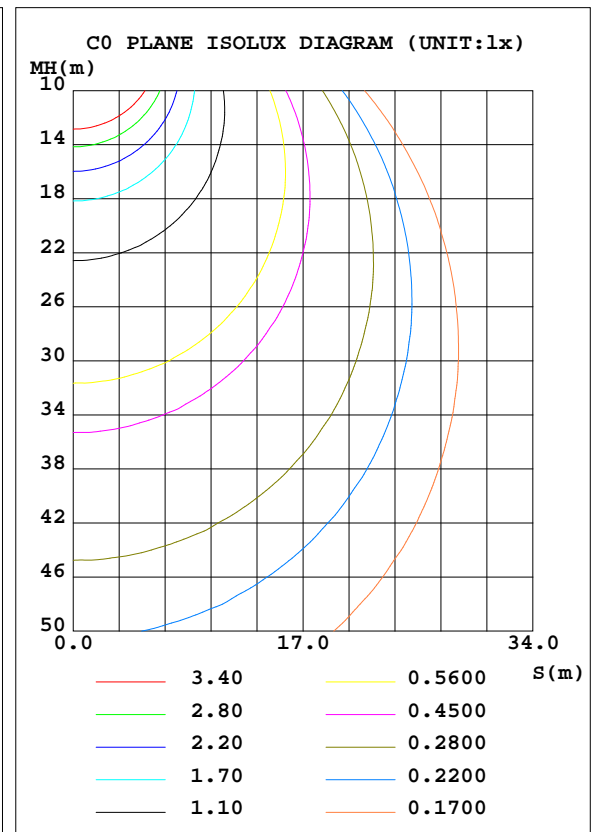
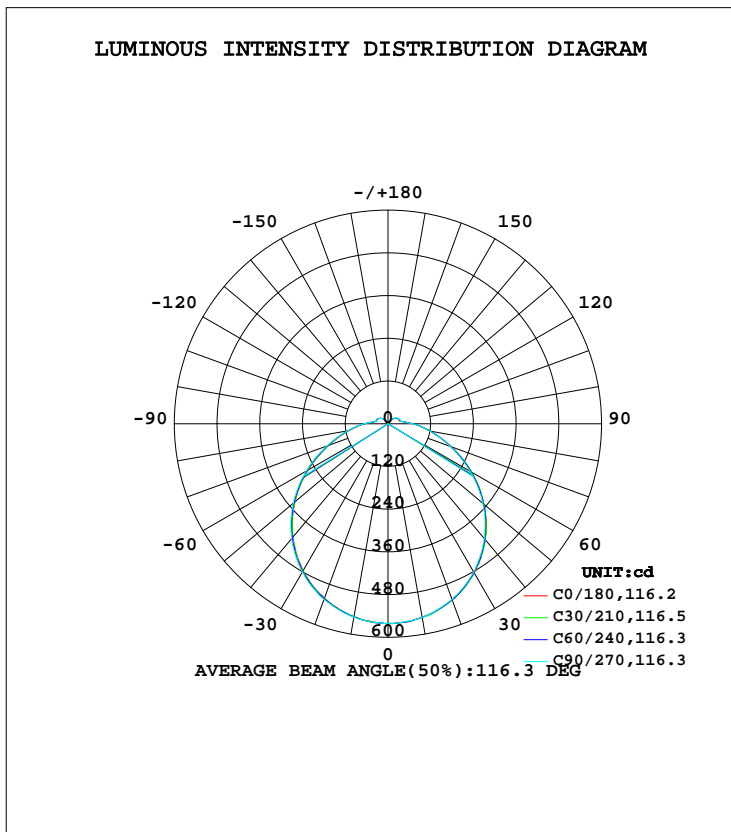


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.00V I:0.1637A P:19.240W PF:0.9797 Freq:60.00Hz Lamp Flux:1580x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_4000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 75.78 lm/W			
MODEL	LFMDR-MV-12D20CC-EM-NK	Imax(cd)	561.8	S/MH(C0/180)	1.26
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	1580	$\eta$ UP, DN(C0-180)	4.5,45.6
NOMINAL FLUX(lm)	1580	CIE CLASS	DIRECT	$\eta$ UP, DN(C180-360)	4.5,45.5
LAMPS INSIDE	1	$\eta$ up(%)	9.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	120	$\eta$ down(%)	91.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 26 August 2023

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 42.7%  
 Test Distance: 2.500m [K=1.0391]  
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	552.1	552.7	551.8	551.4	550.4	550.7	551.4	552.5	0- 10	53.10	53.10	2.73,2.73
20	526.8	526.7	525.4	522.8	521.5	523.0	525.2	526.3	10- 20	152.5	205.6	10.6,10.6
30	484.2	483.5	480.7	476.9	476.7	479.3	481.1	484.0	20- 30	232.7	438.3	22.5,22.5
40	425.2	423.8	420.6	416.6	415.1	417.1	421.4	424.3	30- 40	283.0	721.3	37.1,37.1
50	352.4	351.1	347.8	342.3	341.0	343.5	347.2	351.8	40- 50	297.2	1019	52.4,52.4
60	270.9	269.7	265.9	259.7	258.8	261.6	265.4	270.4	50- 60	274.4	1293	66.5,66.5
70	189.0	188.0	185.0	178.6	176.8	179.7	182.9	187.1	60- 70	221.4	1514	77.9,77.9
80	120.1	120.9	118.2	112.5	111.4	114.1	115.6	118.5	70- 80	156.6	1671	85.9,85.9
90	70.19	69.78	68.06	64.13	64.27	66.24	67.10	69.24	80- 90	98.77	1770	91,91
100	39.29	38.65	38.38	37.21	37.24	37.42	37.17	38.72	90-100	55.23	1825	93.9,93.9
110	32.91	34.25	35.55	34.25	33.65	34.36	32.86	32.45	100-110	36.59	1862	95.7,95.7
120	29.95	30.42	31.71	30.23	30.01	30.25	29.43	29.46	110-120	32.18	1894	97.4,97.4
130	23.77	23.87	24.87	23.51	23.47	24.03	23.26	23.44	120-130	24.37	1918	98.6,98.6
140	15.89	16.04	16.16	15.38	15.44	16.20	15.70	16.06	130-140	15.52	1934	99.4,99.4
150	7.896	7.543	7.424	7.241	7.633	8.202	8.085	8.457	140-150	7.469	1941	99.8,99.8
160	3.455	3.158	2.855	2.978	3.500	3.660	3.879	3.993	150-160	2.570	1944	100,100
170	1.332	1.108	1.073	1.263	1.575	1.612	1.854	1.782	160-170	0.6738	1944	100,100
180	0.5467	0.5463	0.5424	0.5514	0.5544	0.5521	0.5518	0.5514	170-180	0.1007	1944	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 870.55 lm

%lum = 44.8%  
 %lamp = 44.8%

Conical surface Flux(120deg): 1293 lm

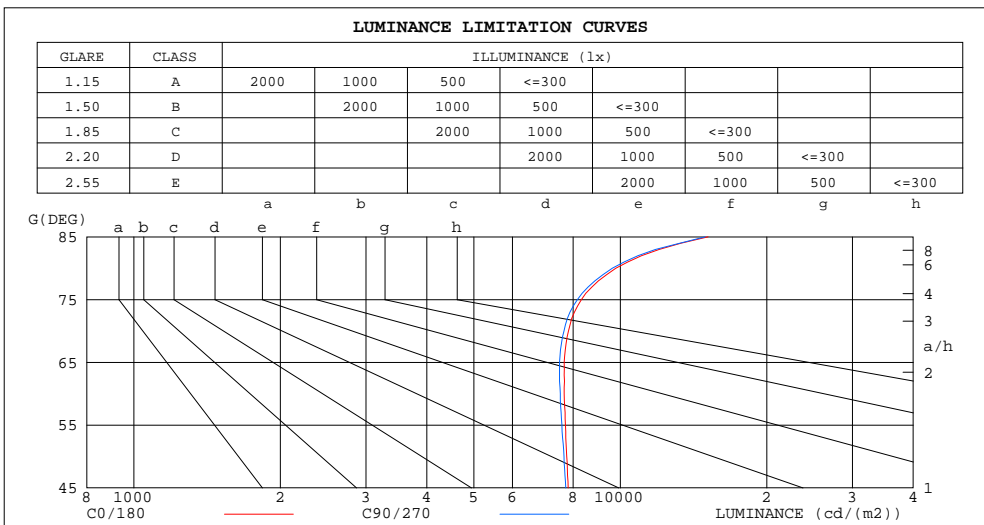
%lum = 66.5%  
 %lamp = 66.5%

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 26 August 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 42.7%  
 Test Distance: 2.500m [K=1.0391]  
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.00V I:0.1637A P:19.240W PF:0.9797 Freq:60.00Hz Lamp Flux:1580x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_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	15150	14948
80	9788	9632
75	8318	8164
70	7823	7658
65	7667	7499
60	7668	7527
55	7714	7586
50	7760	7659
45	7812	7721

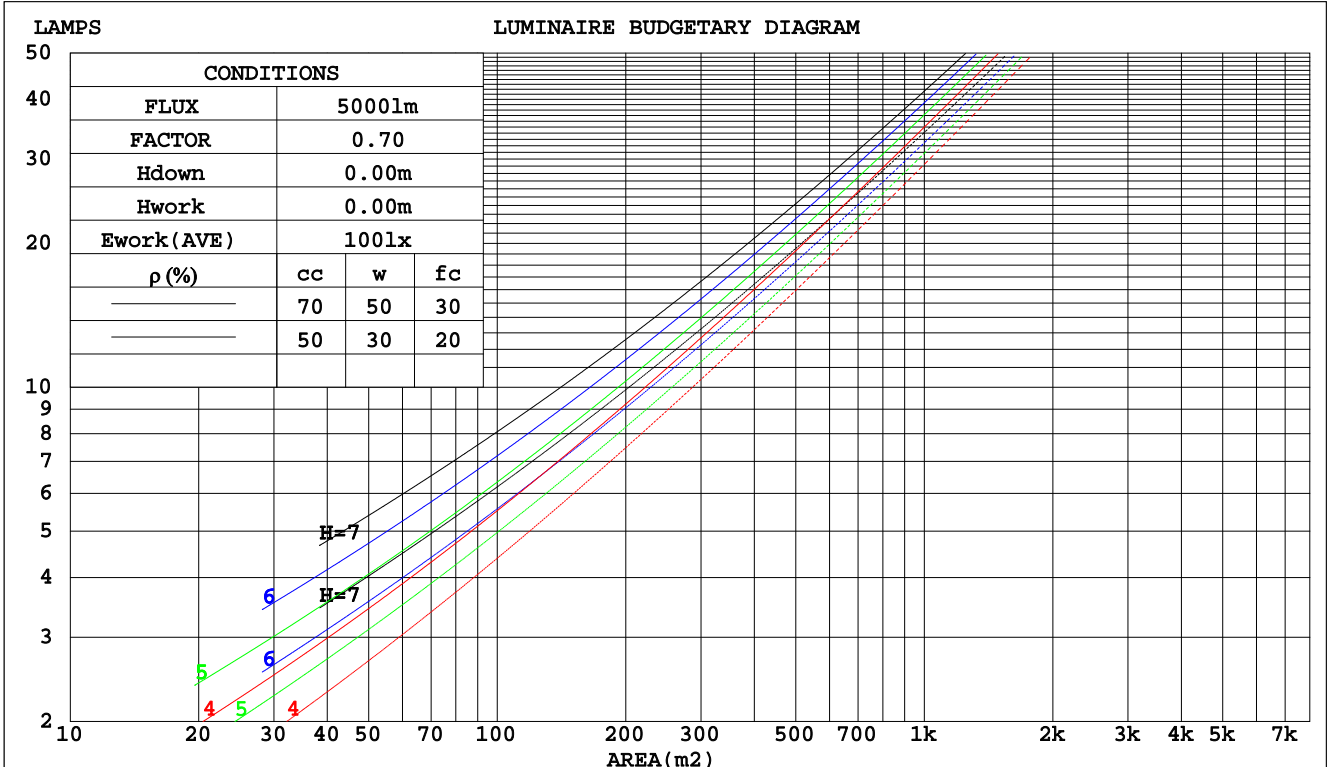
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 26 August 2023

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 42.7%  
 Test Distance: 2.500m [K=1.0391]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.00V I:0.1637A P:19.240W PF:0.9797 Freq:60.00Hz Lamp Flux:1580x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_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	1.17	1.17	1.17	1.13	1.13	1.13	1.06	1.06	1.06	.00	.00	.00	.94	.94	.94	.91
1.0	.00	.95	.90	.96	.92	.88	.91	.87	.84	.85	.82	.79	.80	.78	.76	.73
2.0	.86	.79	.73	.83	.77	.71	.78	.73	.68	.74	.69	.65	.69	.66	.62	.60
3.0	.75	.67	.60	.73	.65	.59	.69	.62	.56	.65	.59	.54	.61	.56	.52	.50
4.0	.66	.57	.50	.64	.56	.49	.61	.54	.48	.57	.51	.46	.54	.49	.45	.42
5.0	.59	.50	.43	.57	.49	.42	.54	.47	.41	.51	.45	.40	.49	.43	.39	.36
6.0	.53	.44	.37	.52	.43	.37	.49	.41	.36	.46	.40	.35	.44	.38	.34	.32
7.0	.48	.39	.33	.47	.38	.32	.44	.37	.32	.42	.36	.31	.40	.34	.30	.28
8.0	.44	.35	.29	.43	.35	.29	.41	.33	.28	.39	.32	.27	.37	.31	.27	.25
9.0	.40	.32	.26	.39	.31	.26	.37	.30	.25	.36	.29	.25	.34	.28	.24	.22
10.0	.37	.29	.24	.36	.29	.23	.35	.28	.23	.33	.27	.22	.32	.26	.22	.20



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 26 August 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 42.7%  
 Test Distance: 2.500m [K=1.0391]  
 Remarks:

WEC AND CCEC

Test:U:120.00V I:0.1637A P:19.240W PF:0.9797 Freq:60.00Hz Lamp Flux:1580x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_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	.349	.199	.063	.339	.194	.061	.321	.184	.059	.304	.175	.056	.288	.167	.054	
2.0	.312	.171	.053	.304	.167	.052	.287	.160	.050	.272	.152	.048	.257	.146	.046	
3.0	.282	.150	.045	.275	.147	.044	.260	.141	.043	.246	.135	.041	.233	.129	.040	
4.0	.257	.134	.039	.250	.131	.039	.237	.126	.037	.224	.120	.036	.213	.116	.035	
5.0	.236	.120	.035	.229	.118	.034	.217	.113	.033	.206	.109	.032	.195	.104	.031	
6.0	.217	.109	.031	.211	.107	.031	.201	.103	.030	.190	.099	.029	.181	.095	.028	
7.0	.201	.100	.028	.196	.098	.028	.186	.094	.027	.177	.091	.026	.168	.087	.026	
8.0	.187	.092	.026	.183	.090	.025	.174	.087	.025	.165	.084	.024	.157	.081	.023	
9.0	.175	.085	.024	.171	.083	.023	.163	.080	.023	.155	.078	.022	.147	.075	.022	
10.0	.164	.079	.022	.160	.077	.022	.153	.075	.021	.146	.072	.021	.139	.070	.020	

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	.259	.259	.259	.221	.221	.221	.151	.151	.151	.087	.087	.087	.028	.028	.028	
1.0	.252	.225	.200	.216	.193	.172	.148	.133	.119	.085	.077	.069	.027	.025	.022	
2.0	.244	.201	.165	.209	.173	.143	.144	.120	.099	.083	.070	.058	.027	.023	.019	
3.0	.237	.184	.142	.203	.159	.123	.139	.110	.087	.080	.064	.051	.026	.021	.017	
4.0	.229	.171	.127	.196	.148	.111	.135	.103	.078	.078	.060	.046	.025	.020	.015	
5.0	.221	.161	.117	.190	.139	.102	.131	.097	.072	.076	.057	.043	.024	.019	.014	
6.0	.214	.153	.109	.184	.133	.095	.127	.093	.067	.074	.055	.040	.024	.018	.013	
7.0	.207	.146	.104	.178	.127	.090	.123	.089	.064	.072	.052	.038	.023	.017	.013	
8.0	.201	.141	.099	.173	.122	.087	.119	.086	.061	.070	.051	.037	.022	.017	.012	
9.0	.194	.136	.096	.167	.118	.084	.116	.083	.060	.068	.049	.036	.022	.016	.012	
10.0	.189	.132	.094	.163	.114	.082	.113	.080	.058	.066	.048	.035	.021	.016	.011	

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 26 August 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 42.7%  
 Test Distance: 2.500m [K=1.0391]  
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.00V I:0.1637A P:19.240W PF:0.9797 Freq:60.00Hz Lamp Flux:1580x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_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	19.4	20.9	19.8	21.2	21.6	19.4	20.8	19.7	21.2	21.5
3H	21.2	22.5	21.6	22.9	23.4	21.1	22.5	21.5	22.8	23.3
4H	22.1	23.4	22.5	23.8	24.2	22.0	23.3	22.4	23.7	24.1
6H	23.0	24.2	23.4	24.6	25.1	22.9	24.1	23.3	24.5	25.0
8H	23.4	24.6	23.9	25.0	25.5	23.3	24.5	23.8	24.9	25.4
12H	24.0	25.1	24.5	25.5	26.0	23.9	25.0	24.4	25.4	25.9
4H 2H	20.1	21.3	20.5	21.7	22.2	20.0	21.3	20.4	21.7	22.1
3H	22.1	23.2	22.5	23.6	24.1	22.0	23.1	22.5	23.6	24.0
4H	23.1	24.1	23.6	24.6	25.1	23.0	24.0	23.5	24.5	25.0
6H	24.2	25.1	24.7	25.6	26.1	24.1	25.0	24.6	25.5	26.1
8H	24.7	25.6	25.3	26.1	26.7	24.7	25.5	25.2	26.0	26.6
12H	25.4	26.2	25.9	26.7	27.3	25.3	26.1	25.9	26.6	27.2
8H 4H	23.5	24.3	24.0	24.9	25.4	23.4	24.3	24.0	24.8	25.4
6H	24.8	25.5	25.4	26.1	26.7	24.8	25.5	25.3	26.0	26.6
8H	25.6	26.2	26.2	26.8	27.4	25.5	26.1	26.1	26.7	27.3
12H	26.4	27.0	27.0	27.6	28.2	26.3	26.9	27.0	27.5	28.2
12H 4H	23.6	24.3	24.1	24.9	25.5	23.5	24.3	24.1	24.8	25.4
6H	25.0	25.6	25.6	26.2	26.8	24.9	25.6	25.5	26.1	26.8
8H	25.8	26.4	26.4	27.0	27.6	25.8	26.3	26.4	26.9	27.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117, 1944 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 2.3)  
 Area: 0.07065 m2

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 26 August 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 42.7%  
 Test Distance: 2.500m [K=1.0391]  
 Remarks:

## UTILIZATION FACTORS TABLE

Test:U:120.00V I:0.1637A P:19.240W PF:0.9797 Freq:60.00Hz Lamp Flux:1580x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_4000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

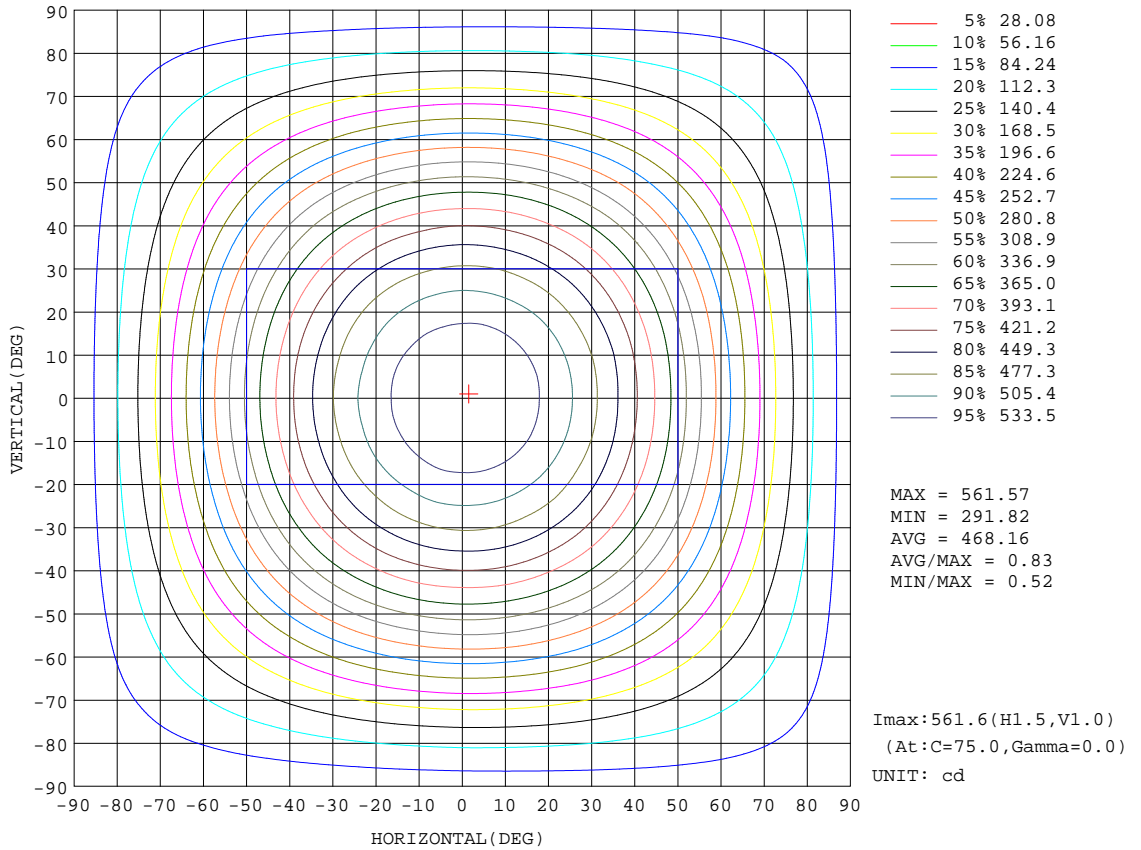
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	53	41	34	52	41	34	50	40	33	27
0.80	62	50	43	61	50	42	59	49	42	34
1.00	71	59	51	69	58	50	66	59	49	42
1.25	78	66	58	76	65	58	72	63	56	48
1.50	83	72	64	80	70	63	76	68	61	52
2.00	90	80	72	87	78	71	82	75	69	59
2.50	94	85	78	91	83	76	86	79	74	63
3.00	97	89	83	94	87	81	89	83	78	67
4.00	102	95	89	98	92	87	93	88	83	72
5.00	104	98	93	101	96	91	95	91	87	75
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: 26 August 2023

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 42.7%  
 Test Distance: 2.500m [K=1.0391]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.00V I:0.1637A P:19.240W PF:0.9797 Freq:60.00Hz Lamp Flux:1580x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_4000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



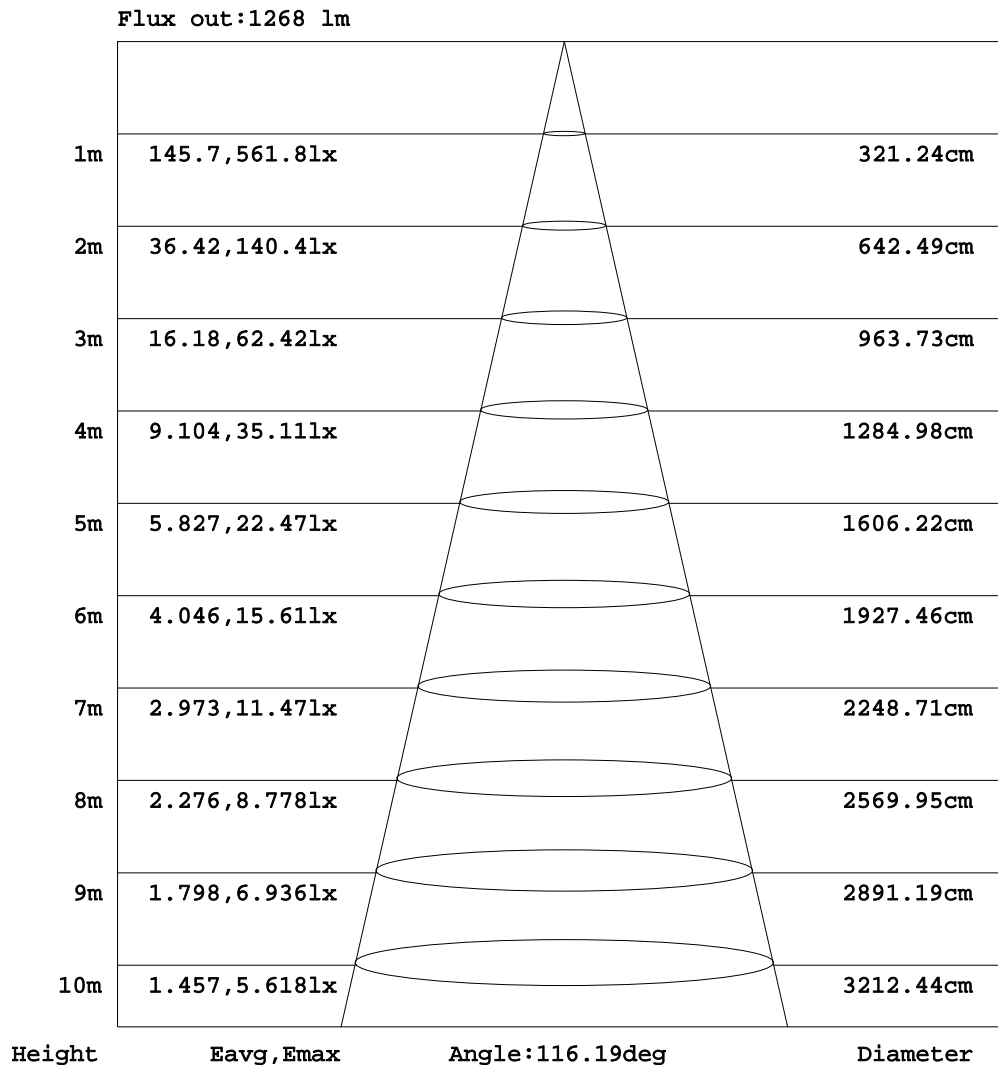
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 26 August 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 42.7%  
 Test Distance: 2.500m [K=1.0391]  
 Remarks:



AAI Figure

Test:U:120.00V I:0.1637A P:19.240W PF:0.9797 Freq:60.00Hz Lamp Flux:1580x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_4000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



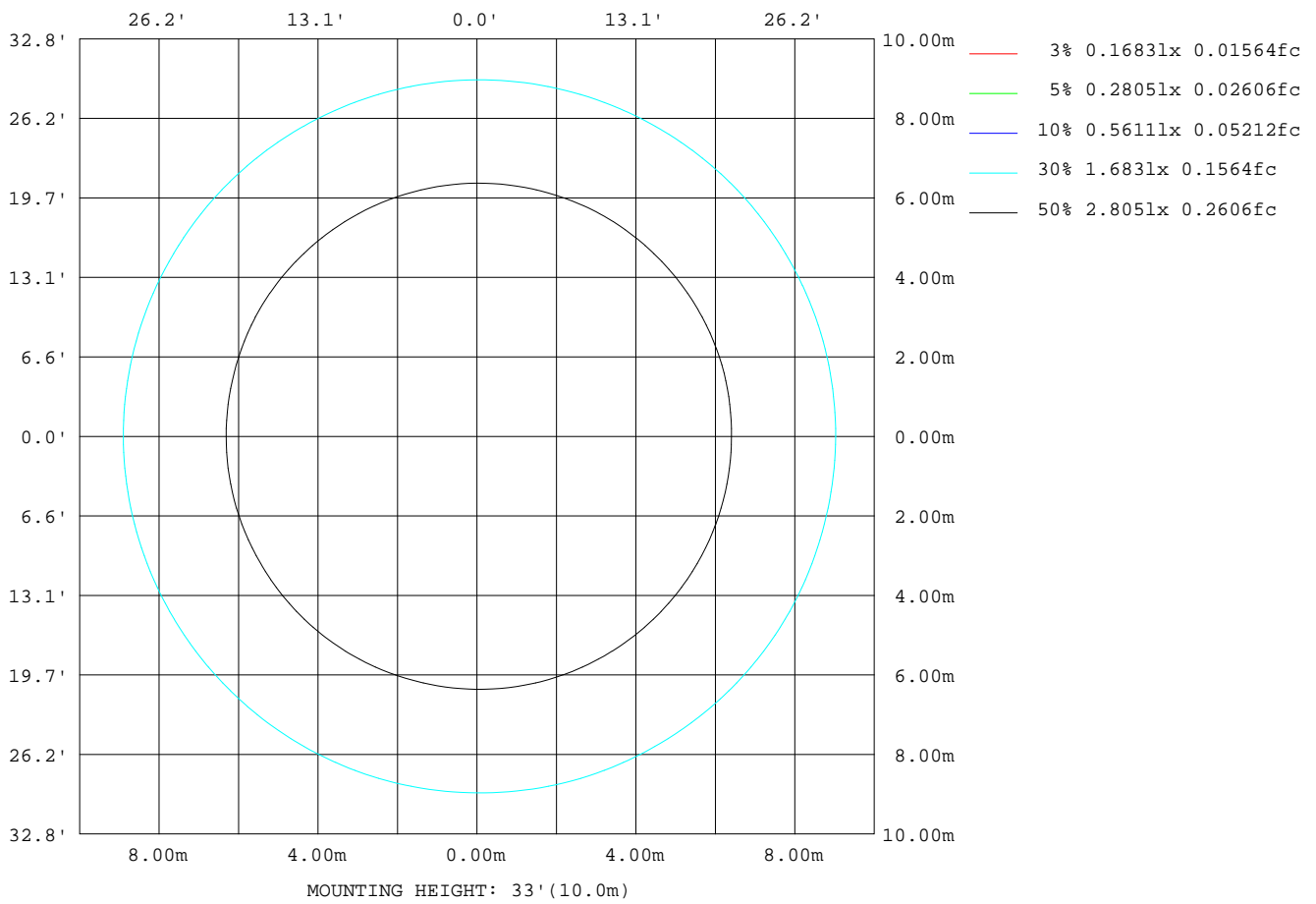
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators:Alan Wang  
 Test Date:26 August 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 42.7%  
 Test Distance:2.500m [K=1.0391]  
 Remarks:

ISOLUX DIAGRAM

Test:U:120.00V I:0.1637A P:19.240W PF:0.9797 Freq:60.00Hz Lamp Flux:1580x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_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: 26 August 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 42.7%  
 Test Distance: 2.500m [K=1.0391]  
 Remarks:

## LED Avg.L Report

Test:U:120.00V I:0.1637A P:19.240W PF:0.9797 Freq:60.00Hz Lamp Flux:1580x1 lm		
NAME:ASD-LFMDR-MV-12D20CC-EM-NK_4000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

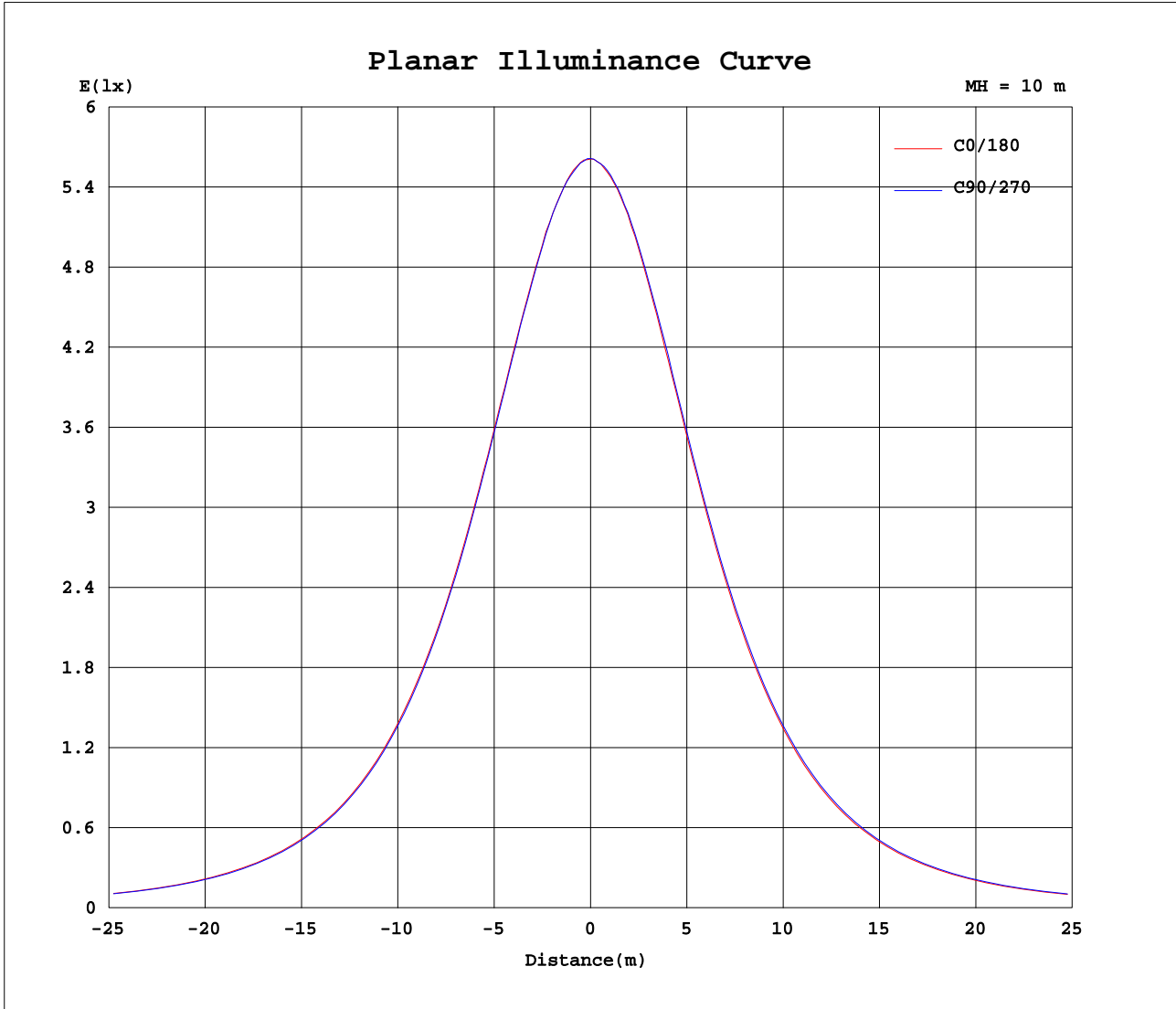
AvgL	cd/m2
L_0~180(65)av	7456
L_0~180(75)av	8035
L_0~180(85)av	14559
L_90~270(65)av	7488
L_90~270(75)av	8090
L_90~270(85)av	14744
L_45(65)av	7482
L_45(75)av	8064
L_45(85)av	14604

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 26 August 2023

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 42.7%  
 Test Distance: 2.500m [K=1.0391]  
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 26 August 2023

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 42.7%  
 Test Distance: 2.500m [K=1.0391]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.00V I:0.1637A P:19.240W PF:0.9797 Freq:60.00Hz Lamp Flux:1580x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_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	561	560	560	561	561	562	561	561	561	561	561	561	561	560	560	561	561	562	561
5	559	559	559	559	559	559	558	559	559	558	558	558	557	558	557	558	559	558	559
10	552	552	553	553	552	552	552	552	551	551	551	550	550	550	550	551	551	551	551
15	541	543	542	542	541	541	540	540	540	539	539	538	538	539	538	538	539	540	541
20	527	527	526	527	526	525	525	524	523	523	522	522	522	522	522	523	523	524	525
25	508	508	508	507	506	506	505	504	503	501	501	501	502	501	502	503	504	504	505
30	484	484	483	483	482	482	481	480	478	477	477	476	477	477	478	479	479	480	481
35	456	456	457	456	455	453	452	451	449	448	447	447	447	448	449	450	451	452	453
40	425	425	424	424	423	422	421	419	418	417	415	414	415	416	416	417	419	419	421
45	390	391	389	389	388	387	386	384	382	381	379	379	380	380	381	382	383	385	386
50	352	353	352	351	350	349	348	346	344	342	341	340	341	342	342	343	345	346	347
55	313	312	313	311	311	310	307	305	304	302	300	300	301	301	302	303	304	306	307
60	271	271	271	270	269	268	266	264	262	260	258	257	259	259	260	262	262	263	265
65	229	229	228	228	227	226	224	222	220	218	216	215	216	217	218	220	221	222	223
70	189	189	189	188	188	186	185	183	181	179	177	176	177	178	179	180	181	182	183
75	152	152	152	152	151	150	149	147	145	143	142	141	142	143	144	145	145	146	147
80	120	120	121	121	120	119	118	116	114	112	111	111	111	112	113	114	115	115	116
85	93.3	93.5	93.6	93.7	93.0	92.2	92.0	89.9	87.9	86.3	85.4	85.1	86.0	86.6	87.5	88.1	88.5	89.0	89.5
90	70.2	70.3	70.1	69.8	69.3	68.5	68.1	66.8	65.1	64.1	63.4	63.3	64.3	64.8	65.8	66.2	66.4	66.8	67.1
95	51.8	51.5	51.1	50.8	50.6	50.5	49.8	49.0	48.1	47.0	46.4	46.4	47.4	48.0	48.5	48.9	49.0	48.8	48.9
100	39.3	39.2	38.7	38.7	39.0	38.9	38.4	37.9	37.6	37.2	36.6	36.5	37.2	37.4	37.3	37.4	37.8	37.6	37.2
105	33.0	33.3	33.7	34.1	34.9	35.4	35.8	35.7	35.2	34.6	34.0	33.7	33.9	34.1	34.2	34.3	33.9	33.4	32.8
110	32.9	33.3	33.8	34.2	34.8	35.2	35.5	35.4	34.9	34.2	33.7	33.4	33.6	33.9	34.2	34.4	33.8	33.4	32.9
115	32.2	32.4	32.6	32.9	33.4	34.0	34.2	34.1	33.5	32.9	32.4	32.3	32.4	32.7	32.8	32.8	32.6	32.1	31.7
120	29.9	30.2	30.3	30.4	30.8	31.3	31.7	31.4	30.9	30.2	29.9	29.8	30.0	30.1	30.3	30.2	30.0	29.7	29.4
125	27.0	27.0	27.2	27.3	27.6	28.0	28.5	28.1	27.7	27.1	26.8	26.7	26.9	27.2	27.3	27.3	27.1	26.8	26.6
130	23.8	23.9	24.0	23.9	24.0	24.3	24.9	24.6	24.0	23.5	23.3	23.2	23.5	23.7	23.9	24.0	23.8	23.5	23.3
135	19.9	20.2	20.2	20.2	19.9	20.3	20.6	20.6	20.0	19.6	19.4	19.3	19.6	19.8	20.2	20.3	20.1	19.8	19.6
140	15.9	16.1	17.2	16.0	15.6	15.9	16.2	16.1	15.7	15.4	15.2	15.1	15.4	15.8	16.1	16.2	16.1	15.8	15.7
145	11.8	11.8	11.8	11.8	11.3	11.4	11.6	11.5	11.3	11.1	10.9	10.9	11.3	11.6	11.9	12.0	11.9	11.8	11.7
150	7.90	7.91	7.89	7.54	7.35	7.34	7.42	7.38	7.30	7.24	7.21	7.26	7.63	7.84	8.07	8.20	8.16	8.12	8.09
155	5.38	5.32	5.33	5.04	4.85	4.77	4.74	4.78	4.74	4.79	4.86	4.94	5.27	5.37	5.53	5.64	5.65	5.67	5.70
160	3.45	3.40	3.32	3.16	3.04	2.93	2.86	2.87	2.90	2.98	3.10	3.20	3.50	3.53	3.58	3.66	3.72	3.79	3.88
165	2.11	2.05	2.00	1.91	1.84	1.77	1.68	1.66	1.74	1.87	1.99	2.08	2.27	2.28	2.28	2.32	2.41	2.51	2.59
170	1.33	1.26	1.19	1.11	1.04	1.04	1.07	1.10	1.15	1.26	1.38	1.46	1.58	1.58	1.58	1.61	1.73	1.81	1.85
175	0.76	0.64	0.56	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.56	0.67	0.95	0.96	1.04	1.09	1.12	1.13	1.25
180	0.55	0.55	0.54	0.55	0.55	0.54	0.54	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 26 August 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 42.7%  
 Test Distance: 2.500m [K=1.0391]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.00V I:0.1637A P:19.240W PF:0.9797 Freq:60.00Hz Lamp Flux:1580x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_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	561	561	561	561	561														
5	560	559	559	559	559														
10	552	552	553	553	553														
15	542	541	542	542	543														
20	526	526	526	527	528														
25	506	506	508	508	509														
30	482	482	484	485	485														
35	454	455	456	457	457														
40	422	423	424	426	426														
45	387	389	390	390	391														
50	349	350	352	353	354														
55	309	310	311	313	314														
60	267	268	270	272	272														
65	225	226	228	230	230														
70	184	186	187	188	189														
75	148	149	150	152	153														
80	116	118	118	120	120														
85	90.1	90.7	91.6	92.8	93.4														
90	67.6	68.4	69.2	70.4	71.1														
95	49.4	50.0	51.0	51.9	52.4														
100	37.3	38.1	38.7	39.0	39.4														
105	32.4	32.5	32.5	32.7	33.0														
110	32.5	32.5	32.4	32.7	32.8														
115	31.5	31.5	31.7	31.9	32.1														
120	29.3	29.3	29.5	29.7	29.9														
125	26.4	26.4	26.6	26.9	27.0														
130	23.2	23.2	23.4	23.7	23.8														
135	19.6	19.7	19.9	20.1	20.2														
140	15.7	15.8	16.1	16.2	16.2														
145	11.8	11.9	12.1	12.2	12.1														
150	8.17	8.32	8.46	8.48	8.38														
155	5.78	5.86	5.91	5.88	5.80														
160	3.95	3.99	3.99	3.94	3.83														
165	2.64	2.65	2.62	2.56	2.43														
170	1.86	1.83	1.78	1.69	1.56														
175	1.26	1.20	1.04	0.99	0.97														
180	0.55	0.55	0.55	0.55	0.55														

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 26 August 2023

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.00.416  
 Humidity: 42.7%  
 Test Distance: 2.500m [K=1.0391]  
 Remarks: