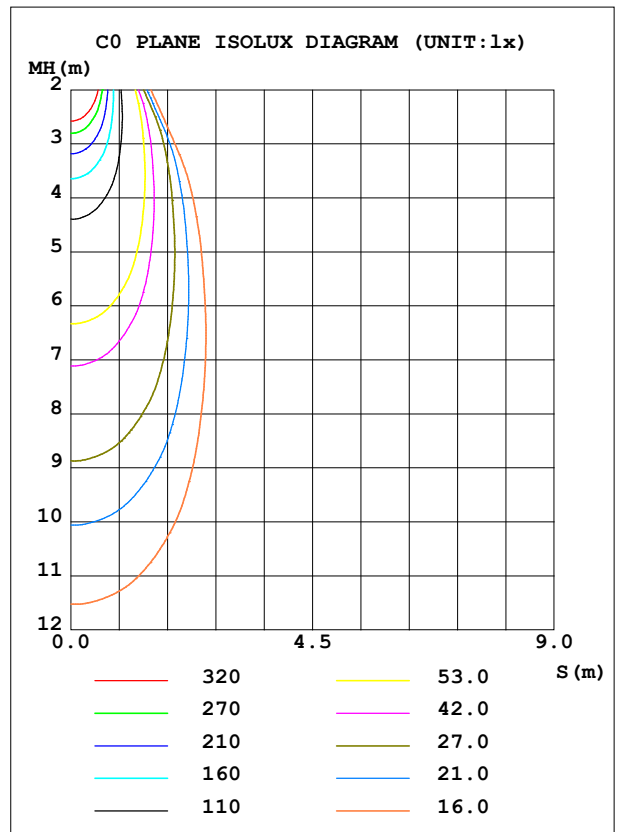
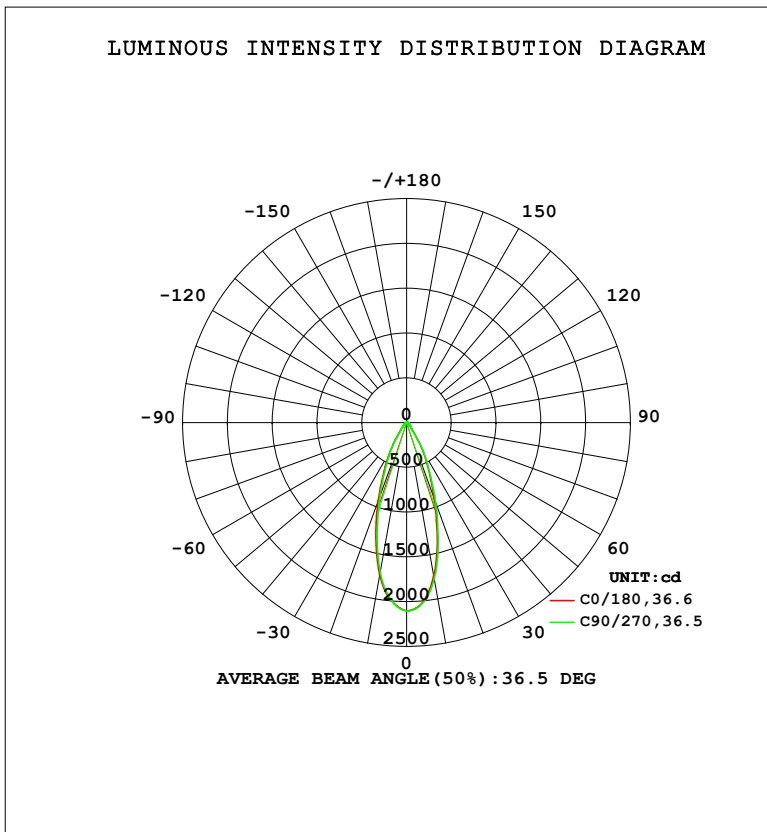


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:119.85V I:0.1153A P:13.527W PF:0.9788 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1042.59x1 lm		
NAME: ASD-CD-TR-MV-2D15AC-WH	TYPE:	WEIGHT:
SPEC.: 3500K 90	DIM.:	SERIAL No.:
MFR.:ASD Lighting Corp	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax (cd)	2108	S/MH (C0/180)	0.60
NOMINAL POWER (W)	15	LOR (%)	100.0	S/MH (C90/270)	0.58
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	1042.6	η UP, DN (C0-180)	0.0, 49.6
NOMINAL FLUX (lm)	1042.59	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 50.4
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	120	η down (%)	100.0	CIBSE SHR MAX	0.65



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators:
 Test Date: 2022-10-14

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:

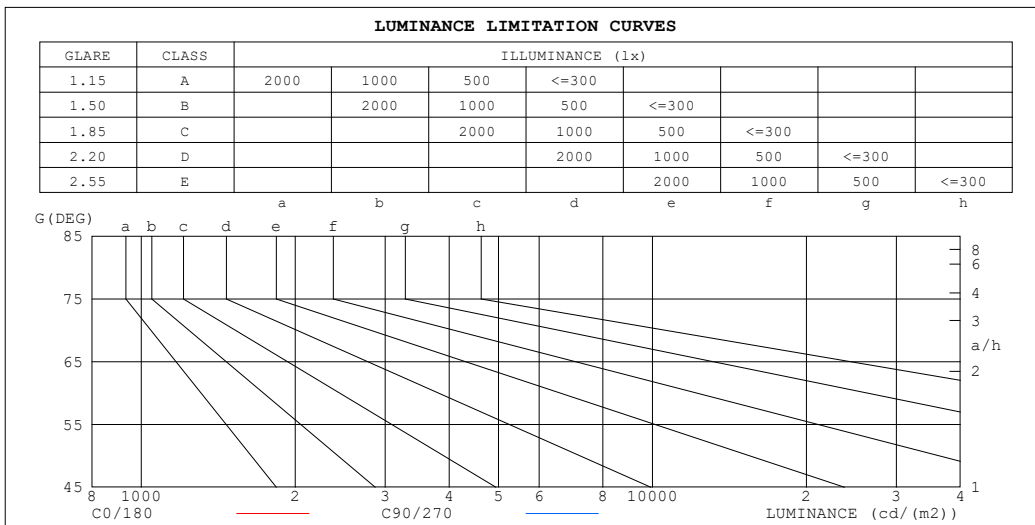
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	1745	1741	1777	1701	1730	1737	1703	1790	0- 10	183.3	183.3	17.6,17.6
20	907.5	904.2	956.5	886.5	930.3	927.4	870.6	954.1	10- 20	364.0	547.3	52.5,52.5
30	370.2	366.3	383.5	341.6	367.9	376.2	350.5	398.7	20- 30	274.8	822.1	78.9,78.9
40	87.99	88.01	91.96	84.00	92.78	97.89	87.75	90.52	30- 40	116.3	938.4	90,90
50	42.87	42.33	43.69	41.80	42.03	42.83	42.81	45.13	40- 50	46.40	984.8	94.5,94.5
60	23.11	22.54	23.55	22.77	23.53	23.84	23.56	24.93	50- 60	29.11	1014	97.3,97.3
70	12.45	12.12	12.69	12.02	12.49	12.81	12.61	13.48	60- 70	17.53	1031	98.9,98.9
80	4.858	4.643	4.865	4.287	4.706	4.955	4.843	5.452	70- 80	8.888	1040	99.8,99.8
90	0.0644	0.0590	0.0617	0.0650	0.0475	0.0447	0.0505	0.0489	80- 90	2.230	1043	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:2022-10-14

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:119.85V I:0.1153A P:13.527W PF:0.9788 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1042.59x1 lm		
NAME: ASD-CD-TR-MV-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	216	190
80	255	251
75	291	291
70	331	332
65	373	376
60	421	422
55	508	506
50	607	609
45	742	747

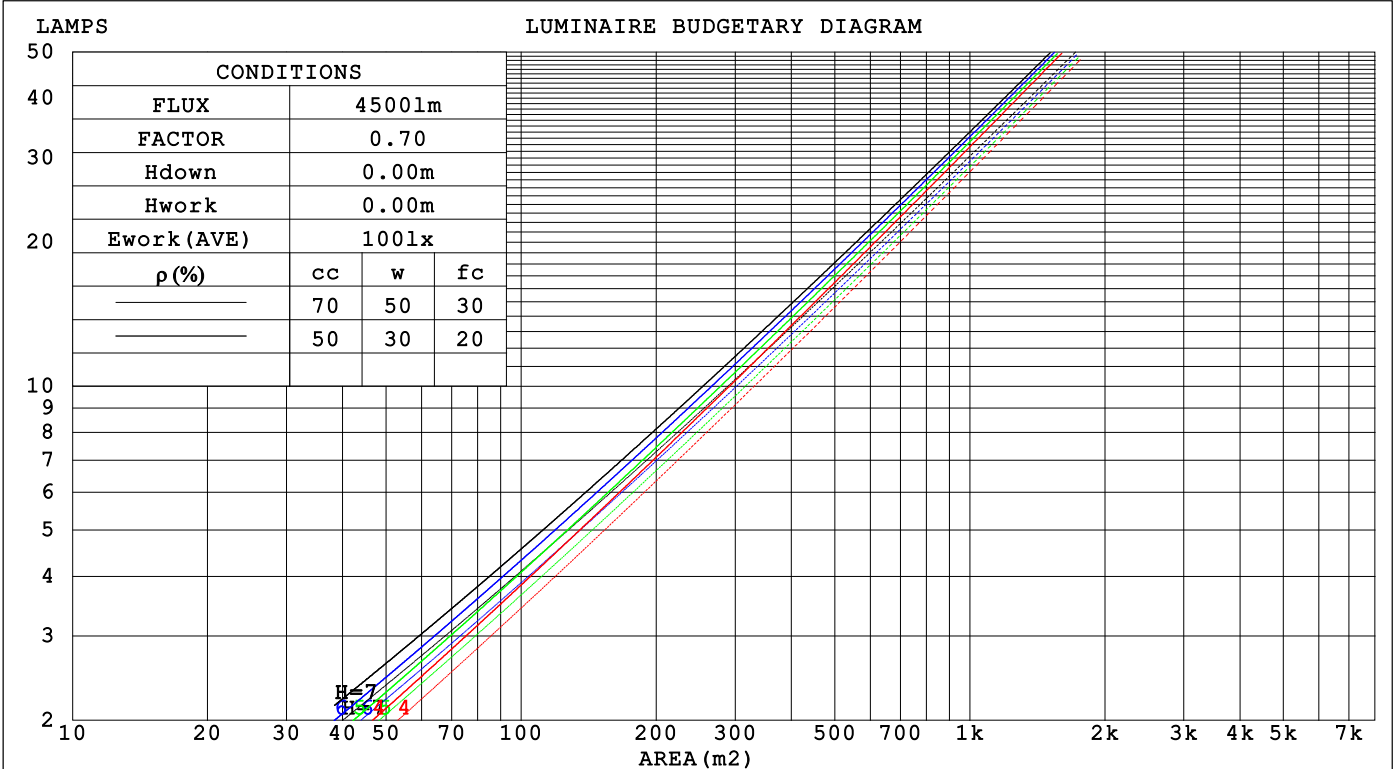
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2022-10-14

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:119.85V I:0.1153A P:13.527W PF:0.9788 Freq:59.98Hz		
UTHdi:0.00% ITHdi:0.00% KDisp:0 Lamp Flux:1042.59x1 lm		
NAME: ASD-CD-TR-MV-2D15AC-WH	TYPE:	WEIGHT:
SPEC.: 3500K 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															
	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	1.05	1.05	1.03	1.01	1.01	.98	.98	.98	.96	.95	.94
2.0	1.03	.96	.96	1.02	.98	.95	.99	.96	.93	.96	.93	.91	.93	.91	.89	.88
3.0	.97	.92	.88	.96	.91	.88	.93	.89	.86	.91	.88	.85	.88	.86	.84	.82
4.0	.91	.86	.82	.90	.85	.82	.88	.84	.81	.86	.83	.80	.84	.81	.79	.77
5.0	.86	.81	.77	.85	.80	.76	.84	.79	.76	.82	.78	.75	.80	.77	.74	.73
6.0	.82	.76	.72	.81	.76	.72	.79	.75	.71	.78	.74	.71	.77	.73	.70	.69
7.0	.78	.72	.68	.77	.72	.68	.76	.71	.68	.75	.70	.67	.74	.70	.67	.66
8.0	.74	.68	.65	.73	.68	.65	.72	.68	.64	.71	.67	.64	.70	.67	.64	.62
9.0	.71	.65	.61	.70	.65	.61	.69	.64	.61	.68	.64	.61	.68	.64	.61	.60
10.0	.67	.62	.59	.67	.62	.59	.66	.62	.58	.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:2022-10-14

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:119.85V I:0.1153A P:13.527W PF:0.9788 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1042.59x1 lm		
NAME: ASD-CD-TR-MV-2D15AC-WH	TYPE:	WEIGHT:
SPEC.: 3500K 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	.176	.100	.032	.169	.097	.031	.157	.090	.029	.145	.084	.027	.135	.078	.025	
2.0	.166	.091	.028	.161	.089	.027	.150	.084	.026	.140	.079	.025	.131	.074	.023	
3.0	.157	.083	.025	.152	.081	.024	.143	.077	.024	.135	.074	.023	.127	.070	.022	
4.0	.148	.077	.023	.144	.075	.022	.136	.072	.022	.129	.069	.021	.122	.066	.020	
5.0	.140	.071	.021	.136	.070	.020	.129	.067	.020	.123	.065	.019	.117	.063	.019	
6.0	.132	.066	.019	.129	.065	.019	.123	.063	.018	.118	.061	.018	.113	.059	.018	
7.0	.126	.062	.018	.123	.061	.017	.118	.060	.017	.113	.058	.017	.108	.056	.017	
8.0	.120	.058	.016	.117	.058	.016	.113	.056	.016	.108	.055	.016	.104	.054	.016	
9.0	.114	.055	.015	.112	.055	.015	.108	.053	.015	.104	.052	.015	.101	.051	.015	
10.0	.109	.052	.015	.107	.052	.014	.104	.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	.086	.058	.054	.050	.018	.017	.016	
2.0	.156	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.143	.114	.090	.122	.098	.078	.084	.068	.055	.048	.040	.032	.016	.013	.011	
4.0	.132	.099	.073	.113	.085	.064	.078	.059	.045	.045	.035	.027	.014	.011	.009	
5.0	.123	.087	.061	.105	.075	.053	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.115	.078	.051	.099	.067	.044	.068	.047	.031	.039	.028	.019	.013	.009	.006	
7.0	.108	.070	.043	.093	.061	.038	.064	.042	.027	.037	.025	.016	.012	.008	.005	
8.0	.102	.063	.037	.088	.055	.032	.061	.039	.023	.035	.023	.014	.011	.007	.005	
9.0	.096	.058	.032	.083	.050	.028	.058	.035	.020	.034	.021	.012	.011	.007	.004	
10.0	.092	.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:2022-10-14

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:119.85V I:0.1153A P:13.527W PF:0.9788 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1042.59x1 lm		
NAME: ASD-CD-TR-MV-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	6.1	7.0	6.3	7.1	7.3	6.3	7.1	6.5	7.3	7.5
3H	6.6	7.4	6.9	7.6	7.8	6.8	7.6	7.0	7.8	8.0
4H	6.8	7.6	7.1	7.8	8.0	7.0	7.8	7.2	8.0	8.2
6H	7.0	7.7	7.3	7.9	8.2	7.1	7.9	7.4	8.1	8.3
8H	7.0	7.7	7.3	8.0	8.2	7.2	7.9	7.5	8.1	8.4
12H	7.0	7.7	7.3	8.0	8.2	7.2	7.8	7.5	8.1	8.4
4H 2H	6.2	7.0	6.5	7.2	7.4	6.4	7.2	6.7	7.4	7.6
3H	6.9	7.6	7.2	7.9	8.1	7.1	7.7	7.4	8.0	8.3
4H	7.2	7.8	7.6	8.1	8.4	7.4	8.0	7.7	8.3	8.6
6H	7.5	8.0	7.8	8.3	8.7	7.6	8.2	8.0	8.5	8.8
8H	7.5	8.0	7.9	8.4	8.8	7.7	8.2	8.1	8.5	8.9
12H	7.6	8.0	8.0	8.4	8.8	7.7	8.2	8.1	8.5	8.9
8H 4H	7.3	7.8	7.7	8.1	8.5	7.4	7.9	7.8	8.3	8.7
6H	7.6	8.0	8.0	8.4	8.8	7.7	8.2	8.2	8.6	9.0
8H	7.7	8.1	8.2	8.5	9.0	7.9	8.2	8.3	8.7	9.1
12H	7.8	8.1	8.3	8.6	9.0	7.9	8.2	8.4	8.7	9.2
12H 4H	7.3	7.7	7.7	8.1	8.5	7.4	7.9	7.8	8.2	8.6
6H	7.6	8.0	8.1	8.4	8.8	7.7	8.1	8.2	8.5	9.0
8H	7.7	8.1	8.2	8.5	9.0	7.9	8.2	8.3	8.6	9.1

Variations with the observer position at spacings(CIE Pub.117):		
S = 1.0H	+ 0.7 / - 0.9	+ 0.7 / - 0.9
1.5H	+ 1.3 / - 0.5	+ 1.3 / - 0.6
2.0H	+ 1.0 / - 0.7	+ 1.0 / - 0.7

CIE Pub.117, 1043 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.1)
 Area: 0.111111 m2

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2022-10-14

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:

UTILIZATION FACTORS TABLE

Test:U:119.85V I:0.1153A P:13.527W PF:0.9788 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1042.59x1 lm		
NAME: ASD-CD-TR-MV-2D15AC-WH	TYPE:	WEIGHT:
SPEC.: 3500K 90	DIM.:	SERIAL No.:
MFR.:ASD Lighting Corp	SUR.:	Shielding Angle:

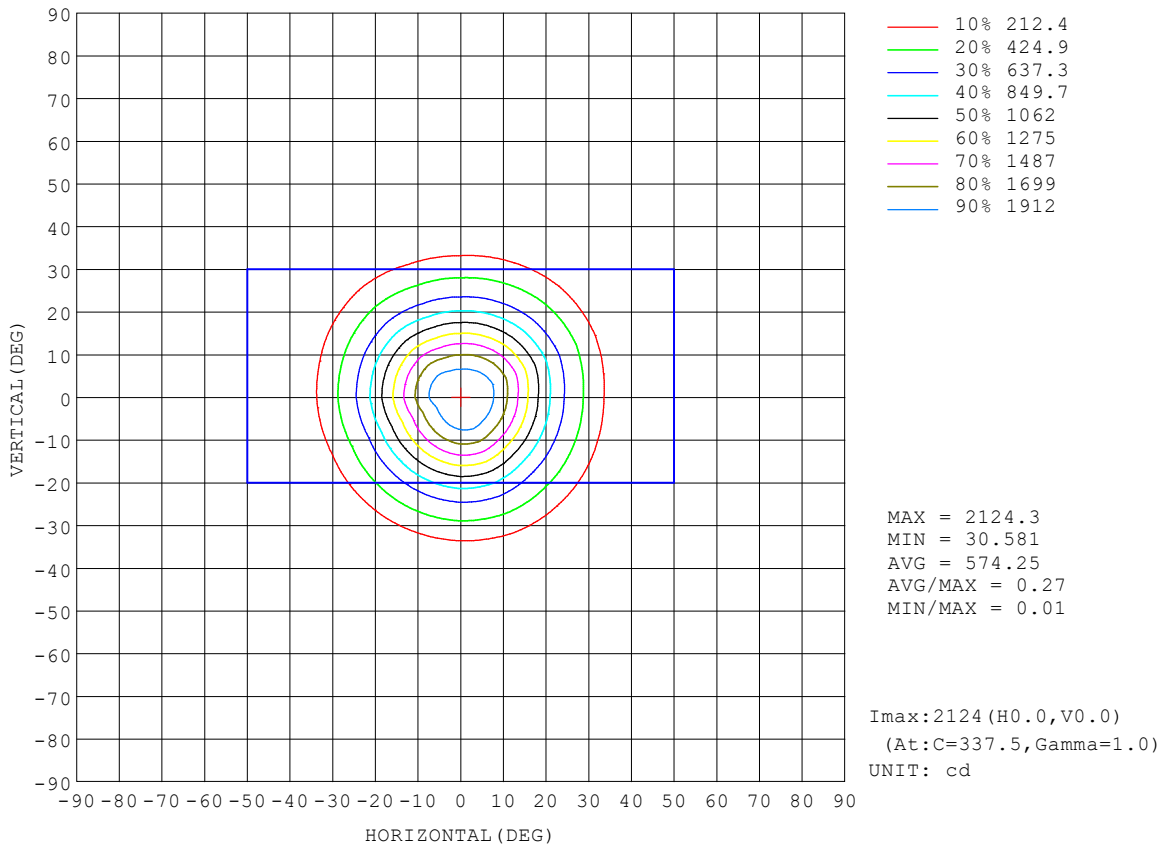
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	85	79	75	85	78	75	84	78	74	71
0.80	93	87	83	92	86	83	91	86	82	78
1.00	98	92	88	97	91	87	95	91	87	83
1.25	102	96	92	101	96	92	99	94	91	87
1.50	105	100	96	103	99	95	101	97	94	90
2.00	108	103	100	106	102	99	103	100	97	92
2.50	109	105	102	108	104	101	105	102	99	93
3.00	111	107	105	109	106	103	106	103	101	95
4.00	113	110	108	111	109	107	108	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:25.3°C
 Operators:
 Test Date:2022-10-14

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:119.85V I:0.1153A P:13.527W PF:0.9788 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1042.59x1 lm		
NAME: ASD-CD-TR-MV-2D15AC-WH	TYPE:	WEIGHT:
SPEC.: 3500K 90	DIM.:	SERIAL No.:
MFR.:ASD Lighting Corp	SUR.:	Shielding Angle:



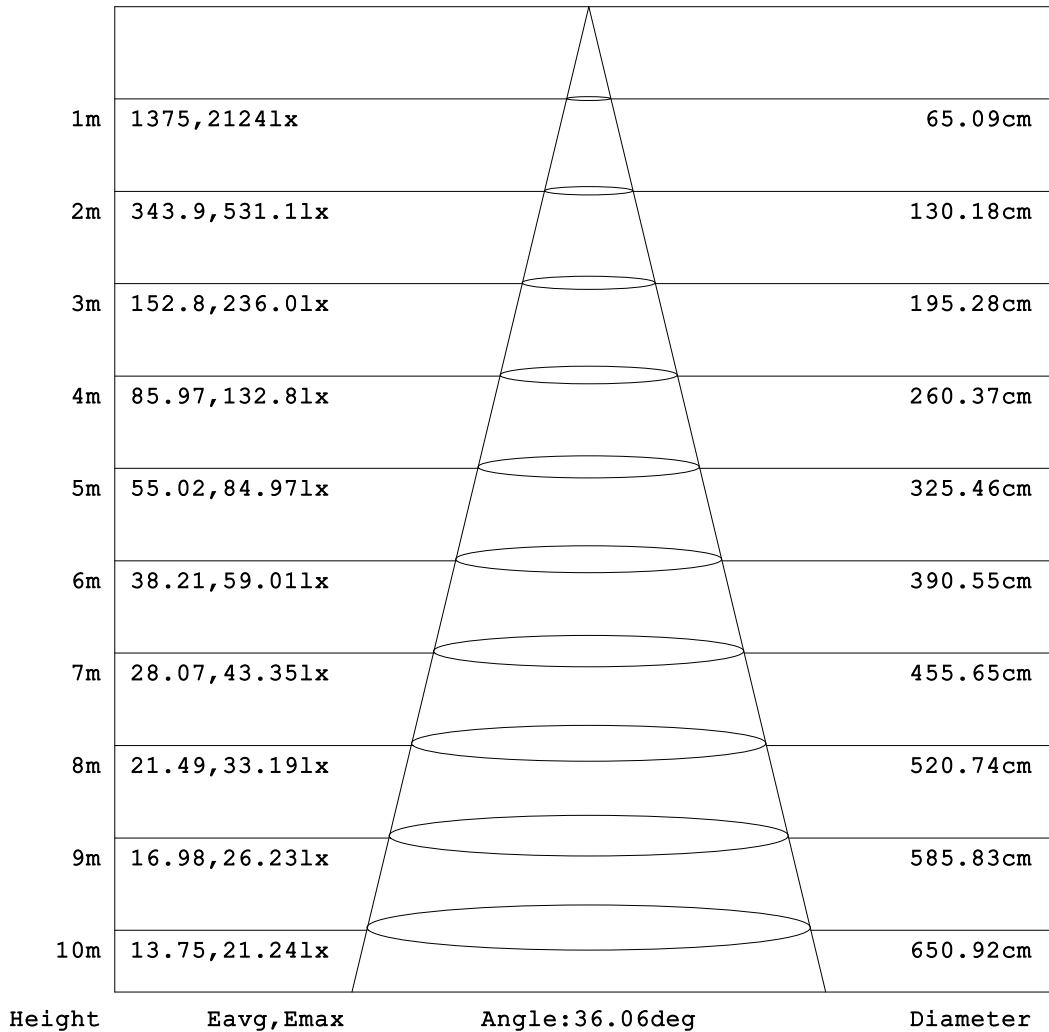
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2022-10-14

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:119.85V I:0.1153A P:13.527W PF:0.9788 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1042.59x1 lm		
NAME: ASD-CD-TR-MV-2D15AC-WH	TYPE:	WEIGHT:
SPEC.: 3500K 90	DIM.:	SERIAL No.:
MFR.:ASD Lighting Corp	SUR.:	Shielding Angle:

Flux out:512.3 lm



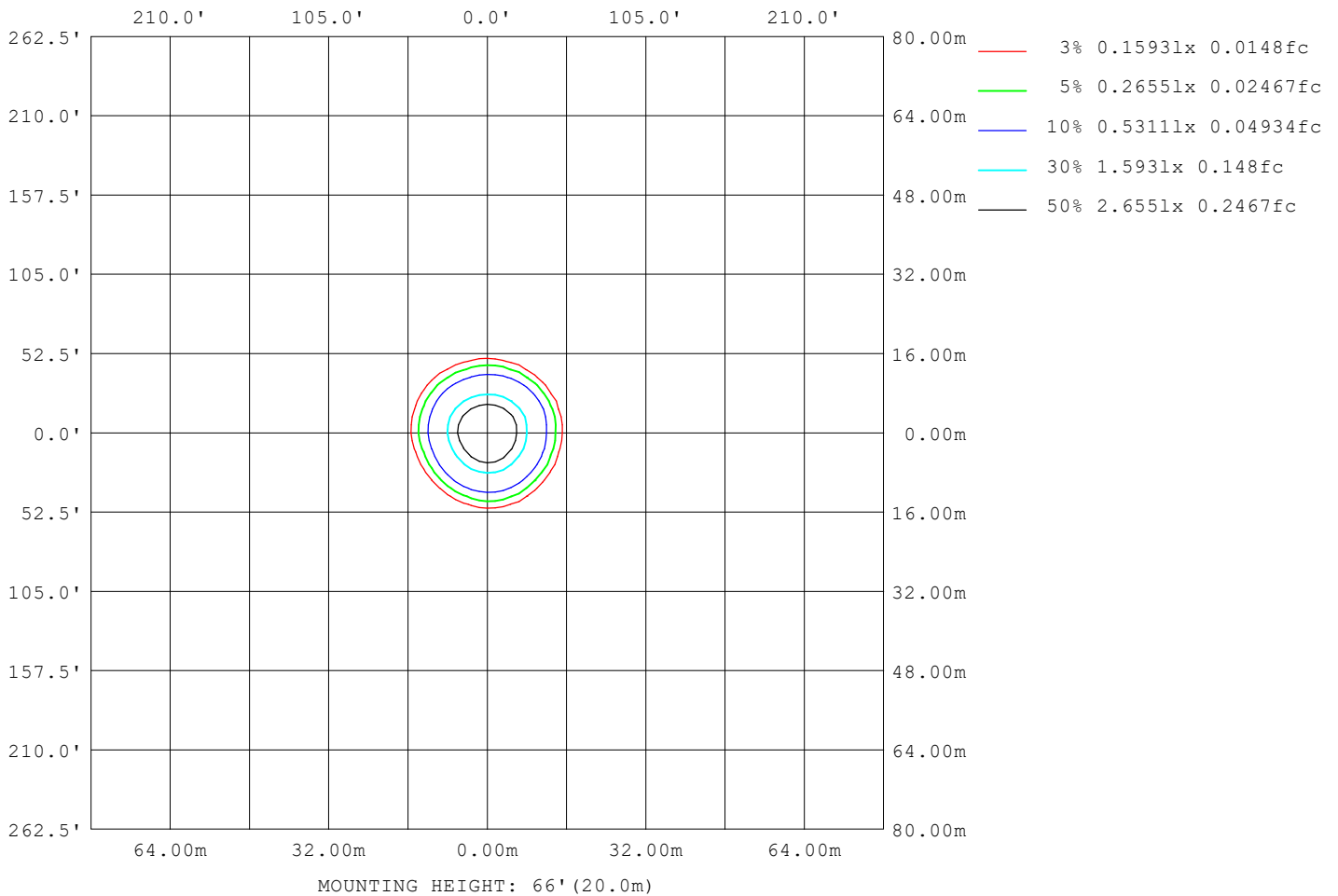
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 2022-10-14

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:119.85V I:0.1153A P:13.527W PF:0.9788 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1042.59x1 lm		
NAME: ASD-CD-TR-MV-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:25.3°C
 Operators:
 Test Date:2022-10-14

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:119.85V I:0.1153A P:13.527W PF:0.9788 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1042.59x1 lm		
NAME: ASD-CD-TR-MV-2D15AC-WH	TYPE:	WEIGHT:
SPEC.: 3500K 90	DIM.:	SERIAL No.:
MFR.:ASD Lighting Corp	SUR.:	Shielding Angle:

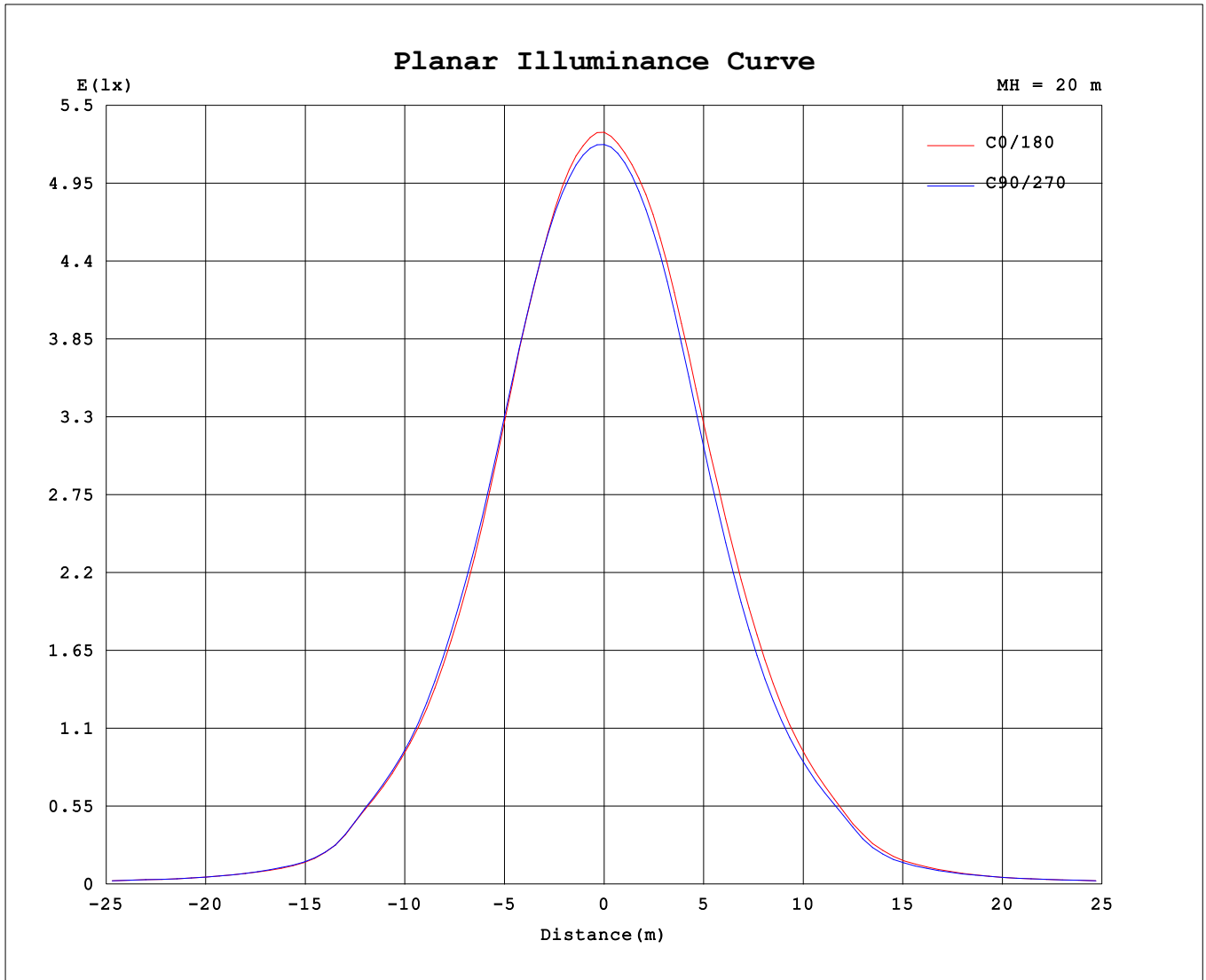
AvgL	cd/m2
L_0~180 (65) av	373
L_0~180 (75) av	286
L_0~180 (85) av	204
L_90~270 (65) av	377
L_90~270 (75) av	291
L_90~270 (85) av	199
L_45 (65) av	376
L_45 (75) av	290
L_45 (85) av	201

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:
 Test Date:2022-10-14

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: 2022-10-14

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:

