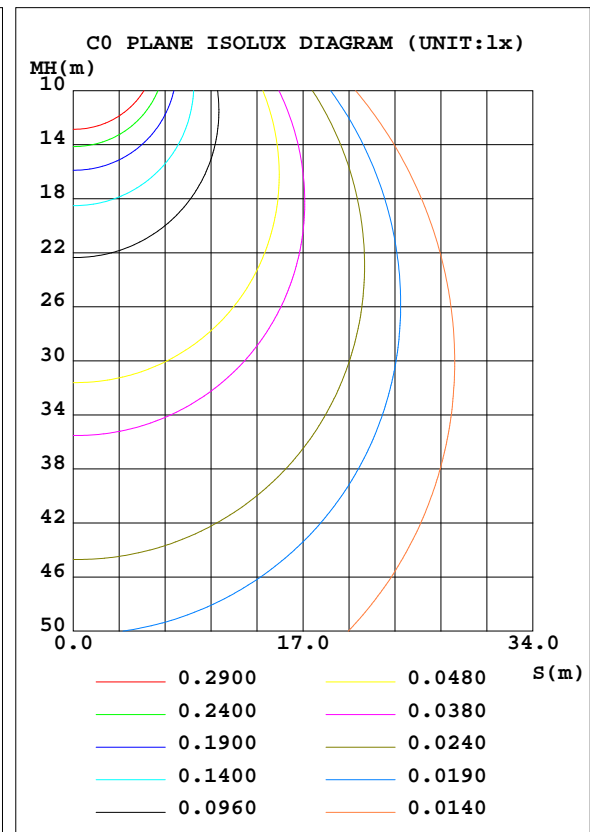
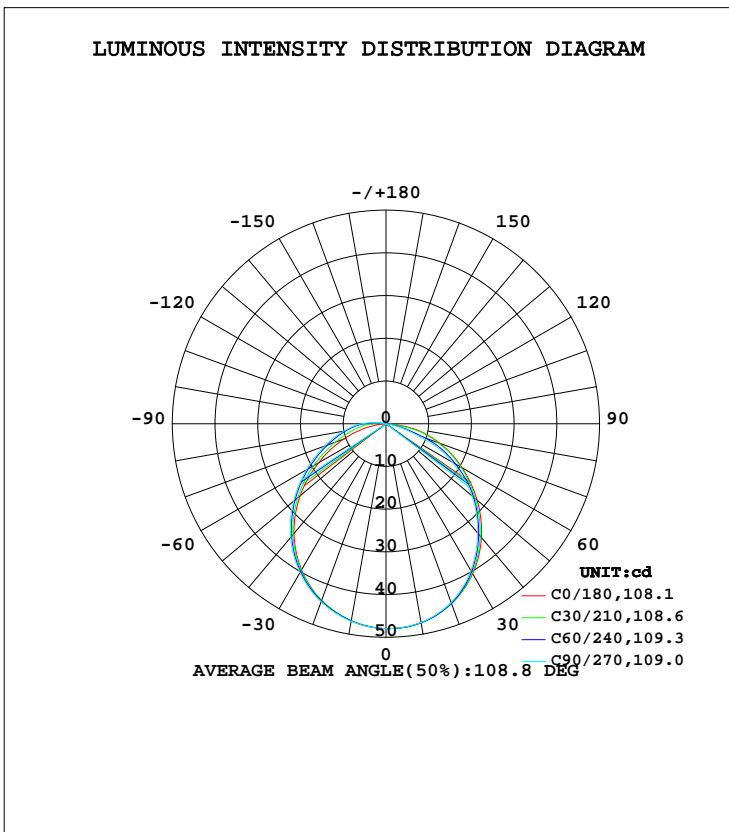


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:12.000V I:0.1667A P:2.0000W PF:1.0000 Freq:0Hz Lamp Flux:135.27x1 lm		
NAME: ASD-HSLS-4N2AC-BK 5000K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 67.63 lm/W			
MODEL	ASD-HSLS-4N2AC-BK	I _{max} (cd)	47.96	S/MH(C0/180)	1.23
NOMINAL POWER(W)	2	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	12	TOTAL FLUX(lm)	135.27	η UP, DN(C0-180)	0.0,47.1
NOMINAL FLUX(lm)	135.27	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.7,52.1
LAMPS INSIDE	1	η up(%)	0.8	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	12	η down(%)	99.2	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.0DEG
 Operators: Alan Wang
 Test Date: 10 June 2023

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.416
 Humidity: 41.9%
 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	47.27	47.32	47.24	47.02	46.84	46.83	46.95	47.11	0- 10	4.535	4.535	3.35,3.35
20	44.80	44.78	44.52	44.24	44.03	44.10	44.36	44.62	10- 20	12.97	17.50	12.9,12.9
30	40.56	40.22	39.71	39.54	39.51	39.84	40.27	40.55	20- 30	19.55	37.05	27.4,27.4
40	34.76	34.02	33.35	33.29	33.50	34.16	34.72	34.99	30- 40	23.27	60.32	44.6,44.6
50	27.84	27.02	26.27	26.28	26.23	27.43	28.29	28.29	40- 50	23.71	84.03	62.1,62.1
60	20.55	19.70	17.82	19.20	18.22	20.36	21.50	21.21	50- 60	21.03	105.1	77.7,77.7
70	13.45	11.92	7.237	11.59	10.62	13.79	15.29	14.55	60- 70	15.94	121.0	89.4,89.4
80	6.256	2.769	1.237	3.037	3.810	8.706	10.16	9.252	70- 80	9.420	130.4	96.4,96.4
90	0.0108	0.0147	0.0156	0.0154	0.0209	4.512	5.704	4.694	80- 90	3.814	134.2	99.2,99.2
100	0.0076	0.0103	0.0120	0.0105	0.0157	0.0440	0.5536	0.0282	90-100	0.8985	135.1	99.9,99.9
110	0.0109	0.0149	0.0164	0.0150	0.0194	0.0178	0.0177	0.0165	100-110	0.0250	135.2	99.9,99.9
120	0.0168	0.0201	0.0213	0.0208	0.0211	0.0186	0.0175	0.0178	110-120	0.0174	135.2	99.9,99.9
130	0.0233	0.0251	0.0264	0.0260	0.0257	0.0248	0.0243	0.0241	120-130	0.0197	135.2	99.9,99.9
140	0.0279	0.0288	0.0299	0.0294	0.0333	0.0331	0.0330	0.0324	130-140	0.0218	135.2	100,100
150	0.0310	0.0303	0.0312	0.0311	0.0415	0.0417	0.0417	0.0404	140-150	0.0210	135.2	100,100
160	0.0357	0.0359	0.0356	0.0352	0.0461	0.0461	0.0460	0.0452	150-160	0.0178	135.3	100,100
170	0.0396	0.0404	0.0406	0.0402	0.0460	0.0459	0.0460	0.0454	160-170	0.0118	135.3	100,100
180	0.0430	0.0430	0.0430	0.0430	0.0440	0.0440	0.0440	0.0440	170-180	0.0041	135.3	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 72.324 lm

%lum = 53.5%

%lamp = 53.5%

Conical surface Flux(120deg): 105.06 lm

%lum = 77.7%

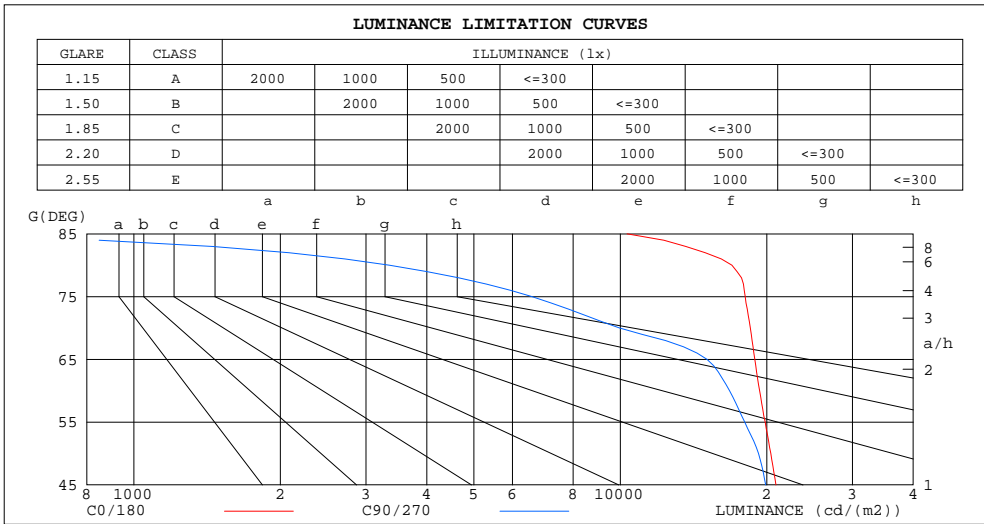
%lamp = 77.7%

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.0DEG
 Operators: Alan Wang
 Test Date: 10 June 2023

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.416
 Humidity: 41.9%
 Test Distance: 2.500m [K=1.0391]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:12.000V I:0.1667A P:2.0000W PF:1.0000 Freq:0Hz Lamp Flux:135.27x1 lm		
NAME: ASD-HSLS-4N2AC-BK 5000K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	10326	375
80	16955	3352
75	18053	6577
70	18508	9957
65	18899	15063
60	19341	16773
55	19846	18013
50	20382	19230
45	20894	19898

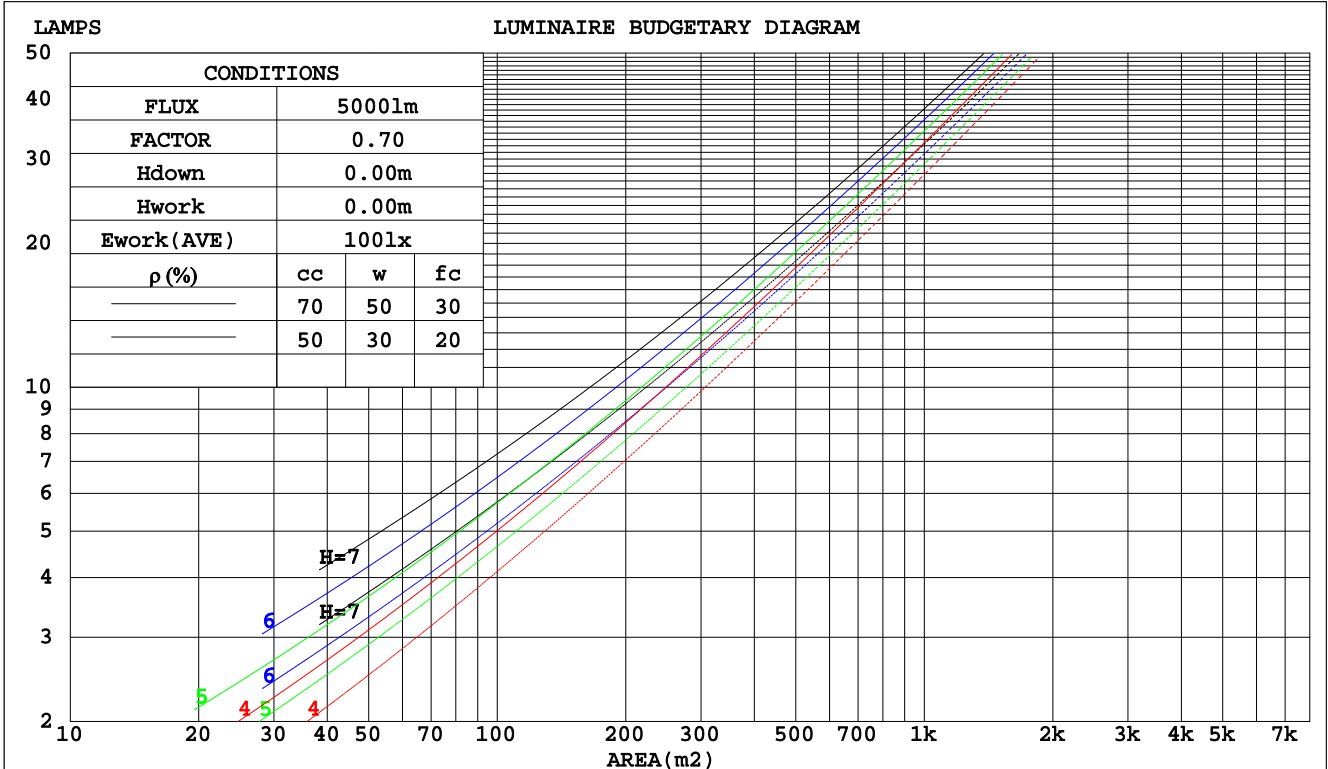
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.0DEG
 Operators: Alan Wang
 Test Date: 10 June 2023

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.416
 Humidity: 41.9%
 Test Distance: 2.500m [K=1.0391]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:12.000V I:0.1667A P:2.0000W PF:1.0000 Freq:0Hz Lamp Flux:135.27x1 lm		
NAME: ASD-HSLS-4N2AC-BK 5000K	TYPE:LED	WEIGHT:
SPEC.:	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																
pfc	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	1.01	1.01	1.01	.99
1.0	1.03	.99	.95	1.01	.97	.93	.97	.93	.90	.92	.90	.87	.89	.87	.85	.82
2.0	.90	.83	.77	.88	.82	.76	.84	.79	.74	.81	.76	.72	.78	.74	.71	.69
3.0	.79	.71	.64	.77	.70	.64	.74	.68	.62	.71	.66	.61	.69	.64	.60	.58
4.0	.70	.61	.54	.69	.60	.54	.66	.59	.53	.64	.57	.52	.61	.56	.52	.49
5.0	.63	.54	.47	.61	.53	.47	.59	.52	.46	.57	.51	.45	.55	.49	.45	.43
6.0	.56	.47	.41	.55	.47	.41	.53	.46	.40	.52	.45	.40	.50	.44	.39	.37
7.0	.51	.42	.36	.50	.42	.36	.49	.41	.36	.47	.40	.35	.46	.40	.35	.33
8.0	.47	.38	.32	.46	.38	.32	.45	.37	.32	.43	.37	.32	.42	.36	.31	.29
9.0	.43	.35	.29	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.28	.27
10.0	.40	.32	.26	.39	.31	.26	.38	.31	.26	.37	.31	.26	.36	.30	.26	.24



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.0DEG
 Operators: Alan Wang
 Test Date: 10 June 2023

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.416
 Humidity: 41.9%
 Test Distance: 2.500m [K=1.0391]
 Remarks:

WEC AND CCEC

Test:U:12.000V I:0.1667A P:2.0000W PF:1.0000 Freq:0Hz Lamp Flux:135.27x1 lm		
NAME: ASD-HSLS-4N2AC-BK 5000K	TYPE:LED	WEIGHT:
SPEC.:	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	.317	.180	.057	.310	.177	.056	.296	.170	.054	.284	.164	.053	.272	.158	.051	
2.0	.294	.161	.050	.288	.159	.049	.276	.153	.048	.265	.148	.046	.254	.144	.045	
3.0	.271	.144	.043	.265	.142	.043	.255	.138	.042	.245	.134	.041	.235	.130	.040	
4.0	.249	.130	.038	.244	.128	.038	.235	.125	.037	.226	.121	.037	.218	.118	.036	
5.0	.230	.117	.034	.226	.116	.034	.217	.113	.033	.209	.110	.033	.202	.108	.032	
6.0	.213	.107	.031	.209	.106	.030	.202	.103	.030	.195	.101	.030	.188	.099	.029	
7.0	.198	.098	.028	.195	.097	.028	.188	.095	.027	.182	.093	.027	.176	.091	.027	
8.0	.185	.091	.025	.182	.090	.025	.176	.088	.025	.170	.086	.025	.165	.085	.025	
9.0	.174	.084	.023	.171	.083	.023	.165	.082	.023	.160	.080	.023	.155	.079	.023	
10.0	.163	.078	.022	.161	.078	.022	.156	.076	.021	.151	.075	.021	.147	.074	.021	

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	.196	.196	.196	.168	.168	.168	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.187	.162	.140	.160	.139	.120	.109	.096	.083	.063	.055	.048	.020	.018	.016	
2.0	.179	.138	.104	.153	.119	.090	.105	.082	.062	.060	.048	.037	.019	.015	.012	
3.0	.171	.120	.080	.146	.104	.069	.100	.072	.049	.058	.042	.029	.019	.014	.009	
4.0	.163	.107	.064	.140	.092	.056	.096	.064	.039	.056	.038	.023	.018	.012	.008	
5.0	.155	.097	.053	.133	.084	.046	.092	.058	.033	.053	.034	.019	.017	.011	.006	
6.0	.148	.088	.045	.127	.076	.039	.088	.053	.028	.051	.031	.017	.016	.010	.005	
7.0	.141	.081	.039	.122	.070	.034	.084	.049	.024	.049	.029	.014	.016	.010	.005	
8.0	.135	.076	.035	.116	.066	.030	.080	.046	.022	.047	.027	.013	.015	.009	.004	
9.0	.129	.071	.031	.111	.061	.027	.077	.043	.019	.045	.025	.012	.014	.008	.004	
10.0	.123	.066	.029	.106	.058	.025	.074	.041	.018	.043	.024	.011	.014	.008	.004	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.0DEG
 Operators: Alan Wang
 Test Date: 10 June 2023

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.416
 Humidity: 41.9%
 Test Distance: 2.500m [K=1.0391]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:12.000V I:0.1667A P:2.0000W PF:1.0000 Freq:0Hz Lamp Flux:135.27x1 lm										
NAME:ASD-HSLS-4N2AC-BK 5000K					TYPE:LED			WEIGHT:		
SPEC.:					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	23.2	24.7	23.4	24.9	25.1	22.6	24.1	22.9	24.4	24.6
3H	24.8	26.2	25.1	26.4	26.7	23.5	24.9	23.8	25.2	25.4
4H	25.5	26.9	25.9	27.1	27.4	23.6	25.0	24.0	25.2	25.5
6H	26.1	27.4	26.5	27.7	27.9	23.6	24.9	24.0	25.2	25.4
8H	26.3	27.5	26.6	27.8	28.1	23.6	24.8	23.9	25.1	25.4
12H	26.3	27.5	26.7	27.8	28.1	23.5	24.7	23.9	25.0	25.3
4H 2H	23.7	25.0	24.0	25.3	25.6	23.3	24.6	23.6	24.9	25.1
3H	25.5	26.7	25.9	27.0	27.3	24.3	25.5	24.7	25.8	26.1
4H	26.4	27.5	26.8	27.8	28.2	24.5	25.5	24.9	25.9	26.2
6H	27.2	28.1	27.6	28.5	28.9	24.5	25.4	24.9	25.8	26.2
8H	27.4	28.3	27.8	28.7	29.1	24.5	25.3	24.9	25.7	26.1
12H	27.5	28.3	27.9	28.7	29.1	24.4	25.2	24.9	25.6	26.0
8H 4H	26.5	27.4	27.0	27.8	28.2	24.7	25.6	25.2	26.0	26.4
6H	27.4	28.1	27.8	28.5	29.0	24.8	25.5	25.3	26.0	26.4
8H	27.7	28.4	28.2	28.8	29.3	24.8	25.4	25.3	25.9	26.3
12H	27.9	28.4	28.4	28.9	29.4	24.7	25.3	25.2	25.8	26.3
12H 4H	26.5	27.3	26.9	27.7	28.1	24.8	25.6	25.2	26.0	26.4
6H	27.4	28.0	27.8	28.5	28.9	24.8	25.5	25.3	25.9	26.4
8H	27.7	28.3	28.2	28.7	29.2	24.8	25.4	25.3	25.9	26.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.3 / - 0.3				
1.5H	+ 0.1 / - 0.3					+ 0.1 / - 0.3				
2.0H	+ 0.1 / - 0.3					+ 0.4 / - 0.5				

CIE Pub.117, 135.3 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -7.0)
 Area: 0.002125 m2

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.0DEG
 Operators: Alan Wang
 Test Date: 10 June 2023

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.416
 Humidity: 41.9%
 Test Distance: 2.500m [K=1.0391]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:12.000V I:0.1667A P:2.0000W PF:1.0000 Freq:0Hz Lamp Flux:135.27x1 lm		
NAME: ASD-HSLS-4N2AC-BK 5000K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

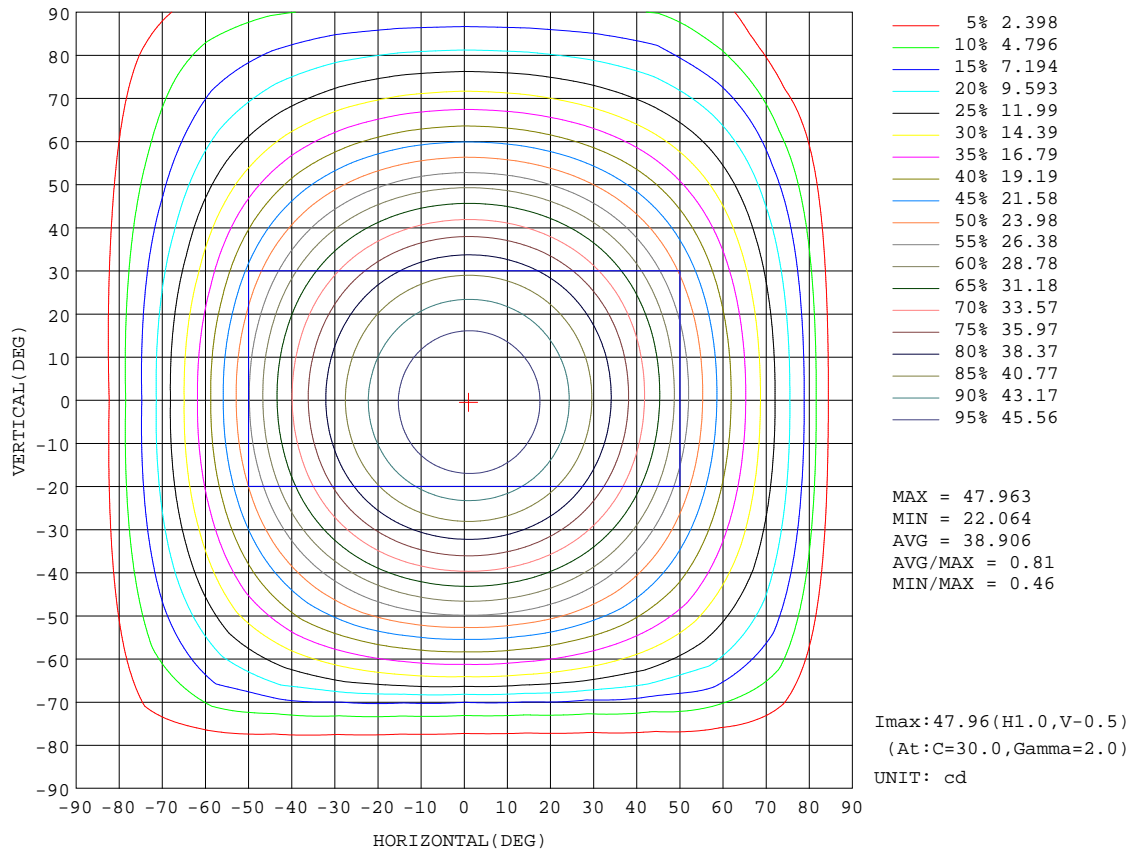
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	57	46	39	57	46	39	56	45	39	32
0.80	67	56	48	66	55	48	65	55	48	41
1.00	76	65	57	75	64	57	72	65	56	49
1.25	83	72	65	81	71	65	79	70	64	56
1.50	88	78	71	86	77	70	83	75	69	61
2.00	94	86	79	93	85	78	89	82	77	69
2.50	98	90	84	96	89	83	92	86	81	73
3.00	102	95	89	99	93	88	95	90	86	77
4.00	106	100	95	103	98	94	99	95	91	82
5.00	108	103	99	106	101	97	101	97	94	85
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: 10 June 2023

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.416
 Humidity: 41.9%
 Test Distance: 2.500m [K=1.0391]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:12.000V I:0.1667A P:2.0000W PF:1.0000 Freq:0Hz Lamp Flux:135.27x1 lm		
NAME: ASD-HSLS-4N2AC-BK 5000K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

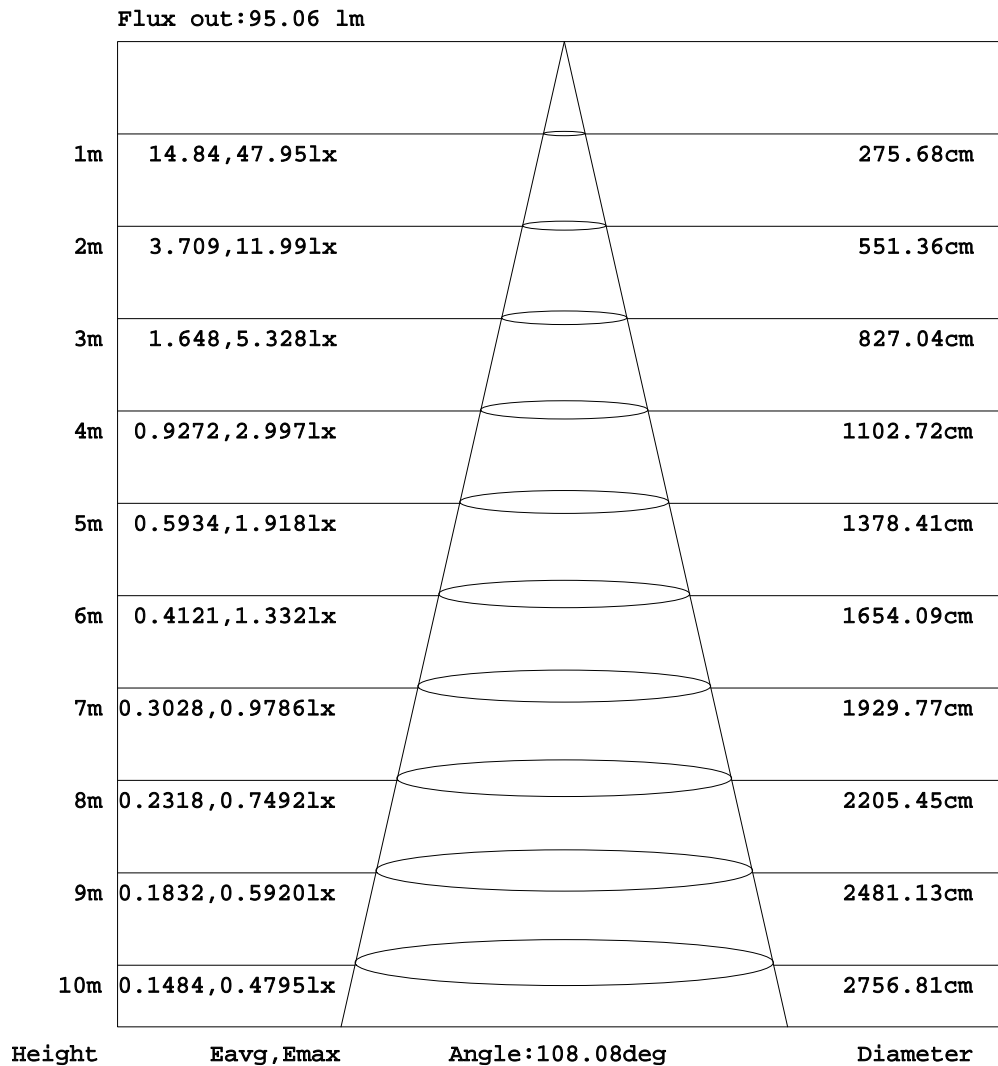


C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.0DEG
 Operators: Alan Wang
 Test Date: 10 June 2023

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.416
 Humidity: 41.9%
 Test Distance: 2.500m [K=1.0391]
 Remarks:

AAI Figure

Test:U:12.000V I:0.1667A P:2.0000W PF:1.0000 Freq:0Hz Lamp Flux:135.27x1 lm		
NAME: ASD-HSLS-4N2AC-BK 5000K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



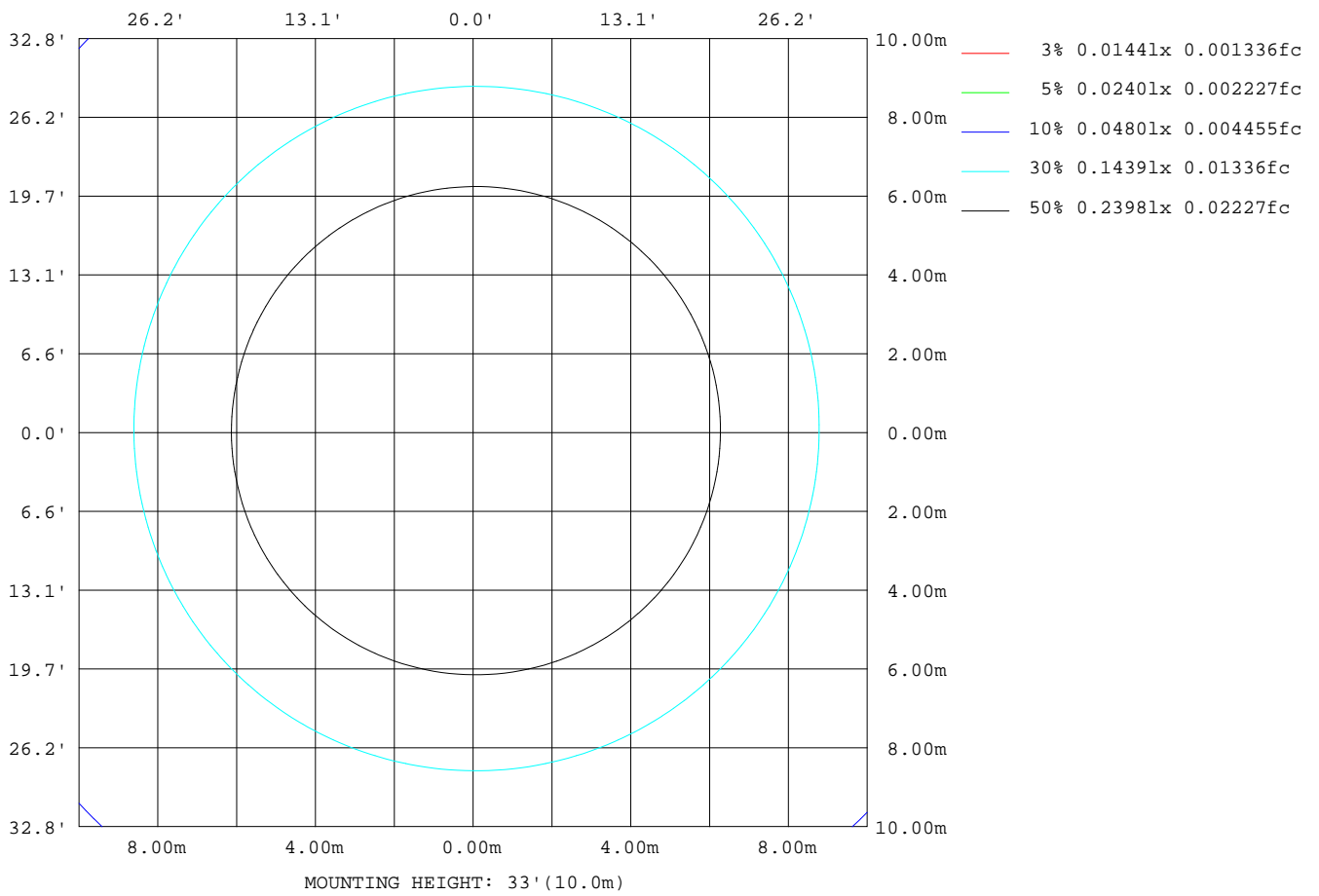
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.0DEG
 Operators:Alan Wang
 Test Date:10 June 2023

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.416
 Humidity: 41.9%
 Test Distance:2.500m [K=1.0391]
 Remarks:

ISOLUX DIAGRAM

Test:U:12.000V I:0.1667A P:2.0000W PF:1.0000 Freq:0Hz Lamp Flux:135.27x1 lm		
NAME:ASD-HSLS-4N2AC-BK 5000K	TYPE:LED	WEIGHT:
SPEC.:	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: 10 June 2023

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.416
 Humidity: 41.9%
 Test Distance: 2.500m [K=1.0391]
 Remarks:

LED Avg.L Report

Test:U:12.000V I:0.1667A P:2.0000W PF:1.0000 Freq:0Hz Lamp Flux:135.27x1 lm		
NAME:ASD-HSLS-4N2AC-BK 5000K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

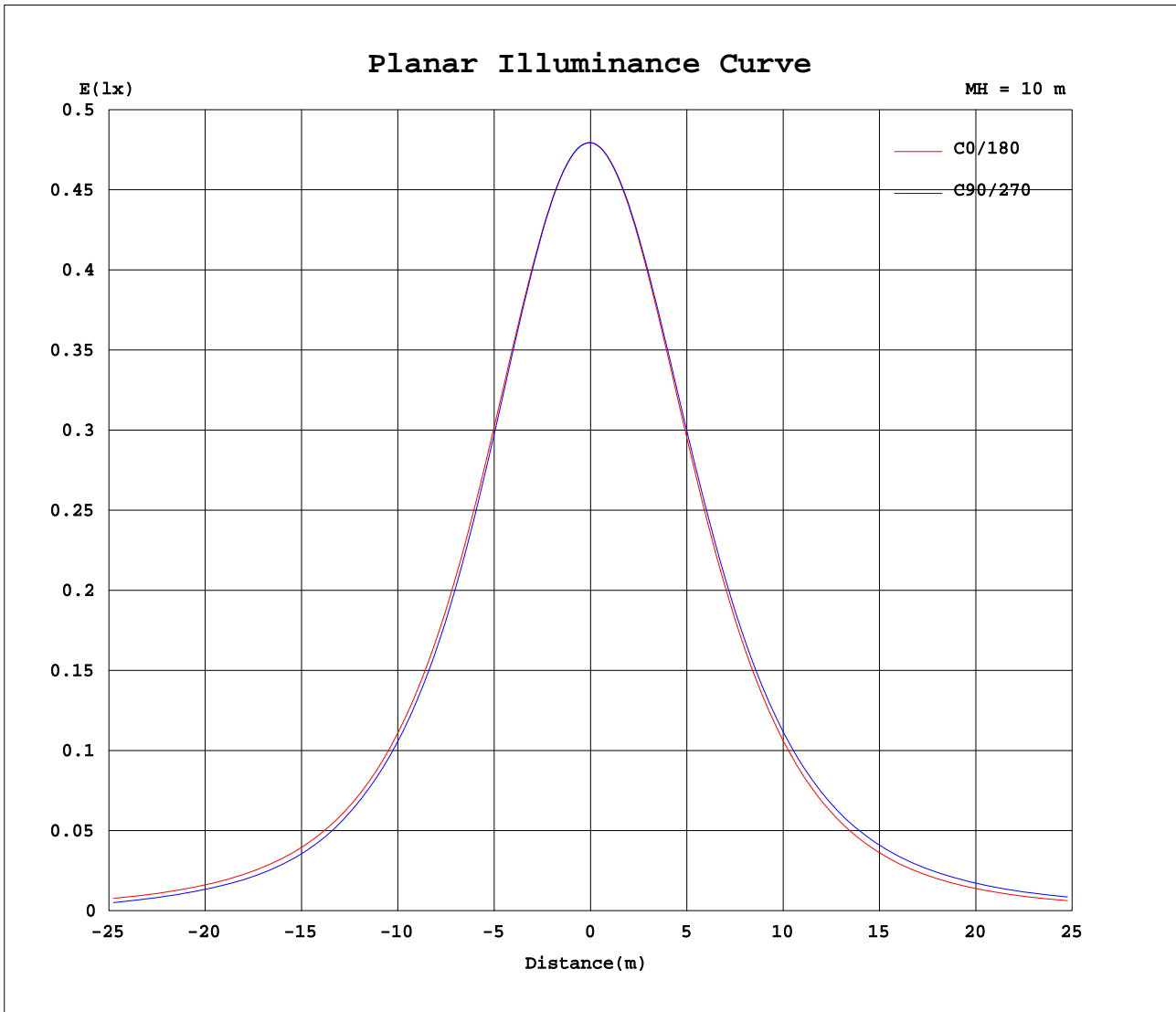
AvgL	cd/m2
L_0~180(65)av	17432
L_0~180(75)av	15406
L_0~180(85)av	7770
L_90~270(65)av	17699
L_90~270(75)av	14757
L_90~270(85)av	21518
L_45(65)av	18263
L_45(75)av	16694
L_45(85)av	19427

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.0DEG
 Operators: Alan Wang
 Test Date: 10 June 2023

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.416
 Humidity: 41.9%
 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: 10 June 2023

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.416
 Humidity: 41.9%
 Test Distance: 2.500m [K=1.0391]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:12.000V I:0.1667A P:2.0000W PF:1.0000 Freq:0Hz Lamp Flux:135.27x1 lm		
NAME:ASD-HSLS-4N2AC-BK 5000K	TYPE:LED	WEIGHT:
SPEC.:	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	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0	48.0
5	47.8	47.8	47.9	47.9	47.9	47.8	47.8	47.8	47.7	47.7	47.7	47.6	47.6	47.6	47.6	47.6	47.6	47.6	47.6
10	47.3	47.3	47.3	47.3	47.3	47.3	47.2	47.2	47.1	47.0	47.0	46.9	46.8	46.8	46.8	46.8	46.9	46.9	46.9
15	46.2	46.3	46.3	46.3	46.3	46.2	46.1	46.0	46.0	45.9	45.8	45.7	45.6	45.6	45.6	45.7	45.7	45.8	45.8
20	44.8	44.8	44.8	44.8	44.7	44.6	44.5	44.4	44.3	44.2	44.1	44.1	44.0	44.0	44.0	44.1	44.2	44.3	44.4
25	42.9	42.9	42.8	42.7	42.6	42.5	42.3	42.3	42.2	42.1	42.0	42.0	42.0	42.0	42.0	42.1	42.3	42.4	42.5
30	40.6	40.5	40.4	40.2	40.0	39.9	39.7	39.6	39.6	39.5	39.5	39.5	39.5	39.6	39.7	39.8	40.0	40.1	40.3
35	37.8	37.7	37.5	37.3	37.0	36.8	36.7	36.6	36.6	36.6	36.6	36.6	36.7	36.8	36.9	37.2	37.4	37.5	37.7
40	34.8	34.5	34.3	34.0	33.7	33.5	33.3	33.3	33.3	33.3	33.3	33.4	33.5	33.7	33.9	34.2	34.4	34.6	34.7
45	31.4	31.1	30.8	30.6	30.3	30.1	29.9	29.8	29.8	29.8	29.8	29.9	30.0	30.2	30.6	30.9	31.2	31.4	31.6
50	27.8	27.6	27.3	27.0	26.8	26.5	26.3	26.3	26.3	26.3	26.2	26.2	26.2	26.5	27.0	27.4	27.8	28.1	28.3
55	24.2	23.9	23.7	23.5	22.9	22.2	22.0	22.2	22.7	22.8	22.6	22.3	22.2	22.6	23.3	23.9	24.4	24.7	24.9
60	20.5	20.3	20.2	19.7	18.7	18.1	17.8	18.0	18.5	19.2	19.0	18.5	18.2	18.6	19.5	20.4	20.9	21.4	21.5
65	17.0	16.9	16.8	15.7	14.7	13.9	13.5	13.9	14.6	15.2	15.5	14.8	14.3	14.8	15.9	16.9	17.6	18.1	18.3
70	13.5	13.5	13.0	11.9	9.73	7.83	7.24	8.10	10.2	11.6	12.0	11.3	10.6	11.3	12.7	13.8	14.6	15.1	15.3
75	9.93	10.3	9.53	6.77	4.73	3.83	3.62	3.98	5.03	7.21	8.65	8.06	7.02	8.09	9.81	11.0	11.9	12.4	12.6
80	6.26	6.70	4.87	2.77	1.73	1.33	1.24	1.42	1.94	3.04	4.98	5.14	3.81	5.35	7.44	8.71	9.55	10.0	10.2
85	1.91	2.13	0.96	0.32	0.14	0.08	0.07	0.10	0.18	0.45	1.23	2.31	0.97	3.47	5.42	6.63	7.39	7.78	7.90
90	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	1.55	3.31	4.51	5.24	5.59	5.70
95	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.60	1.71	2.49	2.90	2.99
100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.04	0.22	0.49	0.55
105	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.03	0.03
110	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
115	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
120	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
125	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
130	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02
135	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
140	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
145	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
150	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
155	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
160	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05
165	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05
170	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05
175	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05
180	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.0DEG
 Operators: Alan Wang
 Test Date: 10 June 2023

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.416
 Humidity: 41.9%
 Test Distance: 2.500m [K=1.0391]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:12.000V I:0.1667A P:2.0000W PF:1.0000 Freq:0Hz Lamp Flux:135.27x1 lm		
NAME: ASD-HSLS-4N2AC-BK 5000K	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

Table--2

UNIT: cd

C(DEG) γ (DEG)	285	300	315	330	345														
0	48.0	48.0	48.0	48.0	48.0														
5	47.7	47.7	47.7	47.8	47.8														
10	47.0	47.1	47.1	47.2	47.2														
15	45.9	46.0	46.1	46.1	46.2														
20	44.5	44.5	44.6	44.7	44.8														
25	42.6	42.7	42.8	42.8	42.9														
30	40.4	40.5	40.5	40.6	40.6														
35	37.8	37.9	37.9	37.9	37.9														
40	34.9	34.9	35.0	35.0	34.9														
45	31.7	31.7	31.8	31.7	31.6														
50	28.3	28.3	28.3	28.2	28.1														
55	24.9	24.9	24.8	24.6	24.5														
60	21.5	21.4	21.2	21.0	20.8														
65	18.2	18.0	17.7	17.4	17.2														
70	15.2	14.9	14.6	14.1	13.7														
75	12.5	12.2	11.7	11.0	10.2														
80	10.1	9.76	9.25	8.15	6.66														
85	7.81	7.51	6.99	5.11	2.59														
90	5.58	5.23	4.69	2.87	0.20														
95	2.80	2.27	1.37	0.24	0.02														
100	0.40	0.12	0.03	0.01	0.01														
105	0.02	0.02	0.02	0.02	0.02														
110	0.02	0.02	0.02	0.02	0.02														
115	0.02	0.02	0.02	0.02	0.02														
120	0.02	0.02	0.02	0.02	0.02														
125	0.02	0.02	0.02	0.02	0.02														
130	0.02	0.02	0.02	0.02	0.02														
135	0.03	0.03	0.03	0.03	0.03														
140	0.03	0.03	0.03	0.03	0.03														
145	0.04	0.04	0.04	0.04	0.04														
150	0.04	0.04	0.04	0.04	0.04														
155	0.04	0.04	0.04	0.04	0.04														
160	0.05	0.05	0.05	0.04	0.04														
165	0.05	0.05	0.05	0.05	0.04														
170	0.05	0.05	0.05	0.04	0.04														
175	0.05	0.05	0.05	0.04	0.04														
180	0.04	0.04	0.04	0.04	0.04														

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.0DEG
 Operators: Alan Wang
 Test Date: 10 June 2023

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.416
 Humidity: 41.9%
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