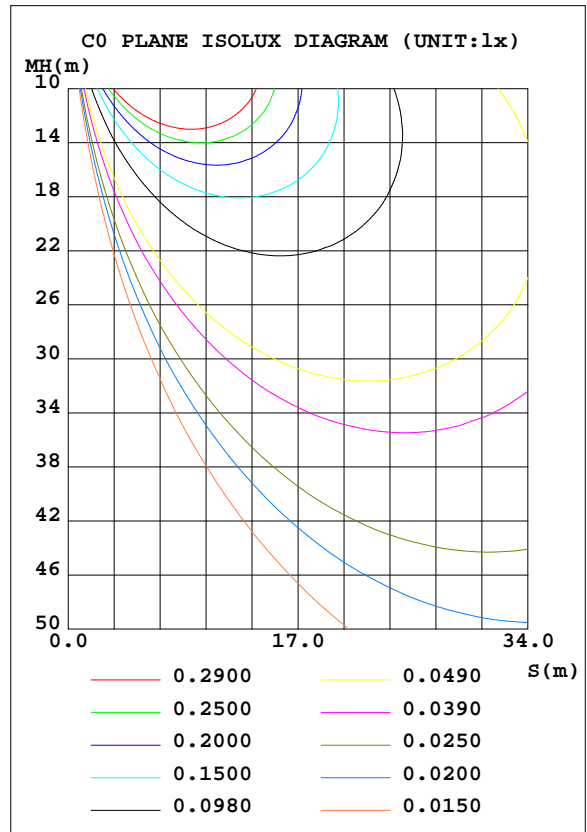
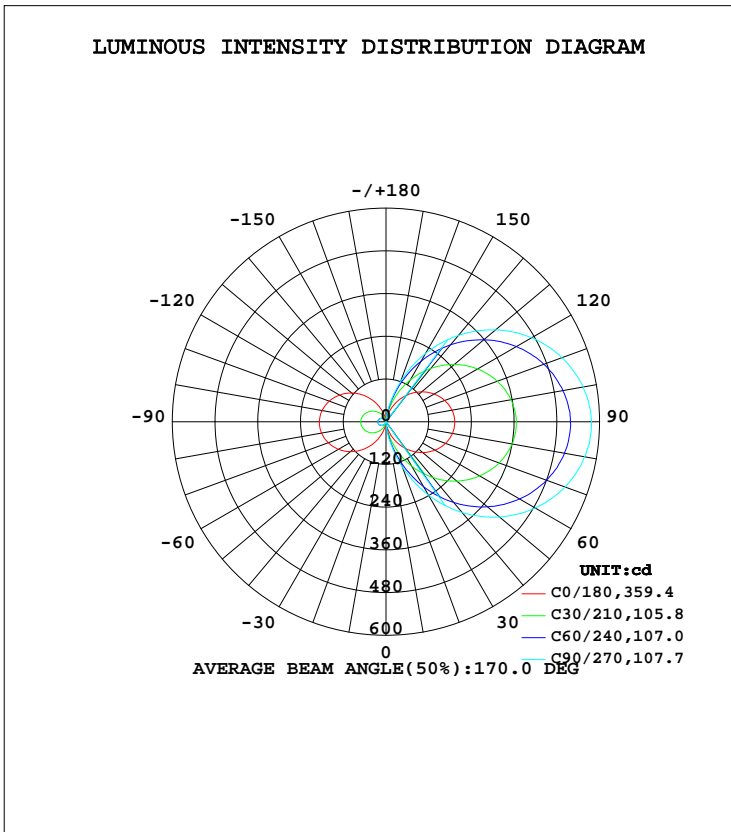


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.00V I:0.1699A P:20.050W PF:0.9833 Freq:60.00Hz Lamp Flux:2259.3x1 lm		
NAME: ASD-LVF21-MV-18D20NK_4000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 112.68 lm/W			
MODEL	ASD-LVF21-MV-18D20NK	I <sub>max</sub> (cd)	577.3	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)	2259.3	η UP, DN(C0-180)	43.0,44.0
NOMINAL FLUX(lm)	2259.3	CIE CLASS	DIFFUSE	η UP, DN(C180-360)	6.4,6.6
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	10.55	29.69	41.10	30.99	10.48	2.183	1.373	2.383	0- 10	0.7584	0.7584	0.03,0.03
20	39.23	100.5	134.5	101.6	38.09	7.591	4.729	8.313	10- 20	10.36	11.12	0.49,0.49
30	72.59	179.0	237.3	179.5	70.42	14.16	8.749	15.44	20- 30	35.73	46.85	2.07,2.07
40	105.3	254.3	333.4	254.4	102.1	20.83	12.65	22.70	30- 40	74.71	121.6	5.38,5.38
50	134.9	320.3	416.1	320.1	130.7	27.10	16.10	29.48	40- 50	121.8	243.4	10.8,10.8
60	159.4	375.4	484.3	374.4	154.7	32.44	18.93	35.15	50- 60	170.7	414.1	18.3,18.3
70	178.2	415.7	535.8	415.0	172.8	36.54	20.98	39.34	60- 70	214.8	628.9	27.8,27.8
80	189.7	441.4	566.8	440.9	183.9	39.04	22.43	42.17	70- 80	248.1	877.0	38.8,38.8
90	193.4	450.0	577.2	448.5	187.3	39.79	22.77	43.15	80- 90	266.0	1143	50.6,50.6
100	188.5	437.2	562.3	436.8	182.4	38.70	22.08	42.18	90-100	265.0	1408	62.3,62.3
110	175.7	408.4	526.1	408.0	169.8	35.88	20.58	39.34	100-110	245.1	1653	73.2,73.2
120	156.2	365.3	472.1	364.2	150.6	31.60	18.20	34.80	110-120	210.4	1863	82.5,82.5
130	130.9	309.2	401.8	308.2	125.9	26.16	15.32	29.14	120-130	165.6	2029	89.8,89.8
140	101.5	242.2	316.8	240.8	96.95	20.00	12.15	22.37	130-140	117.0	2146	95,95
150	68.98	168.0	221.0	166.8	65.27	14.10	8.524	14.30	140-150	70.64	2217	98.1,98.1
160	36.11	90.63	120.4	90.16	33.77	8.902	4.747	6.625	150-160	32.99	2250	99.6,99.6
170	9.379	24.02	32.04	23.57	8.234	2.720	1.562	2.258	160-170	9.081	2259	100,100
180	0.0341	0.0661	0.0117	0.1266	0.0916	0.0885	0.1023	0.1653	170-180	0.5716	2259	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 176.33 lm

%lum = 7.8%

%lamp = 7.8%

Conical surface Flux(120deg): 414.11 lm

%lum = 18.3%

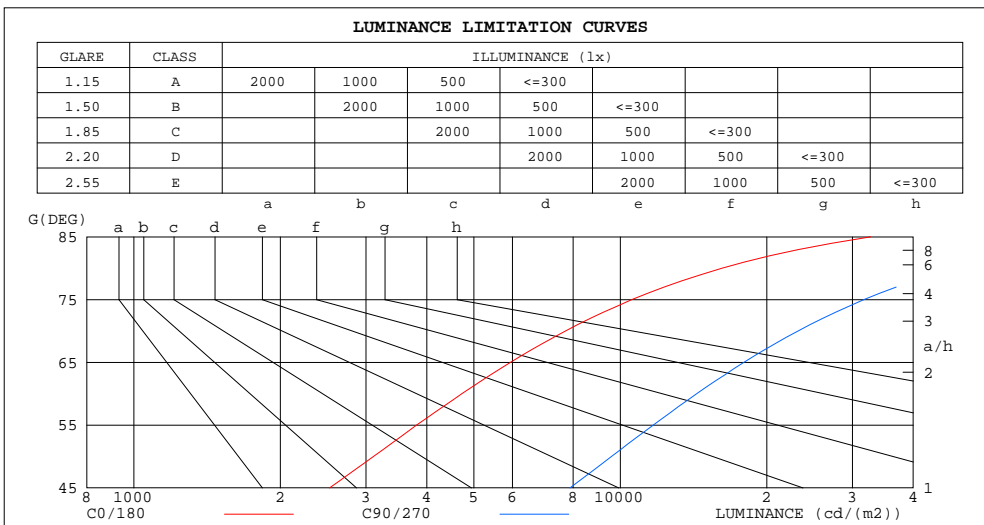
%lamp = 18.3%

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:0.1699A P:20.050W PF:0.9833 Freq:60.00Hz Lamp Flux:2259.3x1 lm		
NAME: ASD-LVF21-MV-18D20NK_4000K	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	32707	97720
80	16186	48356
75	10562	31681
70	7721	23210
65	5945	17949
60	4722	14351
55	3813	11687
50	3109	9590
45	2525	7879

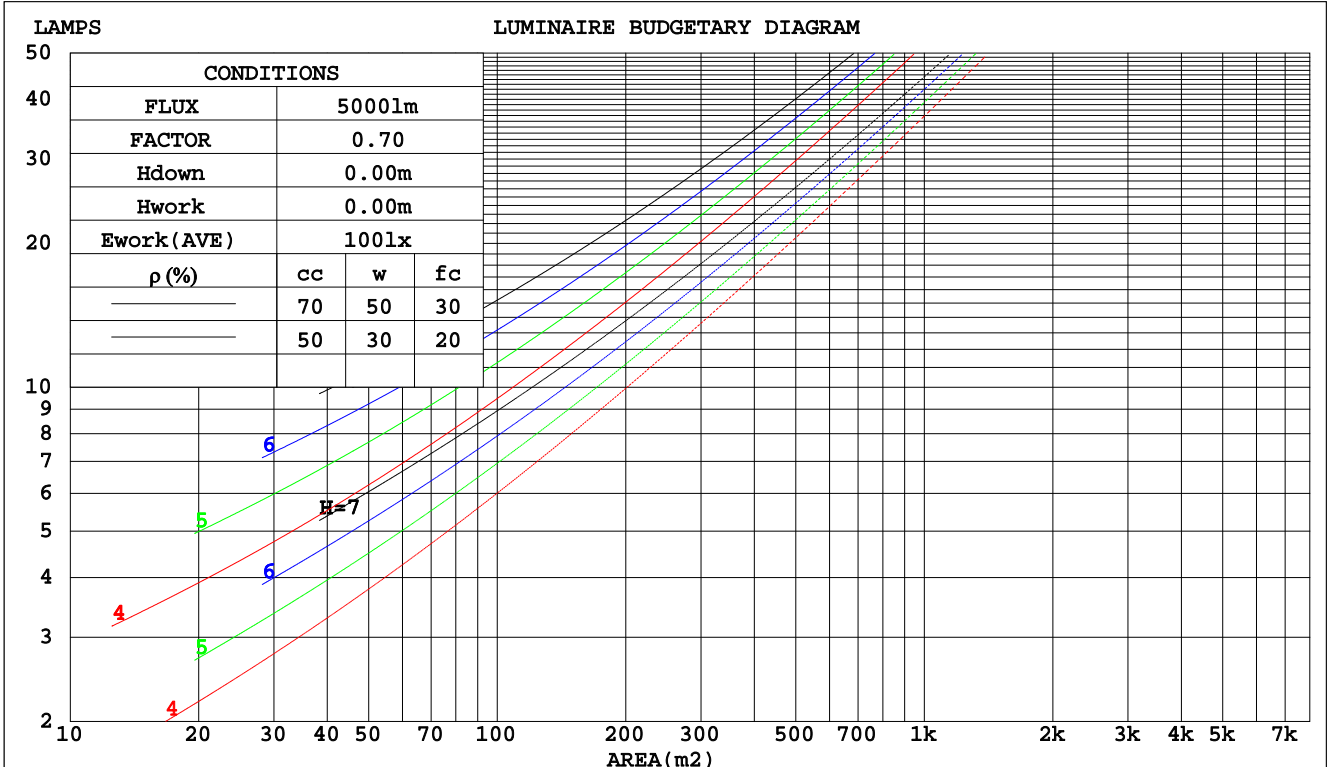
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 25 September 2023

$\gamma$  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:0.1699A P:20.050W PF:0.9833 Freq:60.00Hz Lamp Flux:2259.3x1 lm		
NAME: ASD-LVF21-MV-18D20NK_4000K	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:0.1699A P:20.050W PF:0.9833 Freq:60.00Hz Lamp Flux:2259.3x1 lm		
NAME: ASD-LVF21-MV-18D20NK_4000K	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	.156	.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	.569	.535	.503	.487	.459	.433	.333	.316	.299	.192	.183	.174	.061	.059	.056	
2.0	.564	.514	.471	.483	.442	.407	.331	.306	.284	.191	.178	.167	.061	.058	.054	
3.0	.557	.499	.452	.478	.430	.392	.328	.299	.275	.190	.175	.162	.061	.057	.053	
4.0	.550	.487	.440	.472	.421	.382	.325	.294	.269	.188	.172	.159	.060	.056	.052	
5.0	.542	.479	.431	.466	.414	.375	.321	.289	.265	.186	.170	.157	.060	.055	.052	
6.0	.535	.471	.426	.460	.408	.371	.317	.286	.262	.184	.168	.156	.059	.055	.051	
7.0	.528	.465	.421	.454	.403	.367	.314	.283	.260	.182	.167	.155	.059	.055	.051	
8.0	.521	.460	.418	.449	.399	.365	.311	.280	.259	.181	.165	.154	.058	.054	.051	
9.0	.515	.456	.416	.444	.395	.363	.307	.278	.257	.179	.164	.153	.058	.054	.051	
10.0	.509	.452	.414	.439	.392	.361	.305	.276	.256	.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:0.1699A P:20.050W PF:0.9833 Freq:60.00Hz Lamp Flux:2259.3x1 lm		
NAME: ASD-LVF21-MV-18D20NK_4000K	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	16.9	18.1	17.8	19.0	20.1	21.2	22.3	22.0	23.2	24.4
3H	20.0	21.0	20.9	21.9	23.1	25.1	26.1	25.9	27.0	28.2
4H	21.7	22.7	22.6	23.6	24.8	27.2	28.2	28.1	29.1	30.3
6H	23.5	24.4	24.4	25.4	26.6	29.5	30.4	30.4	31.3	32.6
8H	24.5	25.4	25.4	26.4	27.6	30.7	31.6	31.6	32.6	33.8
12H	25.7	26.5	26.6	27.5	28.7	32.1	33.0	33.0	33.9	35.2
4H 2H	19.4	20.4	20.3	21.3	22.5	21.9	22.9	22.8	23.8	25.0
3H	22.4	23.3	23.3	24.2	25.5	26.0	26.8	26.9	27.8	29.0
4H	24.1	24.9	25.1	25.9	27.1	28.3	29.0	29.2	30.0	31.3
6H	25.9	26.6	26.9	27.6	28.9	30.7	31.5	31.7	32.4	33.7
8H	26.9	27.6	27.9	28.6	29.9	32.1	32.8	33.1	33.8	35.1
12H	28.0	28.6	29.0	29.6	31.0	33.6	34.2	34.6	35.3	36.6
8H 4H	25.8	26.5	26.8	27.5	28.8	28.7	29.4	29.7	30.4	31.7
6H	27.9	28.5	28.9	29.5	30.8	31.5	32.1	32.5	33.1	34.4
8H	29.1	29.6	30.1	30.6	31.9	33.1	33.6	34.1	34.6	36.0
12H	30.3	30.8	31.3	31.8	33.1	34.9	35.3	35.9	36.4	37.7
12H 4H	26.4	27.0	27.4	28.0	29.3	28.8	29.4	29.8	30.4	31.7
6H	28.7	29.2	29.7	30.2	31.6	31.7	32.2	32.7	33.3	34.6
8H	30.0	30.4	31.0	31.5	32.8	33.4	33.9	34.4	34.9	36.3
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, 2259 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 2.8)  
 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:0.1699A P:20.050W PF:0.9833 Freq:60.00Hz Lamp Flux:2259.3x1 lm		
NAME: ASD-LVF21-MV-18D20NK_4000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

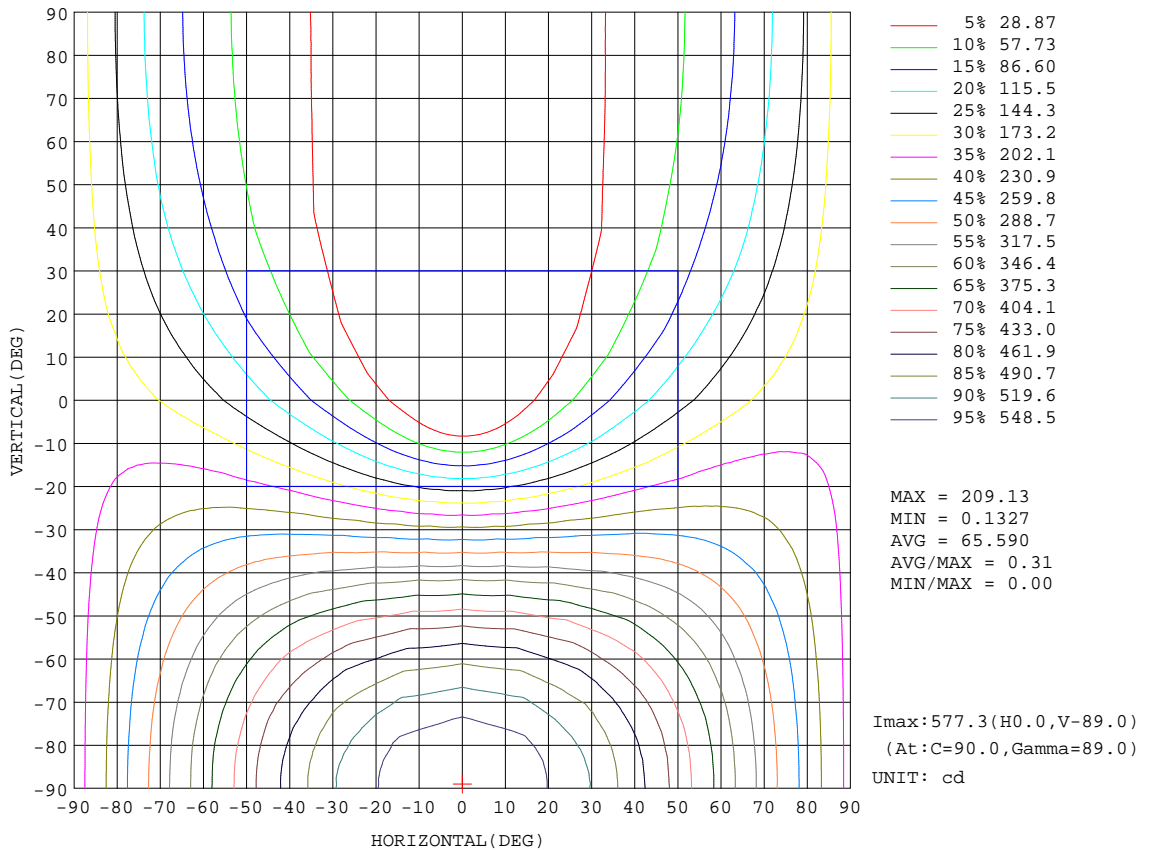
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	33	20	12	31	19	12	28	17	11	4
0.80	42	27	18	39	26	17	34	23	15	6
1.00	49	34	24	45	32	23	39	30	20	9
1.25	55	40	30	52	38	29	44	33	25	12
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:0.1699A P:20.050W PF:0.9833 Freq:60.00Hz Lamp Flux:2259.3x1 lm		
NAME: ASD-LVF21-MV-18D20NK_4000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



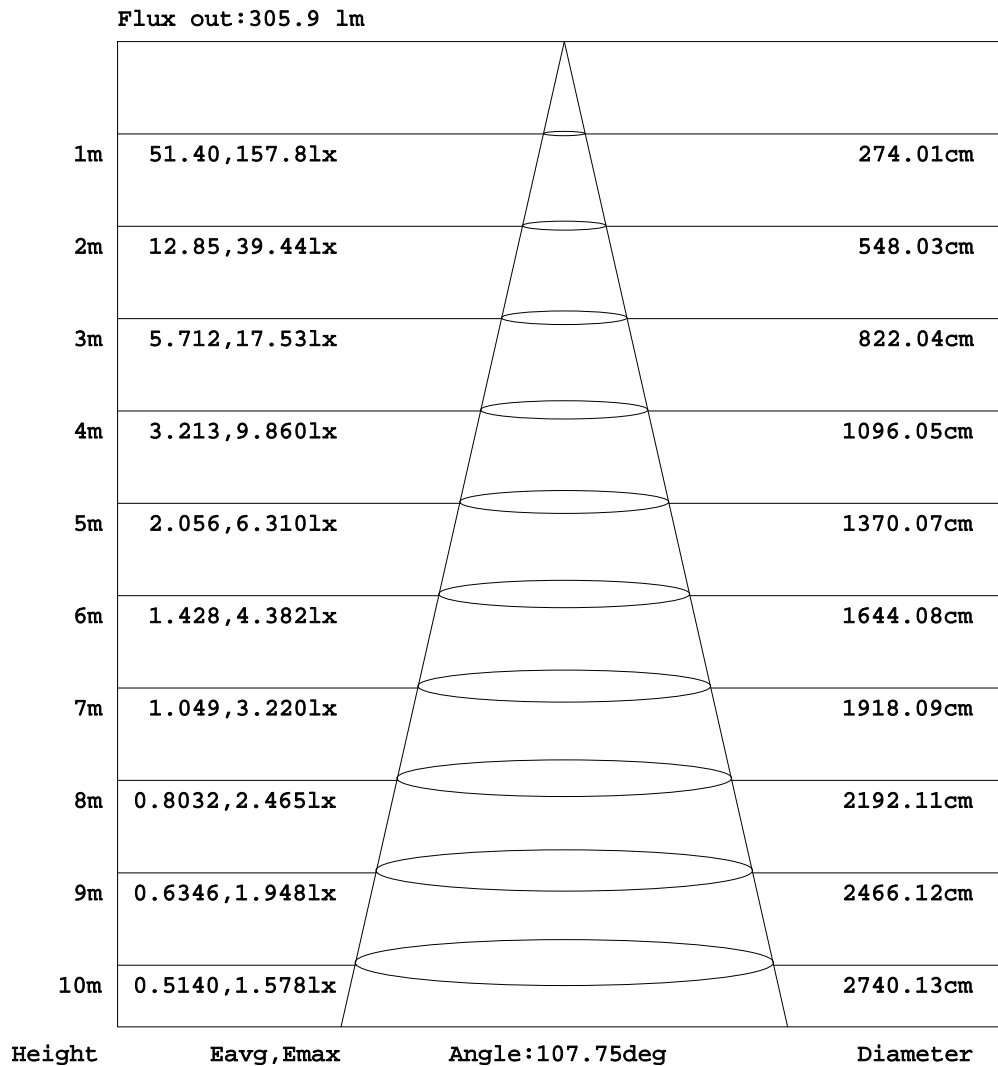
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators:Alan Wang  
 Test Date:25 September 2023

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:0.1699A P:20.050W PF:0.9833 Freq:60.00Hz Lamp Flux:2259.3x1 lm		
NAME: ASD-LVF21-MV-18D20NK_4000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



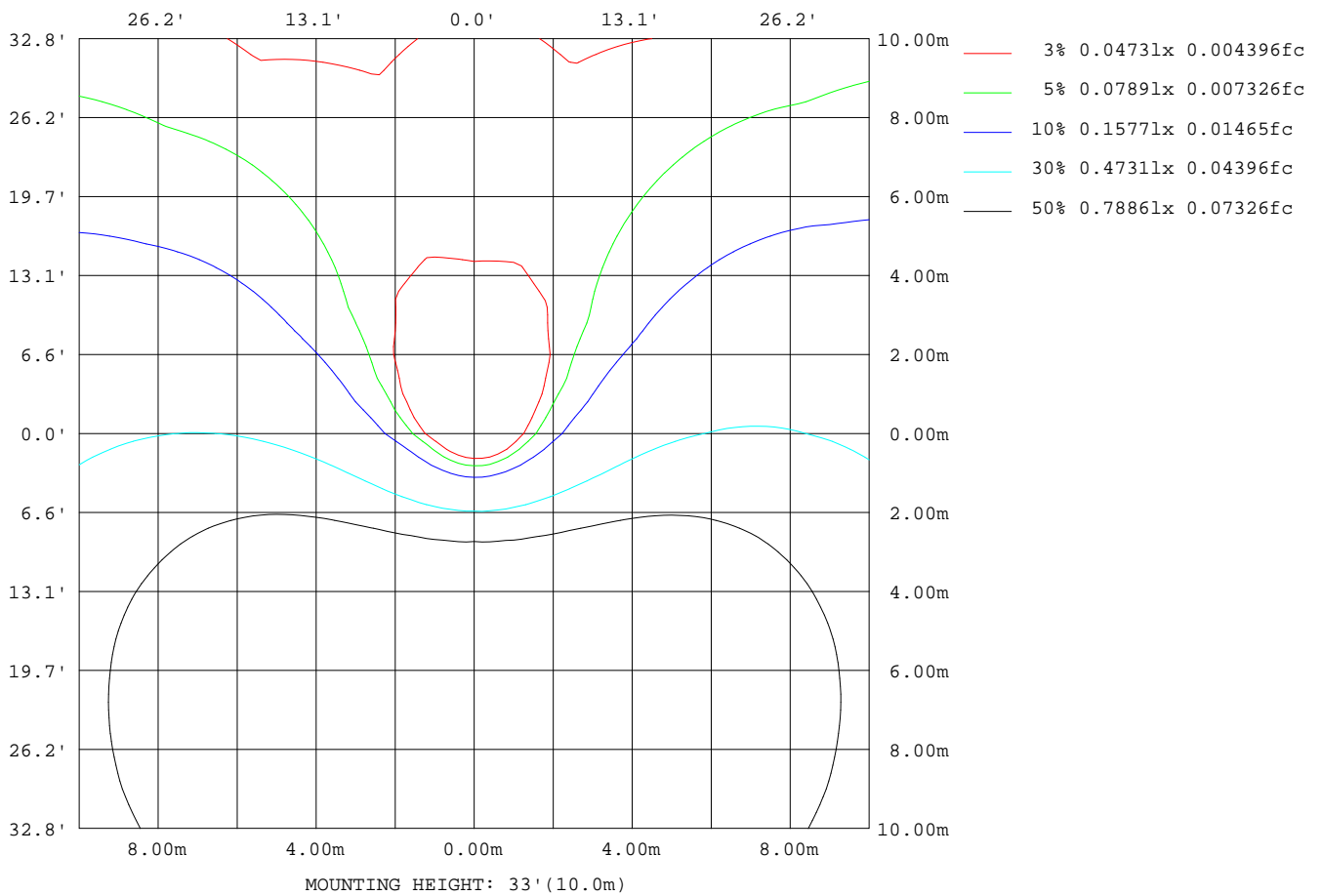
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.1699A P:20.050W PF:0.9833 Freq:60.00Hz Lamp Flux:2259.3x1 lm		
NAME: ASD-LVF21-MV-18D20NK_4000K	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:0.1699A P:20.050W PF:0.9833 Freq:60.00Hz Lamp Flux:2259.3x1 lm		
NAME: ASD-LVF21-MV-18D20NK_4000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

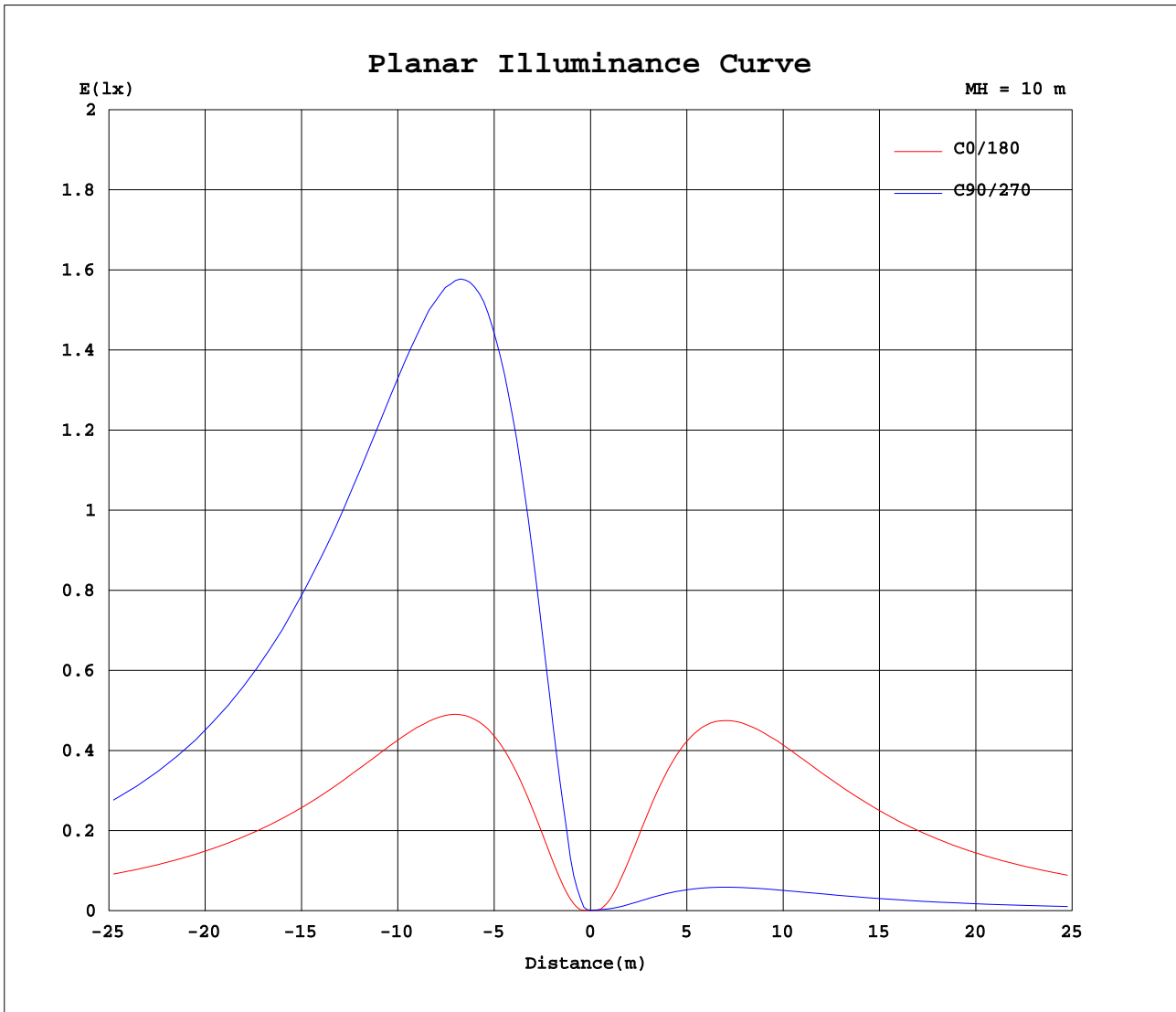
AvgL	cd/m2
L_0~180(65)av	5857
L_0~180(75)av	10408
L_0~180(85)av	32215
L_90~270(65)av	9326
L_90~270(75)av	16464
L_90~270(85)av	50795
L_45(65)av	7585
L_45(75)av	13438
L_45(85)av	41567

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

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:0.1699A P:20.050W PF:0.9833 Freq:60.00Hz Lamp Flux:2259.3x1 lm		
NAME: ASD-LVF21-MV-18D20NK_4000K	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	0.13	0.13	0.14	0.14	0.15	0.17	0.20	0.24	0.27	0.31	0.34	0.37	0.13	0.13	0.14	0.14	0.15	0.17	0.20
5	1.84	3.11	4.62	6.18	7.57	8.56	9.00	8.82	8.08	6.97	5.55	4.04	2.06	1.15	0.69	0.55	0.55	0.51	0.45
10	10.5	16.4	23.4	29.7	35.4	39.5	41.1	40.1	36.4	31.0	24.7	17.9	10.5	6.11	3.45	2.18	1.89	1.62	1.37
15	23.8	35.9	49.4	62.8	74.3	82.0	84.9	82.5	75.2	63.9	50.6	37.0	23.1	14.0	7.85	4.60	3.48	3.10	2.90
20	39.2	58.5	79.7	100	118	130	135	131	119	102	80.6	59.3	38.1	23.2	13.3	7.59	5.23	4.71	4.73
25	55.8	82.2	111	140	164	180	186	180	165	141	112	82.9	54.1	33.4	19.2	10.8	7.10	6.38	6.72
30	72.6	106	143	179	210	230	237	231	210	179	144	107	70.4	43.7	25.3	14.2	9.00	8.03	8.75
35	89.3	130	174	218	254	278	286	278	254	218	174	130	86.5	54.1	31.4	17.5	10.9	9.66	10.8
40	105	153	204	254	296	324	333	323	296	254	204	152	102	64.1	37.4	20.8	12.7	11.2	12.7
45	121	174	233	289	335	366	376	366	335	289	233	174	117	73.8	43.3	24.1	14.5	12.7	14.5
50	135	194	260	320	372	405	416	405	371	320	258	193	131	82.8	48.7	27.1	16.1	14.1	16.1
55	148	213	283	349	405	440	452	440	404	349	282	212	143	91.1	53.7	29.9	17.7	15.3	17.6
60	159	230	304	375	434	472	484	472	433	374	303	228	155	98.3	58.2	32.4	19.0	16.4	18.9
65	170	243	323	397	459	499	512	498	458	397	322	242	165	105	62.1	34.7	20.2	17.4	20.0
70	178	255	338	416	480	522	536	522	479	415	337	254	173	110	65.3	36.5	21.3	18.2	21.0
75	185	265	351	431	498	540	553	539	497	430	349	263	179	114	67.9	38.0	22.1	18.9	21.8
80	190	272	359	441	509	552	567	553	508	441	358	270	184	117	69.7	39.0	22.7	19.4	22.4
85	192	276	365	448	516	560	575	559	515	447	363	274	187	119	70.9	39.6	23.0	19.7	22.8
90	193	277	366	450	518	562	577	562	517	449	364	275	187	120	71.1	39.8	23.1	19.8	22.8
95	192	275	363	446	514	558	572	558	513	445	361	273	186	118	70.5	39.5	22.9	19.7	22.5
100	188	270	357	437	505	548	562	548	504	437	355	267	182	116	69.1	38.7	22.5	19.3	22.1
105	183	262	347	425	491	533	547	532	489	424	344	260	177	113	67.0	37.5	21.9	18.8	21.4
110	176	252	333	408	472	513	526	512	471	408	331	249	170	108	64.2	35.9	21.0	18.1	20.6
115	167	239	316	389	450	489	502	488	448	388	314	237	161	102	60.6	33.9	19.9	17.3	19.4
120	156	224	297	365	423	461	472	460	421	364	295	222	151	95.5	56.4	31.6	18.6	16.3	18.2
125	144	207	275	339	393	427	439	427	391	337	273	205	139	87.9	51.8	29.0	17.1	15.2	16.8
130	131	189	251	309	359	391	402	390	357	308	249	187	126	79.5	46.7	26.2	15.6	13.9	15.3
135	117	168	224	277	322	351	361	351	321	275	222	166	112	70.3	41.2	23.1	14.0	12.6	13.8
140	102	147	196	242	282	308	317	307	281	241	194	145	96.9	60.9	35.6	20.0	12.3	11.2	12.2
145	85.4	124	166	206	240	263	270	262	239	204	164	122	81.2	51.5	30.1	16.9	10.7	9.71	10.4
150	69.0	101	135	168	196	215	221	214	195	167	133	99.0	65.3	42.5	24.8	14.1	9.01	8.16	8.52
155	52.3	76.6	104	129	151	166	171	166	151	128	102	75.4	49.2	34.3	20.1	11.5	7.44	6.65	6.60
160	36.1	53.3	72.4	90.6	106	117	120	117	106	90.2	71.4	52.6	33.8	26.3	15.4	8.90	5.81	5.11	4.75
165	21.4	31.8	43.4	54.4	64.0	70.0	72.7	70.3	63.8	54.0	43.0	31.5	19.8	17.2	10.2	5.90	3.99	3.54	3.06
170	9.38	14.0	19.1	24.0	28.1	31.0	32.0	30.9	27.8	23.6	18.8	13.7	8.23	7.81	4.48	2.72	2.09	2.00	1.56
175	1.49	2.29	3.23	4.14	5.67	6.13	6.17	5.86	5.24	3.83	2.88	1.97	0.93	0.95	0.62	0.54	0.59	0.61	0.47
180	0.03	0.04	0.07	0.07	0.04	0.01	0.01	0.04	0.08	0.13	0.13	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.10

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:0.1699A P:20.050W PF:0.9833 Freq:60.00Hz Lamp Flux:2259.3x1 lm		
NAME: ASD-LVF21-MV-18D20NK_4000K	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	0.24	0.27	0.31	0.34	0.37														
5	0.58	0.67	0.69	0.81	1.30														
10	1.69	2.01	2.38	3.85	6.74														
15	3.19	3.65	5.05	8.70	15.1														
20	4.83	5.54	8.31	14.6	25.1														
25	6.54	7.55	11.8	20.9	35.9														
30	8.24	9.60	15.4	27.5	46.8														
35	9.89	11.7	19.1	34.1	57.7														
40	11.5	13.7	22.7	40.6	68.4														
45	13.0	15.6	26.2	46.9	78.5														
50	14.4	17.4	29.5	52.6	88.0														
55	15.6	19.0	32.4	57.9	96.4														
60	16.7	20.5	35.2	62.7	104														
65	17.6	21.7	37.4	66.6	111														
70	18.4	22.8	39.3	69.8	116														
75	19.1	23.7	41.0	72.5	120														
80	19.6	24.4	42.2	74.6	123														
85	19.9	24.9	42.9	75.7	125														
90	19.9	24.9	43.1	76.1	126														
95	19.8	24.8	43.0	75.8	125														
100	19.4	24.4	42.2	74.2	123														
105	18.9	23.8	41.0	72.1	119														
110	18.2	22.8	39.3	69.2	114														
115	17.3	21.7	37.3	65.5	108														
120	16.3	20.3	34.8	61.4	102														
125	15.1	18.8	32.0	56.6	93.7														
130	13.9	17.1	29.1	51.4	85.3														
135	12.6	15.4	26.0	45.8	76.4														
140	11.1	13.3	22.4	39.4	66.0														
145	9.59	11.3	18.3	32.4	54.4														
150	7.95	9.25	14.3	24.9	42.2														
155	6.27	7.16	10.2	17.4	29.6														
160	4.58	5.17	6.62	10.6	17.9														
165	2.86	3.35	3.95	5.76	9.43														
170	1.39	1.84	2.26	2.78	4.18														
175	0.46	0.71	0.83	0.92	1.19														
180	0.12	0.14	0.17	0.21	0.26														

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: