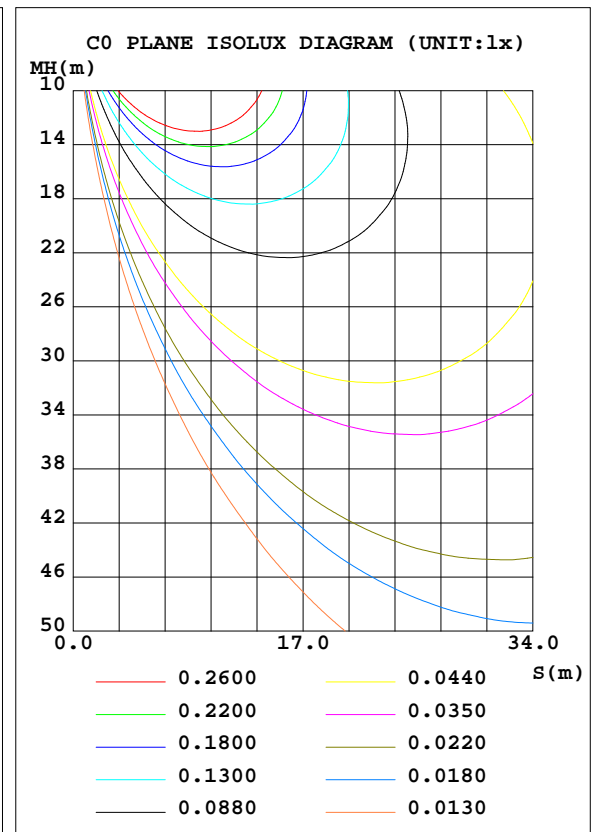
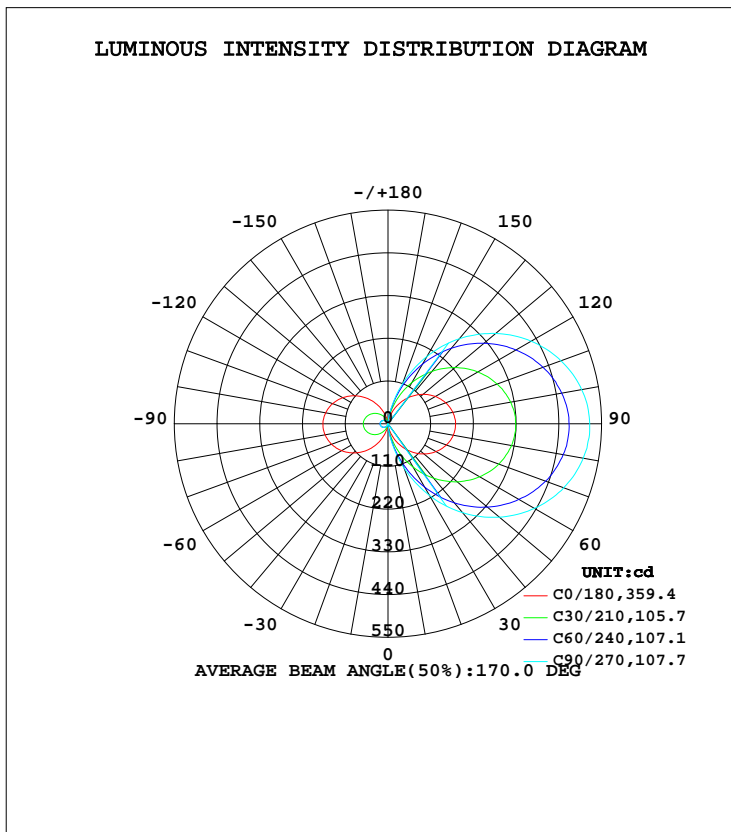


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.00V I:0.1793A P:21.190W PF:0.9849 Freq:60.00Hz Lamp Flux:2031.72x1 lm		
NAME: ASD-LVF21-MV-18D20NK_3000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 95.88 lm/W			
MODEL	ASD-LVF21-MV-18D20NK	I <sub>max</sub> (cd)	519.8	S/MH(C0/180)	25.29
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	10.74
RATED VOLTAGE(V)	120-277	TOTAL FLUX(lm)	2031.7	η UP, DN(C0-180)	43.1,44.0
NOMINAL FLUX(lm)	2031.72	CIE CLASS	DIFFUSE	η UP, DN(C180-360)	6.4,6.5
LAMPS INSIDE	1	η up(%)	49.4	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	120	η down(%)	50.6	CIBSE SHR MAX	1.15



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 25 September 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 40.8%  
 Test Distance: 2.500m [K=1.0388]  
 Remarks:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	9.361	26.36	36.52	27.47	9.577	1.977	1.244	2.147	0- 10	0.6723	0.6723	0.03,0.03
20	35.12	89.74	120.4	90.87	34.11	6.831	4.270	7.466	10- 20	9.254	9.926	0.49,0.49
30	65.13	160.6	212.4	161.2	62.98	12.70	7.886	13.82	20- 30	32.00	41.92	2.06,2.06
40	94.54	228.5	298.9	228.8	91.44	18.71	11.39	20.32	30- 40	67.01	108.9	5.36,5.36
50	120.9	288.2	374.5	288.1	117.1	24.34	14.53	26.37	40- 50	109.4	218.4	10.7,10.7
60	143.3	337.2	435.5	336.9	138.3	29.10	17.12	31.44	50- 60	153.4	371.7	18.3,18.3
70	160.2	374.2	481.7	373.7	154.5	32.77	19.02	35.26	60- 70	193.1	564.8	27.8,27.8
80	170.9	397.4	510.7	396.4	164.6	34.99	20.13	37.71	70- 80	223.1	788.0	38.8,38.8
90	174.2	404.4	519.4	403.4	167.7	35.68	20.52	38.58	80- 90	239.3	1027	50.6,50.6
100	169.6	393.7	506.5	393.2	163.1	34.69	19.88	37.68	90-100	238.3	1266	62.3,62.3
110	158.2	367.7	474.3	367.1	151.8	32.21	18.43	35.14	100-110	220.5	1486	73.1,73.1
120	140.9	328.4	425.5	327.8	134.7	28.33	16.37	31.04	110-120	189.2	1675	82.5,82.5
130	118.2	278.1	361.8	277.2	112.4	23.47	13.90	26.04	120-130	149.1	1824	89.8,89.8
140	91.43	217.9	286.1	217.3	86.47	17.92	10.87	19.93	130-140	105.3	1930	95,95
150	62.20	151.2	199.7	150.5	58.28	12.61	7.564	12.76	140-150	63.63	1993	98.1,98.1
160	32.74	81.82	109.0	81.23	30.11	7.929	4.229	6.035	150-160	29.75	2023	99.6,99.6
170	8.544	21.97	29.28	21.56	7.306	2.413	1.439	2.159	160-170	8.218	2031	100,100
180	0.0323	0	0	0	0.0821	0.0814	0.0909	0.1274	170-180	0.5222	2032	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 158.1 lm

%lum = 7.8%

%lamp = 7.8%

Conical surface Flux(120deg): 371.75 lm

%lum = 18.3%

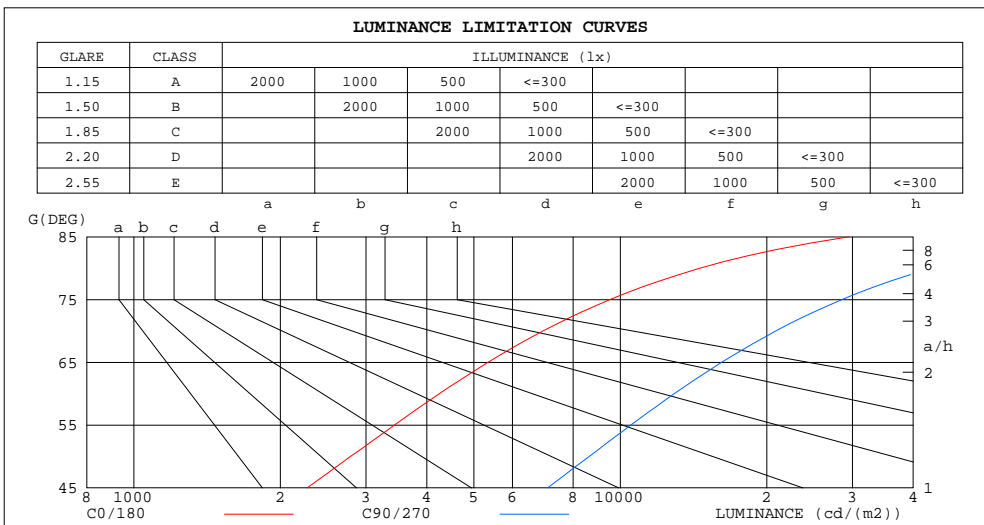
%lamp = 18.3%

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 25 September 2023

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 40.8%  
 Test Distance: 2.500m [K=1.0388]  
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.00V I:0.1793A P:21.190W PF:0.9849 Freq:60.00Hz Lamp Flux:2031.72x1 lm		
NAME: ASD-LVF21-MV-18D20NK_3000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	29477	87937
80	14579	43572
75	9522	28531
70	6937	20866
65	5343	16143
60	4246	12904
55	3430	10507
50	2787	8631
45	2270	7084

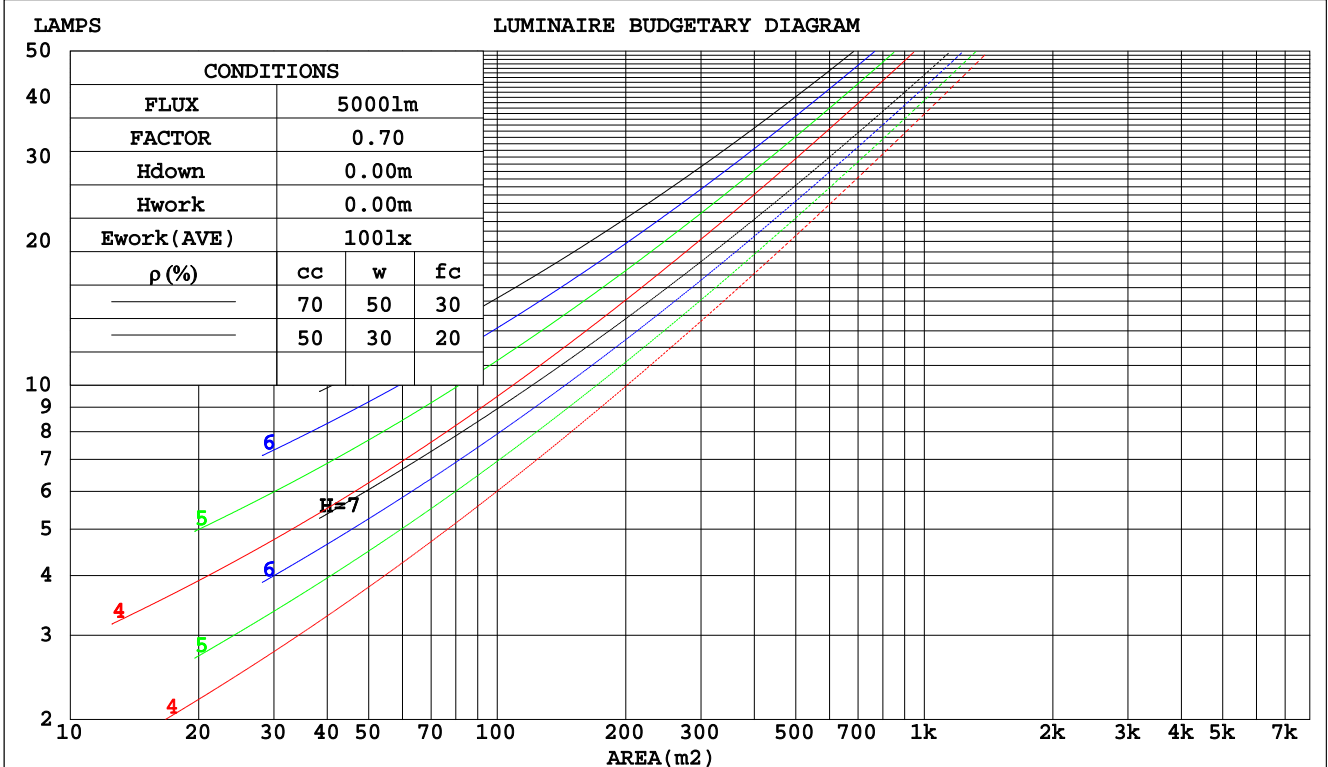
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 25 September 2023

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 40.8%  
 Test Distance: 2.500m [K=1.0388]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.00V I:0.1793A P:21.190W PF:0.9849 Freq:60.00Hz Lamp Flux:2031.72x1 lm		
NAME: ASD-LVF21-MV-18D20NK_3000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.07	1.07	1.07	.99	.99	.99	.84	.84	.84	.70	.70	.70	.57	.57	.57	.51
1.0	.85	.79	.73	.78	.72	.67	.64	.60	.56	.52	.49	.46	.40	.38	.36	.30
2.0	.71	.62	.55	.65	.57	.50	.53	.47	.42	.42	.37	.33	.32	.29	.26	.20
3.0	.60	.51	.43	.55	.46	.39	.45	.38	.32	.35	.30	.26	.27	.23	.19	.15
4.0	.52	.42	.35	.47	.38	.32	.38	.31	.26	.30	.25	.20	.23	.18	.15	.11
5.0	.46	.36	.28	.41	.33	.26	.34	.27	.21	.26	.21	.17	.20	.15	.12	.08
6.0	.40	.31	.24	.37	.28	.22	.30	.23	.18	.23	.18	.14	.17	.13	.10	.07
7.0	.36	.27	.20	.33	.24	.18	.27	.20	.15	.21	.16	.12	.16	.11	.08	.05
8.0	.32	.23	.17	.29	.21	.16	.24	.17	.13	.19	.14	.10	.14	.10	.07	.04
9.0	.29	.21	.15	.27	.19	.14	.22	.15	.11	.17	.12	.08	.13	.09	.06	.04
10.0	.26	.18	.13	.24	.17	.12	.20	.14	.10	.16	.11	.07	.12	.08	.05	.03



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 25 September 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 40.8%  
 Test Distance: 2.500m [K=1.0388]  
 Remarks:

WEC AND CCEC

Test:U:120.00V I:0.1793A P:21.190W PF:0.9849 Freq:60.00Hz Lamp Flux:2031.72x1 lm		
NAME: ASD-LVF21-MV-18D20NK_3000K	TYPE:LED	WEIGHT:
SPEC.:N/A	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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.447	.254	.080	.424	.242	.077	.382	.219	.070	.344	.198	.064	.308	.179	.058	
2.0	.366	.201	.062	.346	.190	.059	.307	.171	.053	.272	.153	.048	.239	.135	.043	
3.0	.316	.168	.050	.297	.159	.048	.262	.142	.043	.230	.126	.039	.200	.110	.034	
4.0	.279	.145	.043	.262	.137	.041	.230	.122	.036	.200	.107	.032	.172	.093	.028	
5.0	.250	.127	.037	.234	.120	.035	.205	.107	.031	.177	.094	.028	.152	.081	.024	
6.0	.227	.114	.033	.212	.107	.031	.185	.095	.028	.160	.083	.024	.136	.071	.021	
7.0	.208	.103	.029	.194	.097	.028	.169	.085	.025	.145	.075	.022	.123	.064	.019	
8.0	.191	.093	.026	.179	.088	.025	.155	.078	.022	.133	.068	.020	.113	.058	.017	
9.0	.177	.086	.024	.166	.081	.023	.144	.071	.020	.123	.062	.018	.104	.053	.015	
10.0	.165	.079	.022	.155	.075	.021	.134	.066	.019	.115	.057	.016	.097	.049	.014	

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.567	.567	.567	.485	.485	.485	.331	.331	.331	.190	.190	.190	.061	.061	.061	
1.0	.570	.535	.503	.487	.459	.433	.333	.316	.300	.192	.183	.174	.061	.059	.056	
2.0	.565	.514	.471	.484	.442	.407	.331	.306	.284	.191	.178	.167	.061	.058	.054	
3.0	.558	.499	.452	.478	.430	.392	.328	.299	.275	.190	.175	.162	.061	.057	.053	
4.0	.550	.488	.440	.472	.421	.382	.325	.294	.269	.188	.172	.159	.060	.056	.052	
5.0	.543	.479	.432	.466	.414	.376	.321	.289	.265	.186	.170	.157	.060	.055	.052	
6.0	.535	.472	.426	.460	.408	.371	.317	.286	.262	.184	.168	.156	.059	.055	.052	
7.0	.528	.466	.422	.454	.404	.367	.314	.283	.260	.182	.167	.155	.059	.055	.051	
8.0	.522	.460	.418	.449	.399	.365	.311	.280	.259	.181	.165	.154	.058	.054	.051	
9.0	.515	.456	.416	.444	.396	.363	.308	.278	.258	.179	.164	.154	.058	.054	.051	
10.0	.509	.452	.414	.439	.393	.361	.305	.276	.257	.178	.163	.153	.058	.054	.051	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 25 September 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 40.8%  
 Test Distance: 2.500m [K=1.0388]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.00V I:0.1793A P:21.190W PF:0.9849 Freq:60.00Hz Lamp Flux:2031.72x1 lm		
NAME: ASD-LVF21-MV-18D20NK_3000K	TYPE:LED	WEIGHT:
SPEC.:N/A	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	16.5	17.7	17.4	18.6	19.7	20.8	22.0	21.7	22.9	24.0
3H	19.6	20.6	20.5	21.6	22.8	24.7	25.7	25.6	26.7	27.8
4H	21.3	22.3	22.2	23.2	24.4	26.8	27.8	27.7	28.7	29.9
6H	23.1	24.1	24.0	25.0	26.2	29.1	30.0	30.0	31.0	32.2
8H	24.1	25.0	25.1	26.0	27.2	30.3	31.2	31.3	32.2	33.4
12H	25.3	26.1	26.2	27.1	28.4	31.8	32.6	32.7	33.6	34.8
4H 2H	19.0	20.0	19.9	20.9	22.2	21.5	22.5	22.4	23.5	24.7
3H	22.0	22.9	23.0	23.9	25.1	25.6	26.5	26.5	27.4	28.7
4H	23.7	24.5	24.7	25.5	26.8	27.9	28.7	28.8	29.6	30.9
6H	25.6	26.3	26.5	27.2	28.5	30.4	31.1	31.3	32.1	33.4
8H	26.5	27.2	27.5	28.2	29.5	31.7	32.4	32.7	33.4	34.7
12H	27.6	28.3	28.6	29.3	30.6	33.3	33.9	34.2	34.9	36.2
8H 4H	25.4	26.1	26.4	27.1	28.4	28.4	29.0	29.3	30.0	31.3
6H	27.5	28.1	28.5	29.1	30.5	31.2	31.7	32.2	32.7	34.1
8H	28.7	29.2	29.7	30.2	31.6	32.7	33.3	33.7	34.3	35.6
12H	29.9	30.4	30.9	31.4	32.8	34.5	35.0	35.5	36.0	37.4
12H 4H	26.0	26.6	27.0	27.6	28.9	28.4	29.1	29.4	30.1	31.4
6H	28.3	28.8	29.3	29.8	31.2	31.4	31.9	32.4	32.9	34.2
8H	29.6	30.1	30.6	31.1	32.4	33.1	33.5	34.1	34.5	35.9
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				

CIE Pub.117, 2032 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 2.5)  
 Area: 0.0675 m2

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 25 September 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 40.8%  
 Test Distance: 2.500m [K=1.0388]  
 Remarks:

## UTILIZATION FACTORS TABLE

Test:U:120.00V I:0.1793A P:21.190W PF:0.9849 Freq:60.00Hz Lamp Flux:2031.72x1 lm		
NAME: ASD-LVF21-MV-18D20NK_3000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

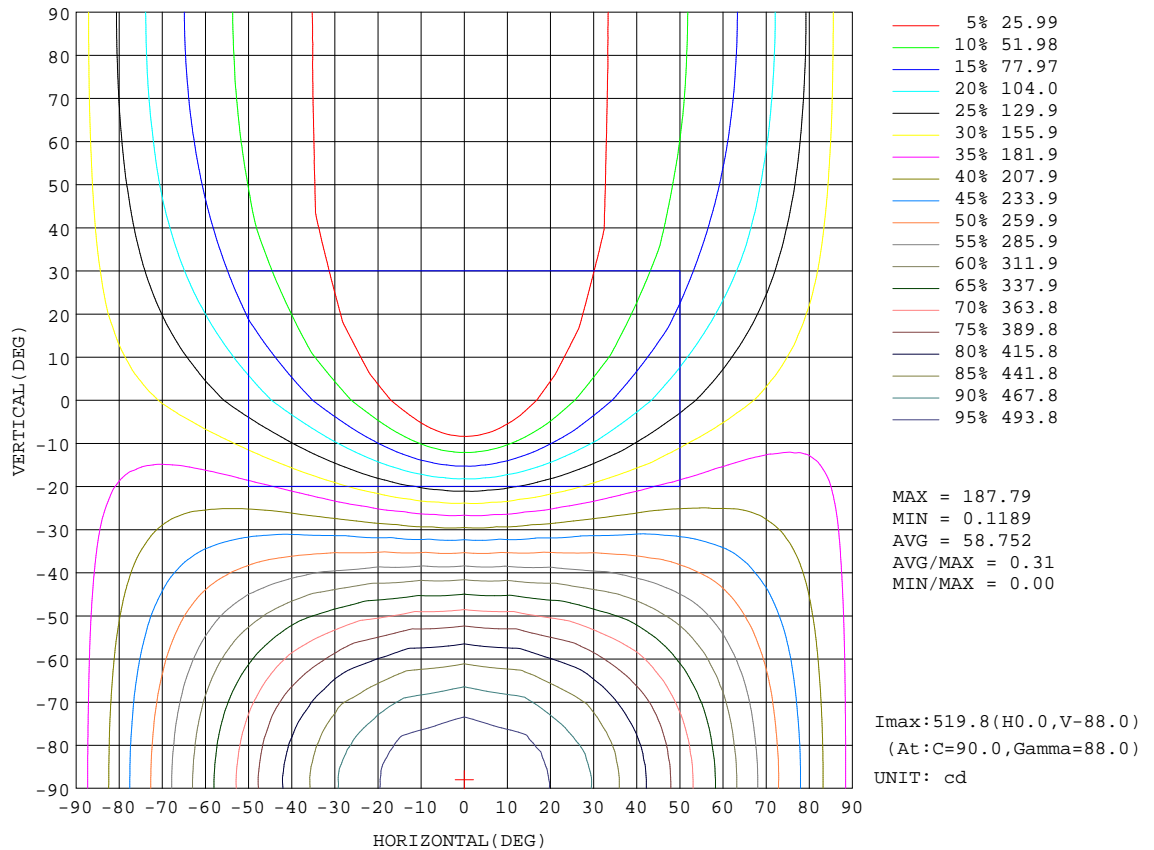
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	33	20	12	31	19	12	28	17	11	4
0.80	42	27	18	39	25	17	34	23	15	6
1.00	49	34	24	45	32	23	39	30	20	9
1.25	55	40	30	51	38	29	44	33	25	11
1.50	61	46	36	56	43	33	48	37	29	14
2.00	69	55	45	64	51	42	54	44	36	18
2.50	74	61	51	68	57	48	58	49	41	21
3.00	78	66	57	72	62	53	61	53	46	24
4.00	84	74	65	77	68	60	65	58	52	28
5.00	88	79	71	81	73	66	68	62	56	31
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 25 September 2023

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 40.8%  
 Test Distance: 2.500m [K=1.0388]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.00V I:0.1793A P:21.190W PF:0.9849 Freq:60.00Hz Lamp Flux:2031.72x1 lm		
NAME: ASD-LVF21-MV-18D20NK_3000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



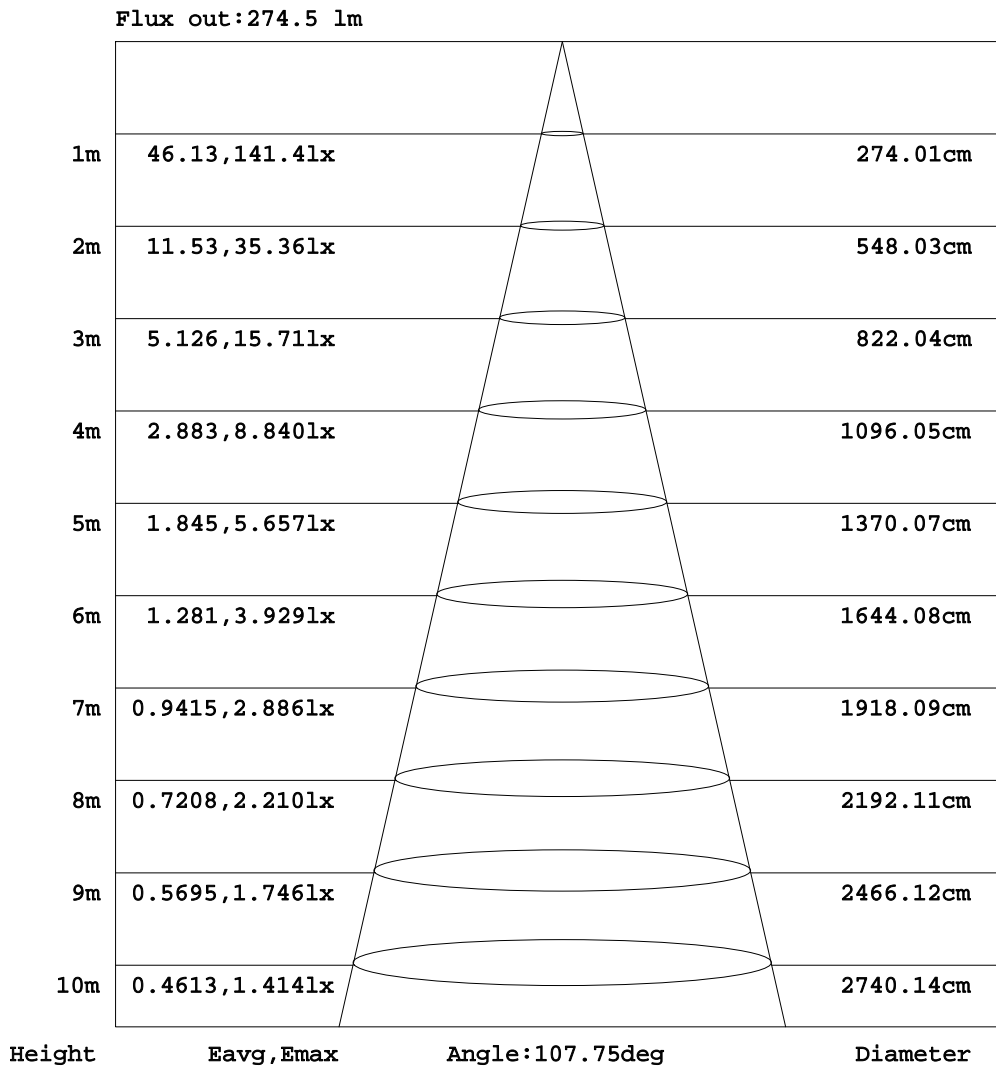
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators:Alan Wang  
 Test Date:25 September 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 40.8%  
 Test Distance:2.500m [K=1.0388]  
 Remarks:



AAI Figure

Test:U:120.00V I:0.1793A P:21.190W PF:0.9849 Freq:60.00Hz Lamp Flux:2031.72x1 lm		
NAME: ASD-LVF21-MV-18D20NK_3000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



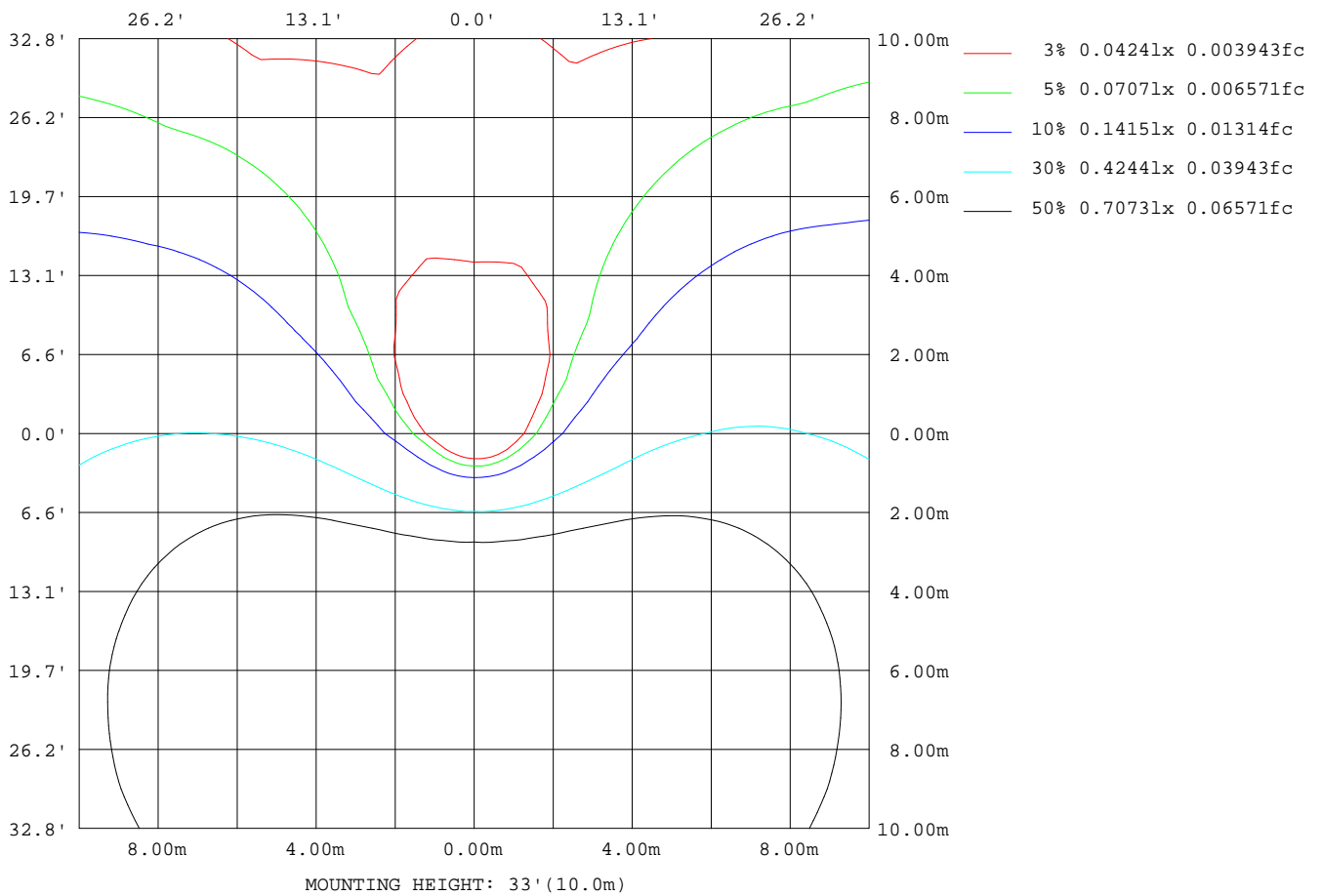
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 25 September 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 40.8%  
 Test Distance: 2.500m [K=1.0388]  
 Remarks:

ISOLUX DIAGRAM

Test:U:120.00V I:0.1793A P:21.190W PF:0.9849 Freq:60.00Hz Lamp Flux:2031.72x1 lm		
NAME: ASD-LVF21-MV-18D20NK_3000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 25 September 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 40.8%  
 Test Distance: 2.500m [K=1.0388]  
 Remarks:

## LED Avg.L Report

Test:U:120.00V I:0.1793A P:21.190W PF:0.9849 Freq:60.00Hz Lamp Flux:2031.72x1 lm		
NAME: ASD-LVF21-MV-18D20NK_3000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

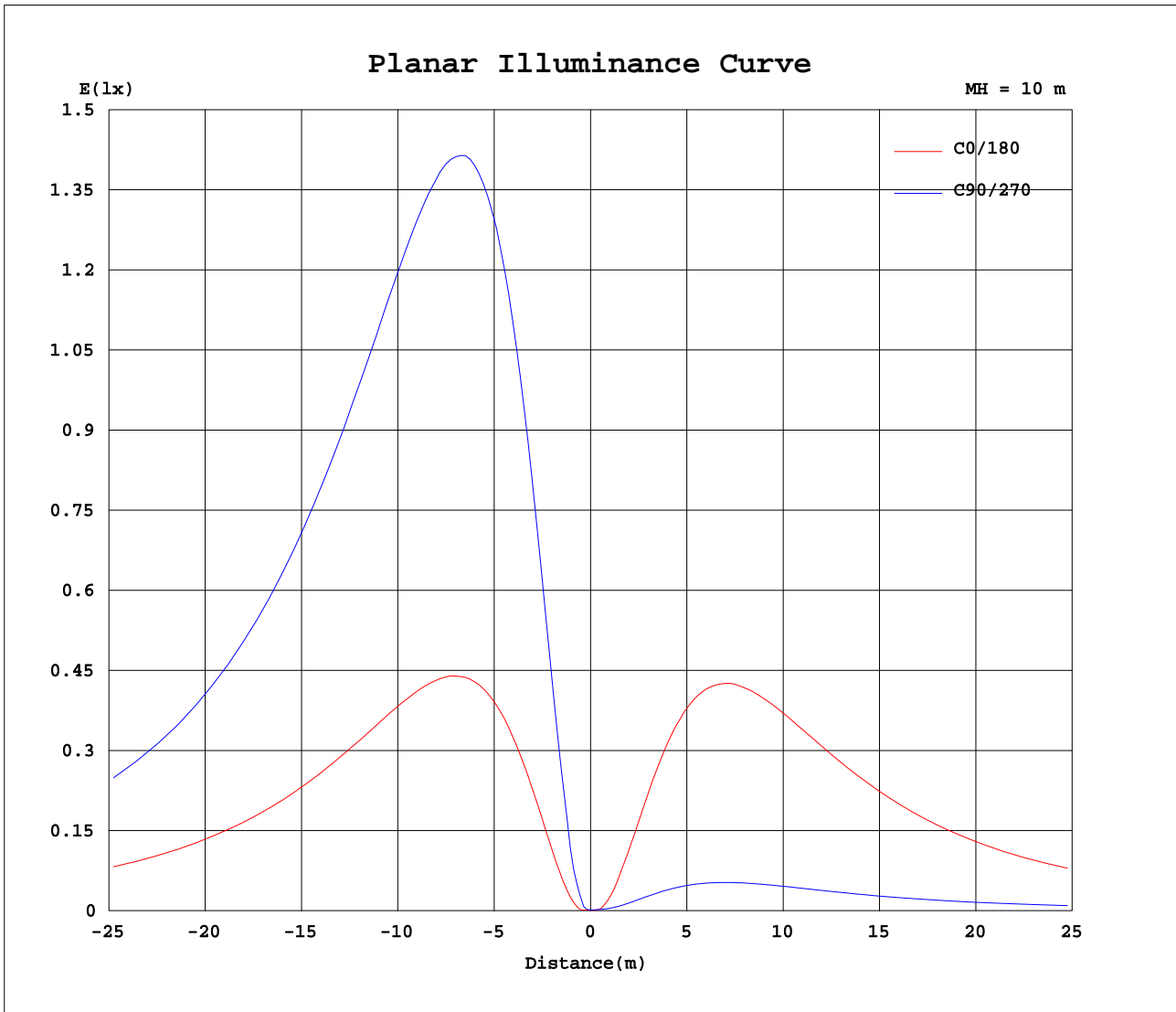
AvgL	cd/m2
L_0~180(65)av	5253
L_0~180(75)av	9352
L_0~180(85)av	28952
L_90~270(65)av	8390
L_90~270(75)av	14828
L_90~270(85)av	45711
L_45(65)av	6826
L_45(75)av	12092
L_45(85)av	37343

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.0DEG  
Operators: Alan Wang  
Test Date: 25 September 2023

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
Humidity: 40.8%  
Test Distance: 2.500m [K=1.0388]  
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 25 September 2023

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 40.8%  
 Test Distance: 2.500m [K=1.0388]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.00V I:0.1793A P:21.190W PF:0.9849 Freq:60.00Hz Lamp Flux:2031.72x1 lm		
NAME: ASD-LVF21-MV-18D20NK_3000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	0.12	0.12	0.12	0.13	0.14	0.15	0.18	0.21	0.24	0.28	0.31	0.33	0.12	0.12	0.12	0.13	0.14	0.15	0.18
5	1.61	2.69	4.02	5.39	6.64	7.49	7.92	7.73	7.14	6.10	4.86	3.56	1.88	1.05	0.63	0.50	0.50	0.46	0.40
10	9.36	14.5	20.9	26.4	31.5	35.1	36.5	35.5	32.3	27.5	21.9	15.6	9.58	5.55	3.12	1.98	1.71	1.46	1.24
15	21.3	31.7	43.8	55.9	66.1	73.1	75.7	73.7	67.0	57.1	45.2	33.0	20.7	12.5	7.08	4.16	3.13	2.80	2.62
20	35.1	51.9	71.0	89.7	106	117	120	117	107	90.9	72.2	53.0	34.1	20.9	11.9	6.83	4.71	4.25	4.27
25	50.0	73.3	99.7	125	147	161	166	162	147	126	100	74.1	48.4	30.0	17.2	9.73	6.38	5.74	6.06
30	65.1	94.9	128	161	188	206	212	206	189	161	129	95.5	63.0	39.3	22.7	12.7	8.08	7.24	7.89
35	80.0	116	156	195	228	250	257	250	229	195	157	117	77.5	48.6	28.2	15.7	9.78	8.68	9.66
40	94.5	137	183	228	266	290	299	291	266	229	183	137	91.4	57.7	33.6	18.7	11.5	10.1	11.4
45	108	156	208	259	301	329	338	329	301	259	208	156	105	66.4	38.9	21.6	13.0	11.4	13.0
50	121	174	233	288	334	364	374	364	334	288	233	174	117	74.4	43.7	24.3	14.5	12.6	14.5
55	133	190	254	314	363	396	407	396	364	314	253	190	128	81.9	48.3	26.9	15.9	13.7	15.9
60	143	205	273	337	390	424	436	424	390	337	272	205	138	88.3	52.3	29.1	17.1	14.8	17.1
65	152	218	290	357	413	449	460	449	412	357	289	217	147	94.1	55.8	31.1	18.2	15.6	18.2
70	160	229	304	374	432	469	482	469	431	374	303	228	155	98.8	58.6	32.8	19.1	16.4	19.0
75	166	237	314	387	447	485	498	485	446	387	314	237	160	103	61.0	34.0	19.8	17.0	19.6
80	171	244	323	397	458	497	511	497	458	396	322	243	165	105	62.5	35.0	20.3	17.4	20.1
85	173	248	327	403	465	504	517	505	464	402	326	247	167	107	63.5	35.6	20.7	17.7	20.5
90	174	248	329	404	466	506	519	506	466	403	328	247	168	107	63.8	35.7	20.8	17.8	20.5
95	173	247	327	401	463	503	516	501	462	401	325	245	166	106	63.3	35.4	20.6	17.6	20.3
100	170	242	321	394	454	493	507	493	454	393	319	241	163	104	62.0	34.7	20.2	17.4	19.9
105	165	236	311	383	442	480	493	480	441	382	310	234	158	101	60.1	33.7	19.6	16.9	19.3
110	158	226	299	368	425	463	474	462	424	367	298	224	152	96.8	57.5	32.2	18.7	16.2	18.4
115	150	215	285	350	405	440	452	439	404	349	283	213	144	91.8	54.3	30.4	17.8	15.5	17.5
120	141	201	267	328	380	414	426	414	380	328	265	200	135	85.8	50.7	28.3	16.6	14.6	16.4
125	130	186	247	305	353	385	396	384	353	304	246	185	124	78.9	46.5	26.0	15.4	13.6	15.2
130	118	170	225	278	323	352	362	352	322	277	224	168	112	71.2	41.9	23.5	14.0	12.5	13.9
135	105	151	201	249	290	316	325	316	289	248	200	149	99.8	63.1	37.0	20.8	12.5	11.3	12.4
140	91.4	132	176	218	254	278	286	278	253	217	175	130	86.5	54.7	32.0	17.9	11.1	10.1	10.9
145	77.0	111	149	185	216	237	244	237	216	185	148	110	72.5	46.1	27.0	15.2	9.55	8.72	9.25
150	62.2	90.3	122	151	177	194	200	194	176	150	120	89.0	58.3	38.0	22.2	12.6	8.07	7.30	7.56
155	47.3	69.0	93.5	116	136	150	154	149	136	116	92.5	68.0	43.9	30.7	18.0	10.3	6.66	5.94	5.89
160	32.7	48.2	65.4	81.8	95.9	106	109	106	96.0	81.2	64.6	47.5	30.1	23.4	13.8	7.93	5.18	4.56	4.23
165	19.5	28.9	39.3	49.4	58.1	63.9	65.9	63.8	57.8	49.0	38.9	28.5	17.5	15.4	9.07	5.26	3.55	3.16	2.69
170	8.54	12.7	17.5	22.0	25.7	28.3	29.3	28.3	25.5	21.6	17.1	12.5	7.31	6.96	3.98	2.41	1.87	1.79	1.44
175	1.38	2.11	2.97	3.85	5.28	5.70	5.76	5.46	4.87	3.62	2.68	1.85	0.81	0.83	0.54	0.47	0.52	0.53	0.41
180	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.08	0.08	0.08	0.09	0.09

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 25 September 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 40.8%  
 Test Distance: 2.500m [K=1.0388]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.00V I:0.1793A P:21.190W PF:0.9849 Freq:60.00Hz Lamp Flux:2031.72x1 lm		
NAME: ASD-LVF21-MV-18D20NK_3000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

Table--2

UNIT: cd

C( DEG) γ (DEG)	285	300	315	330	345														
0	0.21	0.24	0.28	0.31	0.33														
5	0.52	0.60	0.62	0.74	1.19														
10	1.53	1.81	2.15	3.48	6.08														
15	2.87	3.28	4.54	7.78	13.6														
20	4.35	4.98	7.47	13.0	22.5														
25	5.88	6.78	10.6	18.7	32.1														
30	7.41	8.61	13.8	24.6	41.9														
35	8.90	10.5	17.1	30.5	51.6														
40	10.3	12.2	20.3	36.3	61.1														
45	11.7	14.0	23.4	41.9	70.2														
50	12.9	15.6	26.4	47.1	78.7														
55	14.0	17.1	29.0	51.8	86.4														
60	15.1	18.4	31.4	56.0	93.2														
65	16.0	19.6	33.5	59.6	99.0														
70	16.7	20.7	35.3	62.5	104														
75	17.2	21.4	36.6	64.8	108														
80	17.6	21.9	37.7	66.6	110														
85	17.9	22.2	38.4	67.8	112														
90	17.9	22.3	38.6	68.0	113														
95	17.7	22.2	38.4	67.6	111														
100	17.4	21.8	37.7	66.4	109														
105	17.0	21.2	36.6	64.4	106														
110	16.3	20.4	35.1	61.8	102														
115	15.5	19.3	33.3	58.6	96.8														
120	14.6	18.1	31.0	54.8	90.8														
125	13.7	16.9	28.7	50.5	83.8														
130	12.5	15.3	26.0	45.9	76.2														
135	11.3	13.7	23.2	40.9	68.2														
140	9.97	12.0	19.9	35.1	58.9														
145	8.59	10.2	16.5	28.9	48.6														
150	7.13	8.35	12.8	22.2	37.7														
155	5.62	6.43	9.09	15.5	26.4														
160	4.07	4.64	6.04	9.48	16.0														
165	2.65	3.21	3.76	5.14	8.45														
170	1.38	1.82	2.16	2.49	3.74														
175	0.40	0.63	0.71	0.81	1.04														
180	0.10	0.11	0.13	0.18	0.22														

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 25 September 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 40.8%  
 Test Distance: 2.500m [K=1.0388]  
 Remarks: