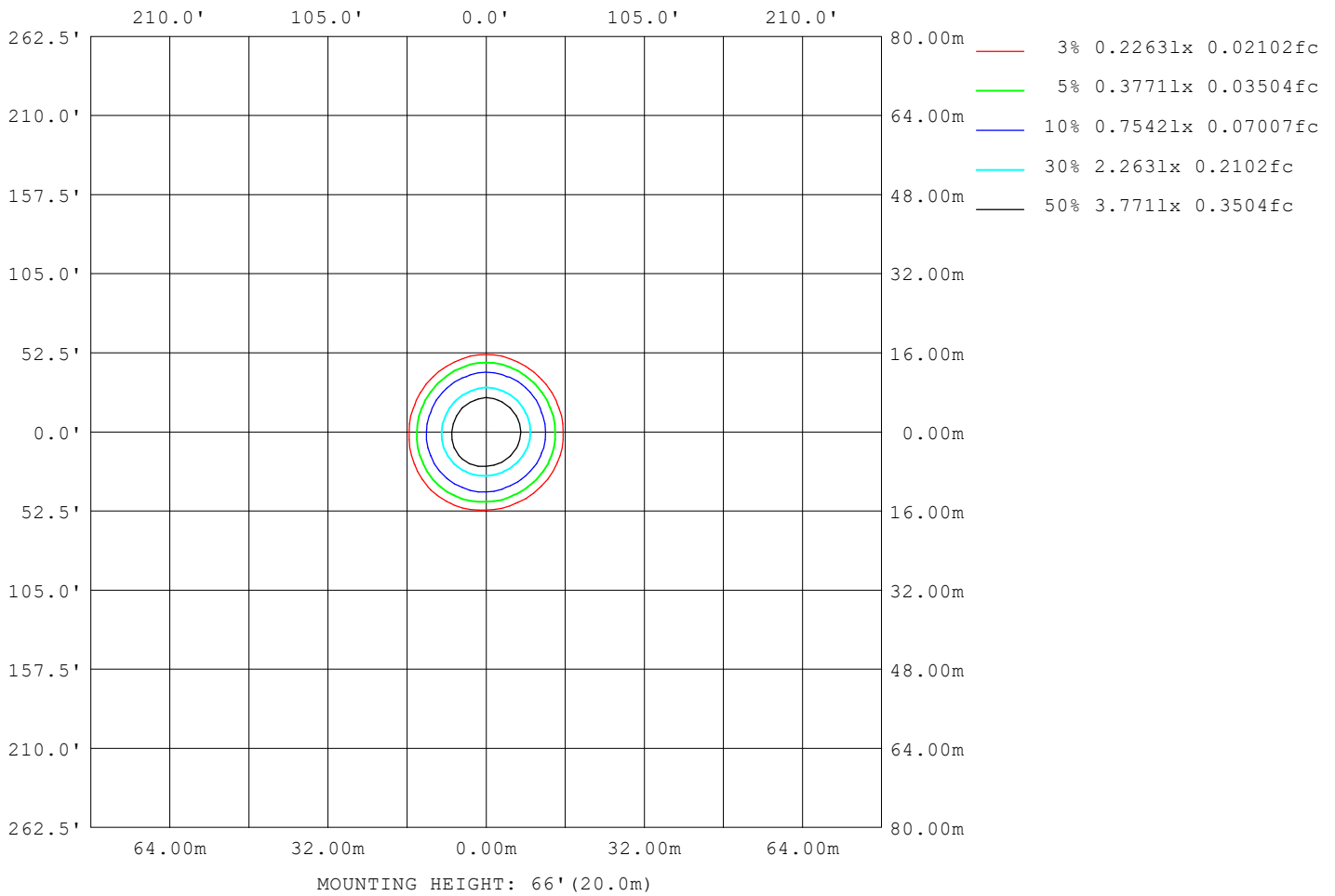
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2022-11-30

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:277.02V I:0.0783A P:21.015W PF:0.9691 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1683.49x1 lm		
NAME: ASD-CD-TR-MV-6D24AC-WH	TYPE:	WEIGHT:
SPEC.: 2700K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2022-11-30

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:277.02V I:0.0783A P:21.015W PF:0.9691 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1683.49x1 lm		
NAME: ASD-CD-TR-MV-6D24AC-WH	TYPE:	WEIGHT:
SPEC.: 2700K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

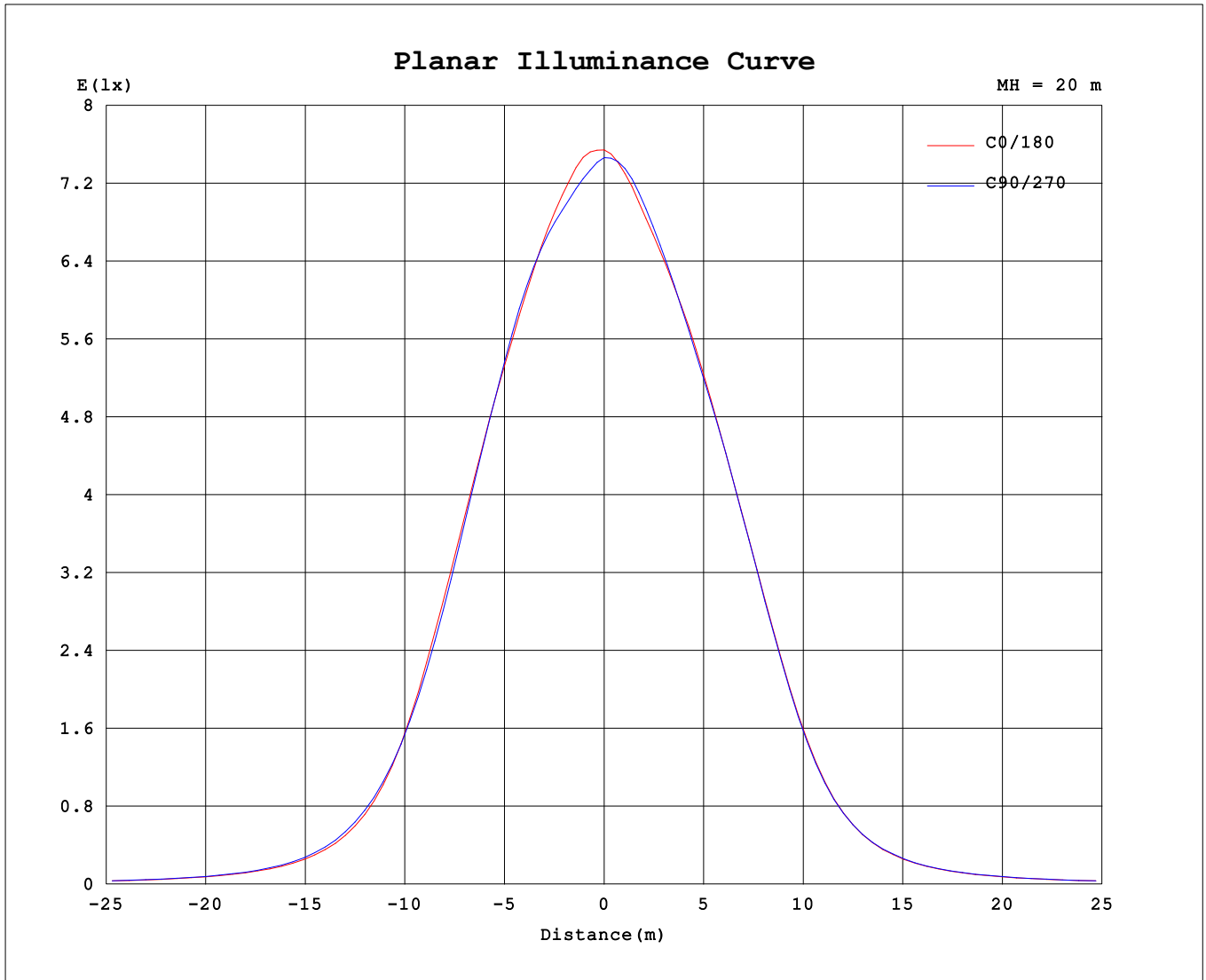
AvgL	cd/m2
L_0~180 (65) av	439
L_0~180 (75) av	131
L_0~180 (85) av	108
L_90~270 (65) av	449
L_90~270 (75) av	131
L_90~270 (85) av	97
L_45 (65) av	447
L_45 (75) av	131
L_45 (85) av	100

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:
 Test Date:2022-11-30

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators:
 Test Date: 2022-11-30

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.090m [K=1.0000]
 Remarks:

