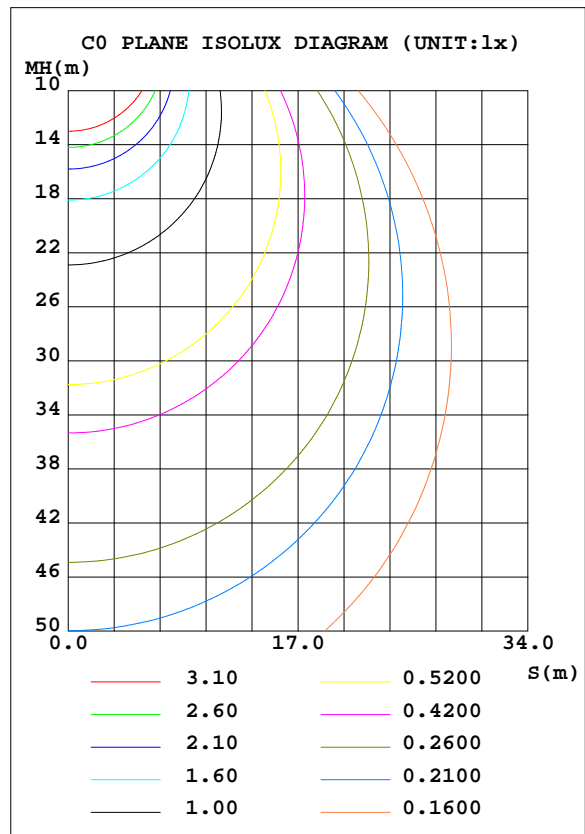
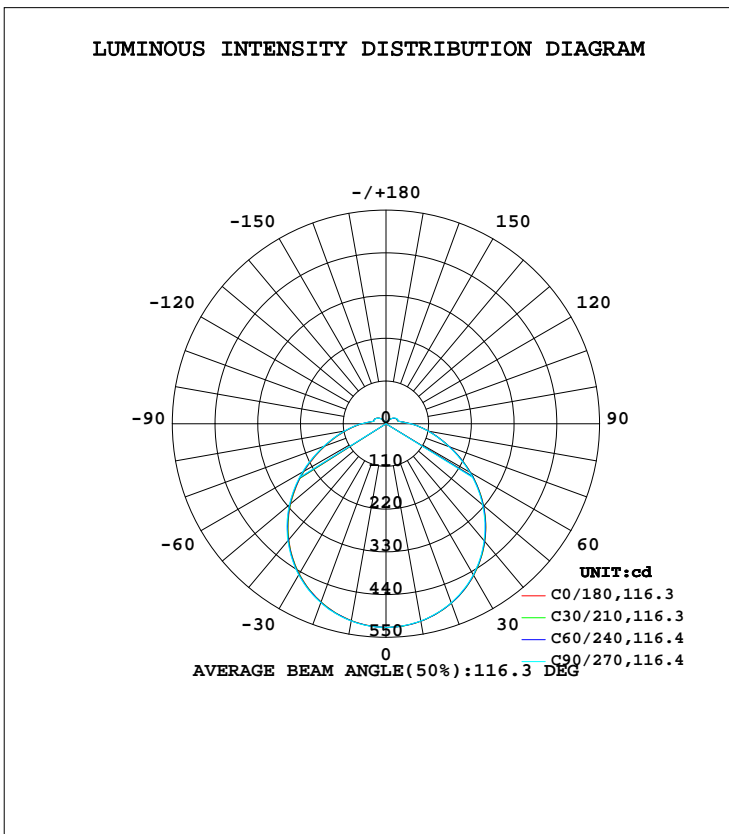


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.00V I:0.1770A P:20.860W PF:0.9822 Freq:60.00Hz Lamp Flux:1450x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_5000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 69.54 lm/W			
MODEL	LFMDR-MV-12D20CC-EM-NK	I <sub>max</sub> (cd)	524.6	S/MH(C0/180)	1.27
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	1450	η UP, DN(C0-180)	4.5,45.5
NOMINAL FLUX(lm)	1450	CIE CLASS	DIRECT	η UP, DN(C180-360)	4.5,45.5
LAMPS INSIDE	1	η up(%)	9.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	120	η 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

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:

## ZONAL FLUX DIAGRAM

## ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum,lamp
10	516.4	516.2	515.7	514.7	515.0	514.9	515.6	516.4	0- 10	49.62	49.62	2.73,2.73
20	491.8	491.5	490.7	488.6	488.5	489.0	490.5	491.7	10- 20	142.5	192.2	10.6,10.6
30	451.3	450.9	449.1	446.4	446.6	447.4	449.6	451.5	20- 30	217.4	409.6	22.5,22.5
40	395.9	395.0	392.9	389.6	389.6	390.8	393.3	395.6	30- 40	264.4	674.0	37.1,37.1
50	328.0	327.3	324.6	320.5	320.2	322.0	324.7	328.5	40- 50	277.7	951.8	52.4,52.4
60	251.4	250.9	248.2	243.2	243.3	245.2	248.1	251.5	50- 60	256.4	1208	66.5,66.5
70	174.8	174.5	172.5	167.5	166.8	169.1	171.3	174.3	60- 70	206.8	1415	77.9,77.9
80	110.9	111.4	110.3	105.7	105.1	107.5	108.7	110.3	70- 80	146.3	1561	85.9,85.9
90	64.44	64.36	63.39	60.02	60.65	62.87	63.41	64.46	80- 90	92.27	1654	91,91
100	36.12	35.41	35.46	34.61	35.11	35.70	35.36	36.21	90-100	51.58	1705	93.9,93.9
110	30.53	31.34	32.47	31.85	31.85	32.65	31.16	30.59	100-110	34.16	1739	95.7,95.7
120	27.77	27.88	29.09	28.08	28.25	28.93	27.98	27.77	110-120	30.06	1769	97.4,97.4
130	22.11	21.85	22.71	21.79	22.08	22.82	22.16	22.20	120-130	22.75	1792	98.6,98.6
140	14.83	14.76	14.65	14.14	14.49	15.26	14.93	15.27	130-140	14.47	1807	99.4,99.4
150	7.401	6.893	6.665	6.614	7.169	7.703	7.686	8.068	140-150	6.967	1814	99.8,99.8
160	3.195	2.898	2.614	2.728	3.263	3.453	3.678	3.784	150-160	2.394	1816	100,100
170	1.250	1.011	0.9723	1.185	1.491	1.522	1.744	1.674	160-170	0.6287	1817	100,100
180	0.5111	0.5105	0.5065	0.5146	0.5166	0.5160	0.5163	0.5150	170-180	0.0944	1817	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 813.46 lm

%lum = 44.8%

%lamp = 44.8%

Conical surface Flux(120deg): 1208.1 lm

%lum = 66.5%

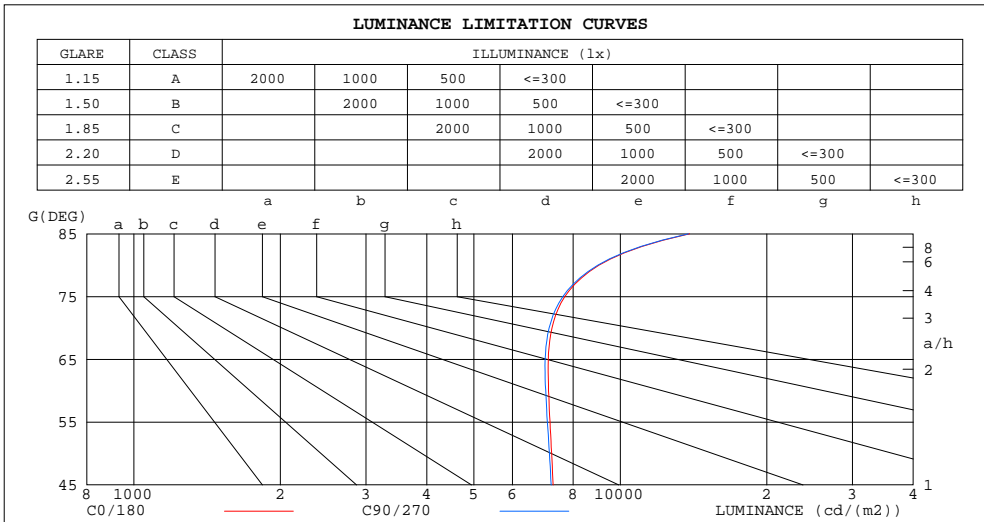
%lamp = 66.5%

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

$\gamma$  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:

LUMINANCE LIMITATION CURVES

Test:U:120.00V I:0.1770A P:20.860W PF:0.9822 Freq:60.00Hz Lamp Flux:1450x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_5000K	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	13874	13803
80	9037	8989
75	7688	7620
70	7235	7140
65	7111	7003
60	7115	7026
55	7170	7079
50	7223	7147
45	7275	7211

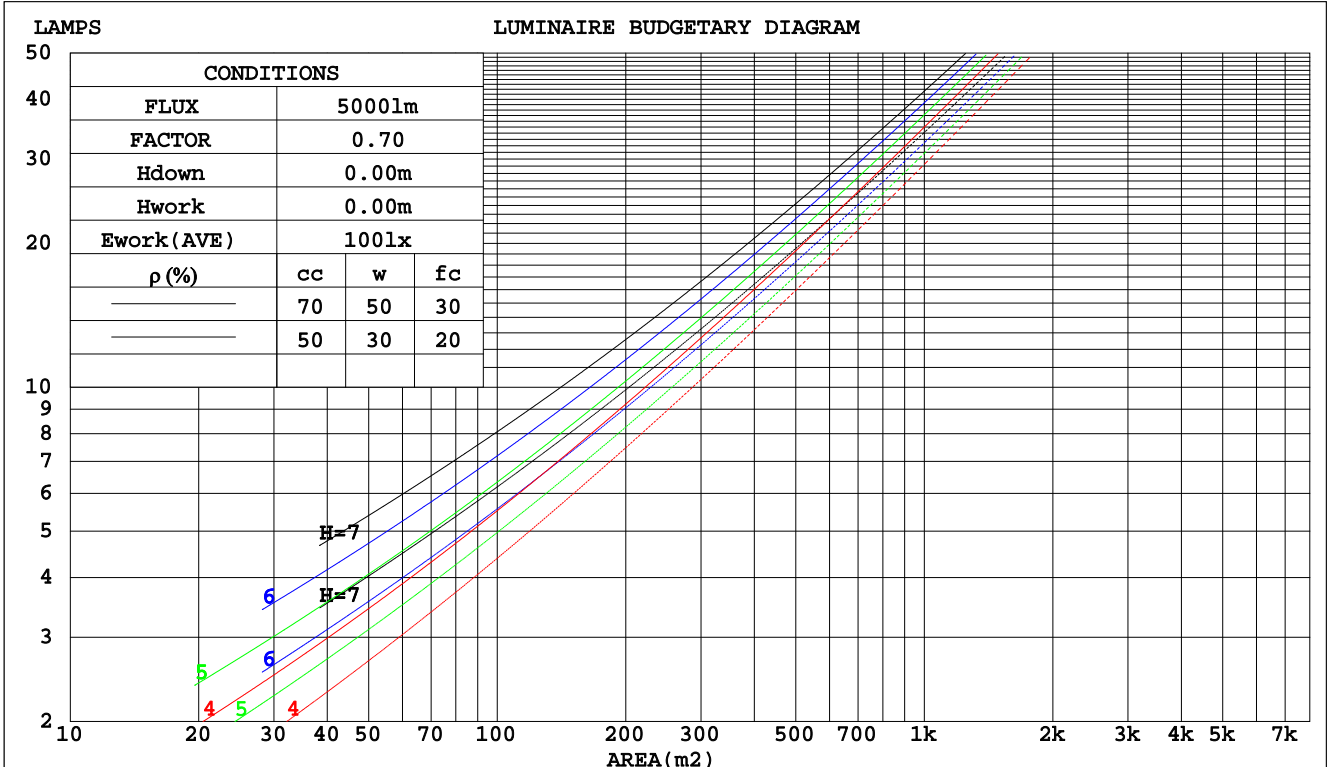
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 26 August 2023

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:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.00V I:0.1770A P:20.860W PF:0.9822 Freq:60.00Hz Lamp Flux:1450x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_5000K	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:0.1770A P:20.860W PF:0.9822 Freq:60.00Hz Lamp Flux:1450x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_5000K	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	.147	.133	.119	.085	.077	.069	.027	.025	.022	
2.0	.244	.201	.165	.209	.173	.143	.143	.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	.069	.050	.037	.022	.017	.012	
9.0	.194	.136	.096	.167	.118	.084	.116	.083	.060	.068	.049	.035	.022	.016	.012	
10.0	.189	.131	.093	.163	.114	.082	.113	.080	.058	.066	.047	.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:0.1770A P:20.860W PF:0.9822 Freq:60.00Hz Lamp Flux:1450x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_5000K	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	19.2	20.6	19.5	21.0	21.3	19.1	20.5	19.5	20.9	21.3
3H	20.9	22.3	21.4	22.6	23.1	20.9	22.2	21.3	22.6	23.0
4H	21.8	23.1	22.2	23.5	23.9	21.7	23.0	22.2	23.4	23.9
6H	22.7	23.9	23.1	24.3	24.8	22.6	23.8	23.1	24.2	24.7
8H	23.1	24.3	23.6	24.7	25.2	23.1	24.2	23.6	24.7	25.2
12H	23.7	24.8	24.1	25.2	25.7	23.6	24.7	24.1	25.2	25.7
4H 2H	19.8	21.1	20.2	21.5	21.9	19.7	21.0	20.2	21.4	21.9
3H	21.8	22.9	22.3	23.3	23.8	21.7	22.8	22.2	23.3	23.8
4H	22.8	23.8	23.3	24.3	24.8	22.8	23.8	23.3	24.3	24.8
6H	23.9	24.8	24.4	25.3	25.8	23.8	24.7	24.4	25.2	25.8
8H	24.4	25.3	25.0	25.8	26.4	24.4	25.2	24.9	25.8	26.3
12H	25.1	25.9	25.6	26.4	27.0	25.0	25.8	25.6	26.4	27.0
8H 4H	23.2	24.0	23.7	24.6	25.1	23.2	24.0	23.7	24.5	25.1
6H	24.5	25.2	25.1	25.8	26.4	24.5	25.2	25.1	25.8	26.4
8H	25.3	25.9	25.8	26.5	27.1	25.2	25.9	25.8	26.4	27.1
12H	26.1	26.7	26.7	27.2	27.9	26.1	26.6	26.7	27.2	27.9
12H 4H	23.3	24.0	23.8	24.6	25.2	23.2	24.0	23.8	24.6	25.2
6H	24.7	25.3	25.3	25.9	26.5	24.7	25.3	25.2	25.9	26.5
8H	25.5	26.1	26.1	26.7	27.3	25.5	26.0	26.1	26.6	27.3
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	+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117, 1817 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 2.1)  
 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:0.1770A P:20.860W PF:0.9822 Freq:60.00Hz Lamp Flux:1450x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_5000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

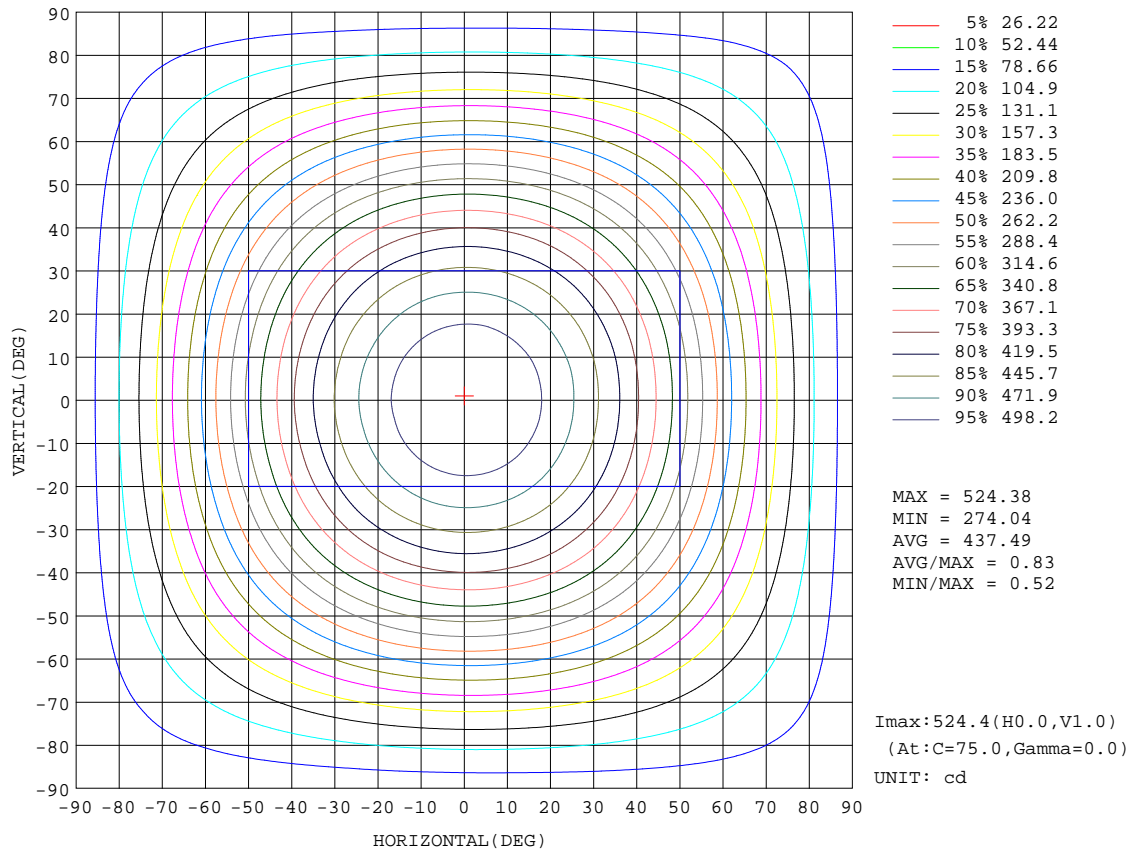
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	53	41	34	52	41	34	50	40	33	27
0.80	62	50	43	61	50	42	59	49	42	34
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

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:

ISOCANDELA DIAGRAM

Test:U:120.00V I:0.1770A P:20.860W PF:0.9822 Freq:60.00Hz Lamp Flux:1450x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_5000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



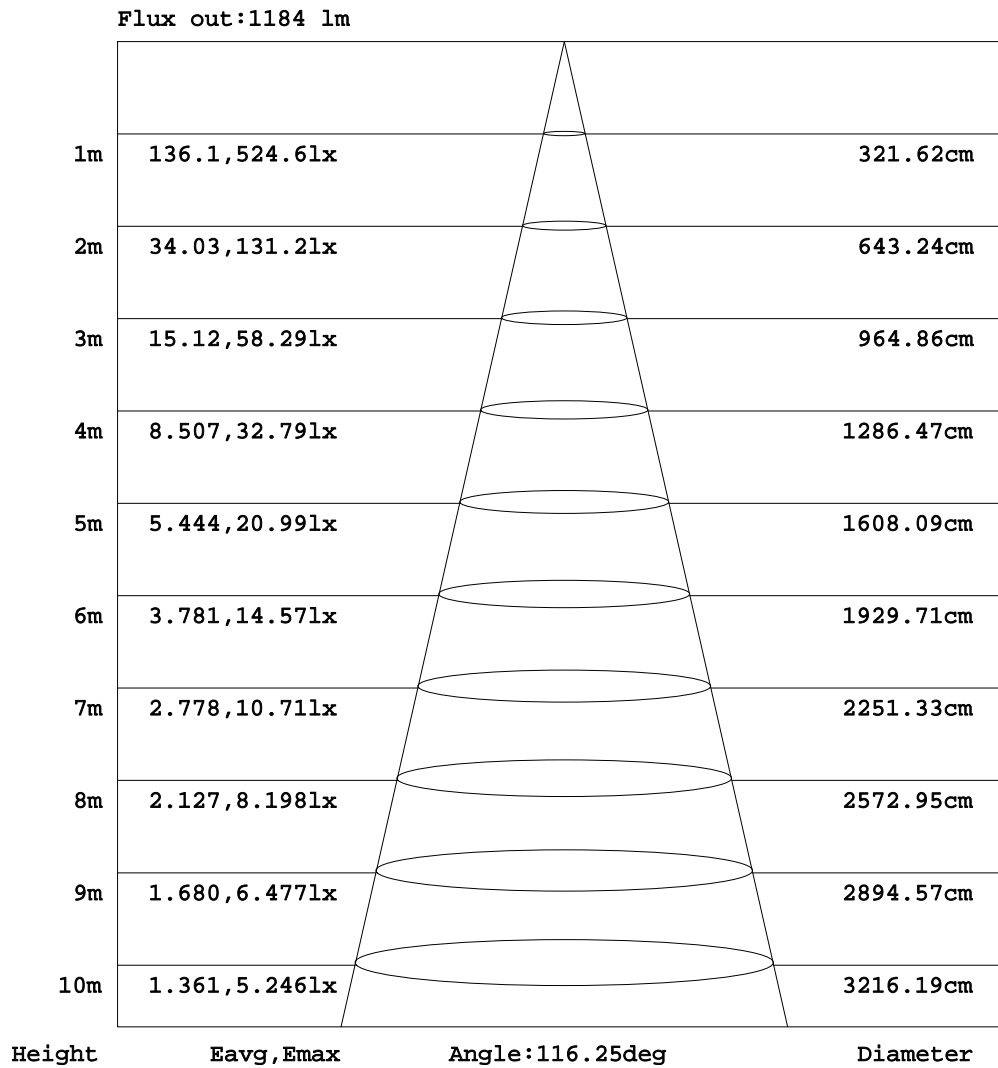
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.0DEG  
 Operators: Alan Wang  
 Test Date: 26 August 2023

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:0.1770A P:20.860W PF:0.9822 Freq:60.00Hz Lamp Flux:1450x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_5000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



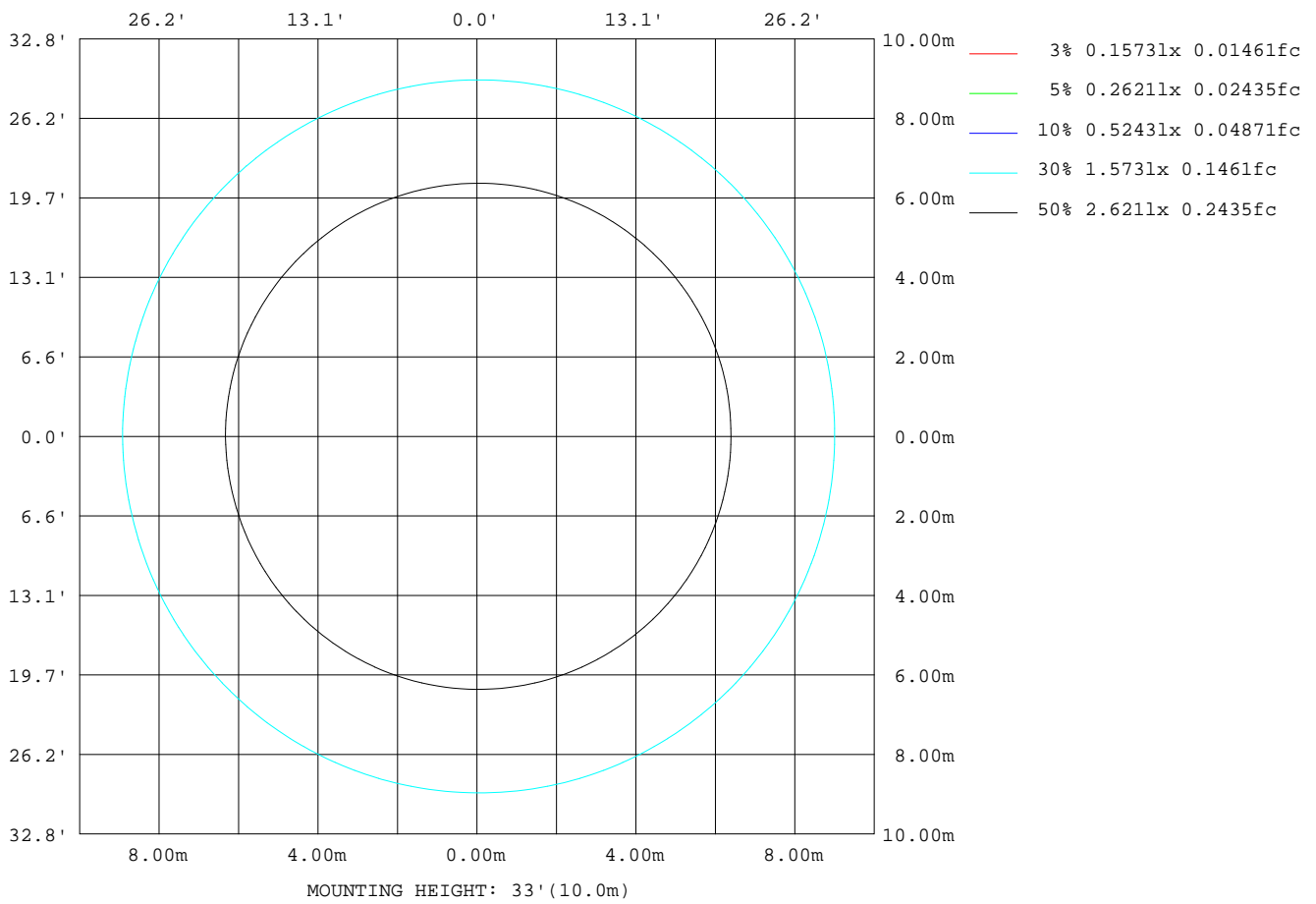
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.1770A P:20.860W PF:0.9822 Freq:60.00Hz Lamp Flux:1450x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_5000K	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:0.1770A P:20.860W PF:0.9822 Freq:60.00Hz Lamp Flux:1450x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_5000K	TYPE:LED	WEIGHT:
SPEC.:N/A	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

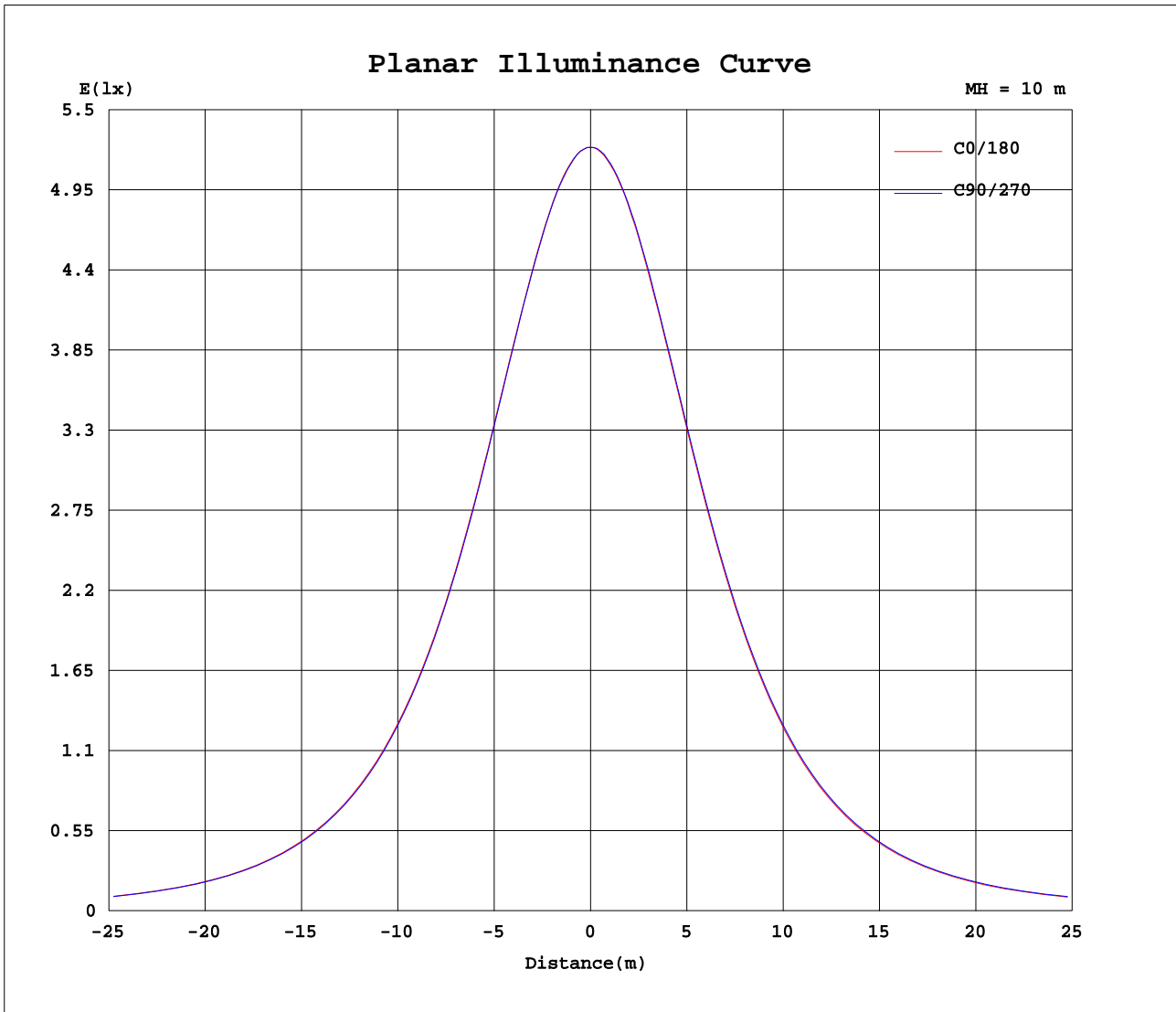
AvgL	cd/m2
L_0~180(65)av	6965
L_0~180(75)av	7497
L_0~180(85)av	13526
L_90~270(65)av	6988
L_90~270(75)av	7572
L_90~270(85)av	13748
L_45(65)av	6973
L_45(75)av	7537
L_45(85)av	13632

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:0.1770A P:20.860W PF:0.9822 Freq:60.00Hz Lamp Flux:1450x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_5000K	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	524	524	525	524	524	525	524	524	524	524	524	524	524	524	525	524	524	525	524
5	522	522	523	522	522	522	522	522	521	521	522	521	521	521	522	522	522	522	522
10	516	516	516	516	516	516	516	515	515	515	514	514	515	515	515	515	515	515	516
15	506	506	506	506	506	505	505	505	504	504	503	503	504	504	504	504	505	505	505
20	492	491	492	492	491	491	491	490	489	489	488	488	489	489	489	489	490	490	491
25	474	473	473	473	473	472	472	471	470	470	469	469	470	470	470	470	471	472	472
30	451	451	451	451	450	450	449	448	447	446	446	446	447	446	447	447	448	449	450
35	425	425	425	425	424	423	423	422	421	420	419	418	420	420	420	421	422	422	423
40	396	396	396	395	395	394	393	392	391	390	389	388	390	390	390	391	391	392	393
45	363	363	363	363	362	361	360	359	358	356	356	355	356	356	357	358	359	359	360
50	328	328	328	327	327	325	325	324	322	321	319	319	320	320	321	322	323	324	325
55	291	291	290	290	289	288	287	286	284	282	281	281	282	283	283	284	285	286	287
60	251	252	251	251	250	249	248	247	245	243	242	242	243	244	244	245	246	247	248
65	212	212	212	212	211	210	209	208	206	204	203	202	204	204	205	206	206	207	208
70	175	175	175	174	174	174	173	171	169	167	166	165	167	167	168	169	170	170	171
75	141	141	141	141	141	140	139	138	136	134	133	132	134	134	135	136	137	137	138
80	111	111	111	111	111	111	110	109	107	106	105	104	105	106	107	108	108	108	109
85	85.4	85.7	85.9	86.1	85.9	85.4	85.0	83.8	82.1	81.0	80.1	79.9	81.1	81.7	82.6	83.4	83.7	84.0	84.3
90	64.4	64.6	64.4	64.4	64.2	63.7	63.4	62.4	60.8	60.0	59.4	59.4	60.7	61.2	62.3	62.9	62.9	63.3	63.4
95	47.5	47.1	46.9	46.7	46.7	46.8	46.3	45.6	44.9	43.9	43.5	43.5	44.6	45.5	46.0	46.4	46.6	46.5	46.4
100	36.1	35.9	35.4	35.4	35.9	35.8	35.5	35.1	34.9	34.6	34.1	34.1	35.1	35.4	35.4	35.7	36.0	35.9	35.4
105	30.6	30.7	30.9	31.3	31.9	32.3	32.6	32.6	32.4	32.1	31.8	31.7	32.1	32.3	32.4	32.6	32.3	31.7	31.2
110	30.5	30.7	31.0	31.3	31.7	32.1	32.5	32.5	32.2	31.9	31.5	31.5	31.8	32.1	32.4	32.7	32.2	31.7	31.2
115	29.9	29.9	30.0	30.2	30.5	31.0	31.3	31.3	31.0	30.6	30.3	30.3	30.6	30.9	31.2	31.3	31.0	30.5	30.2
120	27.8	27.8	27.8	27.9	28.1	28.6	29.1	28.8	28.4	28.1	28.0	27.9	28.2	28.5	28.7	28.9	28.5	28.2	28.0
125	25.1	24.9	25.0	25.0	25.2	25.6	26.1	25.8	25.4	25.1	25.0	25.0	25.3	25.6	25.8	26.1	25.7	25.5	25.3
130	22.1	22.1	22.1	21.8	21.9	22.1	22.7	22.5	22.1	21.8	21.7	21.7	22.1	22.3	22.6	22.8	22.6	22.3	22.2
135	18.6	18.7	18.6	18.5	18.2	18.4	18.7	18.8	18.3	18.1	18.0	18.0	18.4	18.7	19.0	19.1	19.0	18.8	18.6
140	14.8	15.0	17.1	14.8	14.2	14.4	14.6	14.7	14.3	14.1	14.1	14.1	14.5	14.8	15.1	15.3	15.2	15.0	14.9
145	11.0	11.0	10.9	10.5	10.2	10.3	10.4	10.5	10.3	10.2	10.1	10.1	10.6	10.9	11.2	11.3	11.3	11.2	11.1
150	7.40	7.38	7.28	6.89	6.63	6.59	6.66	6.67	6.63	6.61	6.65	6.73	7.17	7.37	7.59	7.70	7.69	7.67	7.69
155	5.00	4.91	4.91	4.63	4.41	4.33	4.31	4.35	4.33	4.39	4.46	4.57	4.94	5.05	5.21	5.32	5.34	5.37	5.41
160	3.20	3.12	3.07	2.90	2.77	2.67	2.61	2.63	2.66	2.73	2.85	2.96	3.26	3.31	3.37	3.45	3.52	3.60	3.68
165	1.96	1.89	1.84	1.74	1.69	1.62	1.55	1.53	1.60	1.72	1.83	1.92	2.12	2.13	2.14	2.19	2.29	2.38	2.45
170	1.25	1.17	1.09	1.01	0.95	0.94	0.97	1.00	1.07	1.18	1.29	1.37	1.49	1.50	1.50	1.52	1.63	1.71	1.74
175	0.70	0.59	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.53	0.64	0.91	0.92	0.99	1.03	1.05	1.06	1.16
180	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.52	0.51	0.52	0.51	0.52	0.52	0.52	0.52	0.51	0.52	0.52

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:0.1770A P:20.860W PF:0.9822 Freq:60.00Hz Lamp Flux:1450x1 lm		
NAME: ASD-LFMDR-MV-12D20CC-EM-NK_5000K	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	524	524	524	524	524														
5	522	523	522	523	522														
10	516	516	516	516	517														
15	505	506	506	506	506														
20	491	491	492	492	492														
25	473	473	474	474	475														
30	450	451	452	452	452														
35	424	425	425	426	426														
40	394	395	396	397	397														
45	361	363	363	364	365														
50	326	327	328	329	330														
55	288	289	291	292	292														
60	249	250	251	253	253														
65	209	211	211	213	214														
70	172	173	174	175	176														
75	138	139	140	141	141														
80	109	110	110	111	112														
85	84.6	84.8	85.3	86.0	86.4														
90	63.7	64.0	64.5	65.3	65.6														
95	46.6	46.9	47.6	48.1	48.4														
100	35.3	35.8	36.2	36.3	36.5														
105	30.8	30.7	30.6	30.6	30.7														
110	30.8	30.7	30.6	30.6	30.6														
115	30.0	29.9	29.8	29.9	29.9														
120	27.9	27.7	27.8	27.9	27.9														
125	25.2	25.1	25.1	25.3	25.2														
130	22.1	22.1	22.2	22.3	22.3														
135	18.7	18.7	18.8	19.0	18.8														
140	15.0	15.1	15.3	15.3	15.2														
145	11.2	11.4	11.6	11.6	11.5														
150	7.79	7.97	8.07	8.07	7.95														
155	5.48	5.56	5.59	5.55	5.44														
160	3.74	3.78	3.78	3.72	3.59														
165	2.50	2.51	2.48	2.41	2.28														
170	1.75	1.72	1.67	1.59	1.47														
175	1.17	1.11	0.96	0.93	0.91														
180	0.52	0.52	0.51	0.52	0.52														

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: