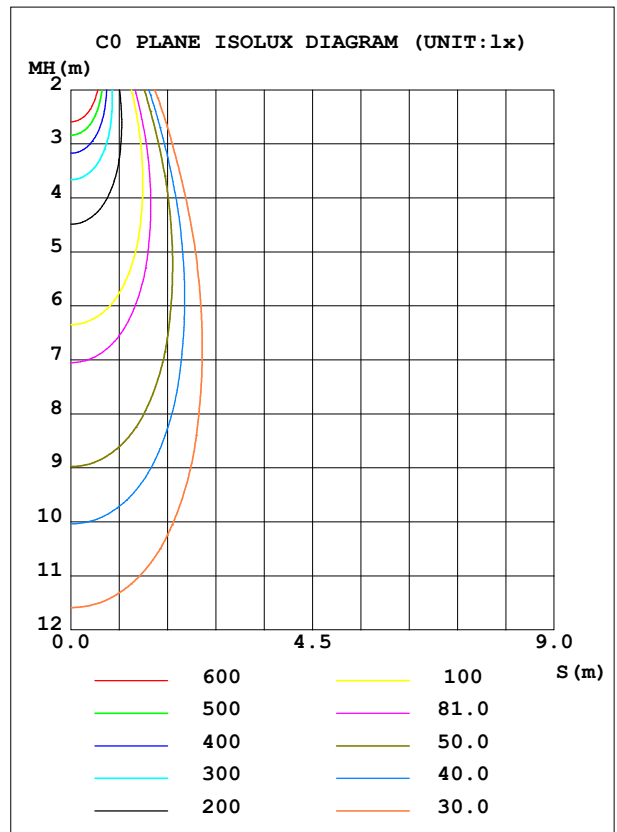
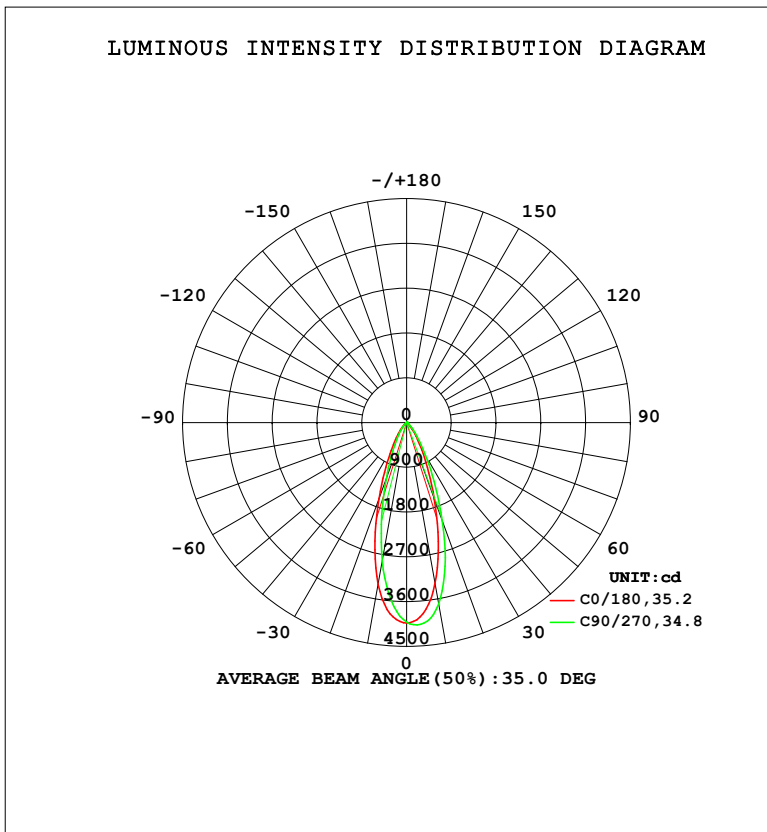


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:119.68V I:0.2306A P:27.265W PF:0.9878 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1831.69x1 lm		
NAME: ASD-TCS-2D30AC-WH	TYPE:	WEIGHT:
SPEC.: 3000K 90	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax (cd)	4073	S/MH (C0/180)	0.58
NOMINAL POWER (W)	30	LOR (%)	100.0	S/MH (C90/270)	0.48
RATED VOLTAGE (V)	120.0	TOTAL FLUX (lm)	1831.7	η UP, DN (C0-180)	0.0, 57.2
NOMINAL FLUX (lm)	1831.69	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 42.8
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	120	η down (%)	100.0	CIBSE SHR MAX	0.60



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators:
 Test Date: 2023-07-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

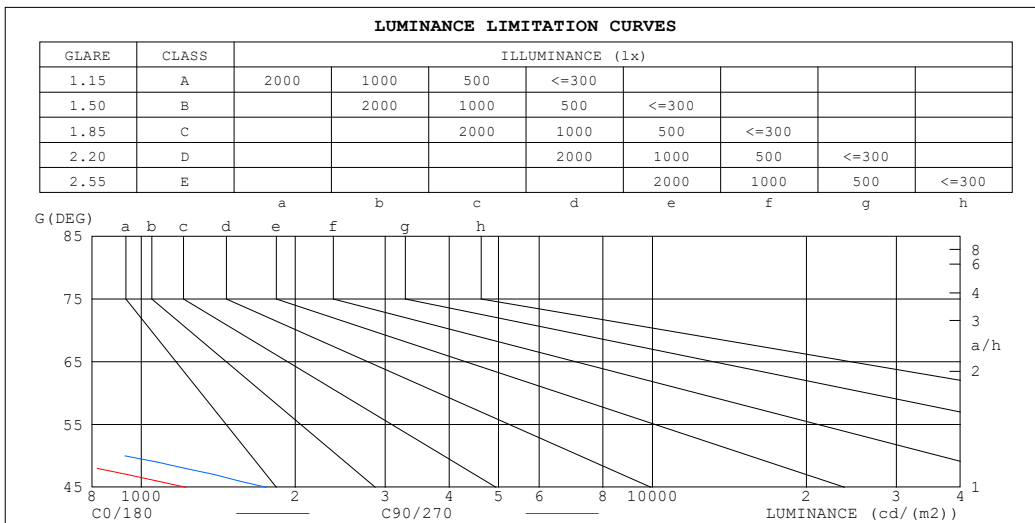
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	3291	3569	3704	3605	3303	2989	2826	2958	0- 10	348.0	348.0	19,19
20	1635	1975	2102	1962	1626	1343	1201	1313	10- 20	673.7	1022	55.8,55.8
30	568.1	710.6	770.6	704.5	576.5	458.6	403.9	442.4	20- 30	467.0	1489	81.3,81.3
40	187.4	247.4	262.1	238.9	205.2	164.1	134.4	145.2	30- 40	218.9	1708	93.2,93.2
50	43.97	60.80	66.38	63.43	51.43	38.86	31.61	33.60	40- 50	84.20	1792	97.8,97.8
60	14.74	16.65	17.48	16.95	15.43	13.63	12.75	12.85	50- 60	23.45	1815	99.1,99.1
70	7.609	8.601	9.069	8.924	8.476	7.739	7.333	7.201	60- 70	11.03	1826	99.7,99.7
80	1.085	1.743	2.018	1.803	1.229	1.029	1.019	1.022	70- 80	4.834	1831	100,100
90	0.0736	0.0902	0.1018	0.1165	0.0544	0.1582	0.0643	0.0595	80- 90	0.5312	1832	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-07-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:119.68V I:0.2306A P:27.265W PF:0.9878 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1831.69x1 lm		
NAME: ASD-TCS-2D30AC-WH	TYPE:	WEIGHT:
SPEC.: 3000K 90	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	33	60
80	56	105
75	126	223
70	200	239
65	225	260
60	265	315
55	358	457
50	616	929
45	1221	1755

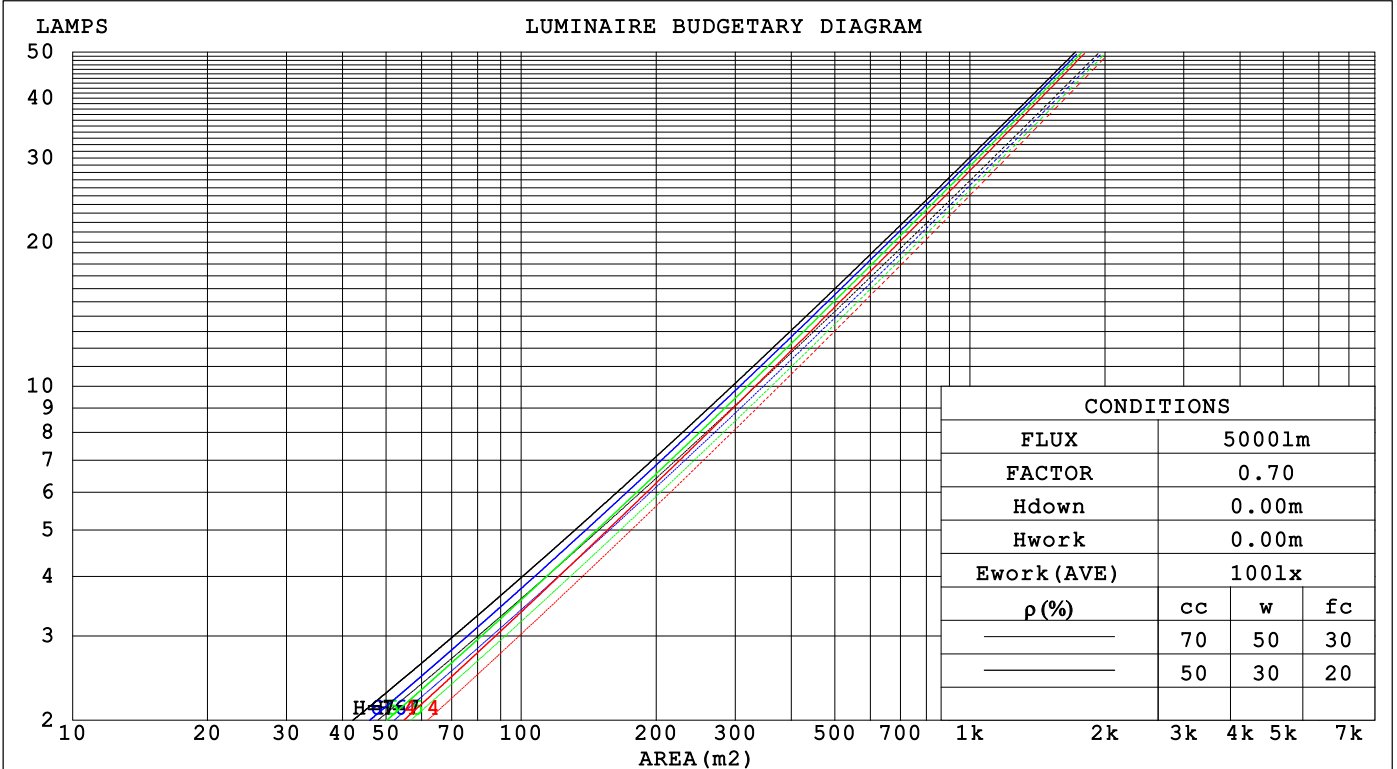
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators:
 Test Date: 2023-07-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:119.68V I:0.2306A P:27.265W PF:0.9878 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1831.69x1 lm		
NAME: ASD-TCS-2D30AC-WH	TYPE:	WEIGHT:
SPEC.: 3000K 90	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															
	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	1.02	1.02	1.02	1.00
1.0	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.04	1.02	1.02	1.00	.99	.98	.97	.96	.95
2.0	1.05	1.01	.98	1.03	.90	.97	.90	.97	.95	.97	.95	.93	.94	.92	.91	.89
3.0	.99	.94	.90	.97	.93	.90	.95	.91	.88	.92	.89	.87	.90	.88	.86	.84
4.0	.93	.88	.84	.92	.87	.84	.90	.86	.83	.88	.85	.82	.86	.83	.81	.80
5.0	.88	.83	.79	.87	.82	.79	.86	.81	.78	.84	.80	.77	.82	.79	.77	.75
6.0	.84	.78	.75	.83	.78	.74	.82	.77	.74	.80	.76	.73	.79	.76	.73	.72
7.0	.80	.74	.71	.79	.74	.70	.78	.73	.70	.77	.73	.70	.76	.72	.69	.68
8.0	.76	.71	.67	.75	.70	.67	.74	.70	.67	.73	.69	.66	.73	.69	.66	.65
9.0	.73	.67	.64	.72	.67	.64	.71	.67	.64	.70	.66	.63	.70	.66	.63	.62
10.0	.70	.64	.61	.69	.64	.61	.68	.64	.61	.68	.64	.61	.67	.63	.61	.59



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-07-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:119.68V I:0.2306A P:27.265W PF:0.9878 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1831.69x1 lm		
NAME: ASD-TCS-2D30AC-WH	TYPE:	WEIGHT:
SPEC.: 3000K 90	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:

ρ_{CC}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.164	.093	.030	.158	.090	.029	.145	.083	.027	.134	.077	.025	.123	.071	.023	
2.0	.156	.085	.026	.150	.083	.025	.140	.078	.024	.130	.073	.023	.121	.069	.022	
3.0	.147	.078	.023	.143	.076	.023	.134	.072	.022	.126	.069	.021	.118	.065	.020	
4.0	.139	.072	.021	.135	.071	.021	.128	.068	.020	.121	.065	.020	.114	.062	.019	
5.0	.132	.067	.020	.129	.066	.019	.122	.064	.019	.116	.061	.018	.110	.059	.018	
6.0	.126	.063	.018	.123	.062	.018	.117	.060	.017	.112	.058	.017	.107	.056	.017	
7.0	.120	.059	.017	.117	.058	.017	.112	.057	.016	.108	.055	.016	.103	.054	.016	
8.0	.115	.056	.016	.112	.055	.016	.108	.054	.015	.104	.053	.015	.100	.051	.015	
9.0	.110	.053	.015	.108	.052	.015	.104	.051	.015	.100	.050	.014	.096	.049	.014	
10.0	.105	.050	.014	.103	.050	.014	.100	.049	.014	.096	.048	.014	.093	.047	.013	

ρ_{CC}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.170	.157	.146	.146	.135	.126	.100	.093	.087	.057	.054	.050	.018	.017	.016	
2.0	.154	.133	.114	.132	.114	.099	.090	.079	.069	.052	.046	.040	.017	.015	.013	
3.0	.141	.113	.092	.121	.098	.079	.083	.068	.056	.048	.040	.033	.015	.013	.011	
4.0	.130	.099	.075	.111	.085	.065	.077	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.120	.087	.062	.103	.075	.054	.071	.052	.038	.041	.031	.022	.013	.010	.007	
6.0	.113	.077	.052	.097	.067	.045	.067	.047	.032	.039	.028	.019	.012	.009	.006	
7.0	.106	.069	.044	.091	.060	.038	.063	.042	.027	.036	.025	.016	.012	.008	.005	
8.0	.100	.063	.038	.086	.055	.033	.059	.038	.023	.035	.023	.014	.011	.007	.005	
9.0	.094	.058	.033	.081	.050	.029	.056	.035	.020	.033	.021	.012	.011	.007	.004	
10.0	.090	.053	.029	.077	.046	.025	.054	.032	.018	.031	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-07-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:119.68V I:0.2306A P:27.265W PF:0.9878 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1831.69x1 lm		
NAME: ASD-TCS-2D30AC-WH	TYPE:	WEIGHT:
SPEC.: 3000K 90	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	5.6	6.5	5.8	6.6	6.8	6.9	7.7	7.1	7.9	8.1
3H	5.6	6.3	5.8	6.5	6.7	6.8	7.6	7.1	7.8	8.0
4H	5.5	6.3	5.8	6.5	6.7	6.8	7.5	7.1	7.8	8.0
6H	5.4	6.1	5.7	6.4	6.6	6.7	7.4	7.0	7.7	7.9
8H	5.4	6.1	5.7	6.3	6.6	6.7	7.4	7.0	7.6	7.9
12H	5.3	6.0	5.7	6.3	6.5	6.7	7.3	7.0	7.6	7.8
4H 2H	5.4	6.2	5.7	6.4	6.6	6.7	7.4	7.0	7.7	7.9
3H	5.4	6.1	5.7	6.3	6.6	6.7	7.3	7.0	7.6	7.8
4H	5.4	6.0	5.7	6.3	6.6	6.7	7.2	7.0	7.5	7.8
6H	5.3	5.8	5.7	6.2	6.5	6.6	7.1	7.0	7.4	7.8
8H	5.3	5.7	5.7	6.1	6.5	6.6	7.0	6.9	7.4	7.7
12H	5.2	5.7	5.6	6.0	6.4	6.5	6.9	6.9	7.3	7.7
8H 4H	5.3	5.8	5.7	6.1	6.5	6.5	7.0	6.9	7.4	7.7
6H	5.2	5.6	5.6	6.0	6.4	6.5	6.9	6.9	7.3	7.7
8H	5.2	5.5	5.6	5.9	6.4	6.4	6.8	6.9	7.2	7.6
12H	5.1	5.4	5.6	5.8	6.3	6.4	6.7	6.9	7.1	7.6
12H 4H	5.2	5.7	5.7	6.1	6.4	6.5	6.9	6.9	7.3	7.7
6H	5.2	5.5	5.6	5.9	6.4	6.4	6.8	6.9	7.2	7.6
8H	5.1	5.4	5.6	5.8	6.3	6.4	6.7	6.9	7.1	7.6

Variations with the observer position at spacings(CIE Pub.117):		
S = 1.0H	+ 2.4 / - 6.1	+ 2.5 / - 6.1
1.5H	+ 3.8 / - 5.1	+ 4.1 / - 5.7
2.0H	+ 4.6 / - 3.6	+ 5.2 / - 3.8

CIE Pub.117, 1832 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 2.1)
 Area: 0.111111 m2

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-07-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:119.68V I:0.2306A P:27.265W PF:0.9878 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1831.69x1 lm		
NAME: ASD-TCS-2D30AC-WH	TYPE:	WEIGHT:
SPEC.: 3000K 90	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:

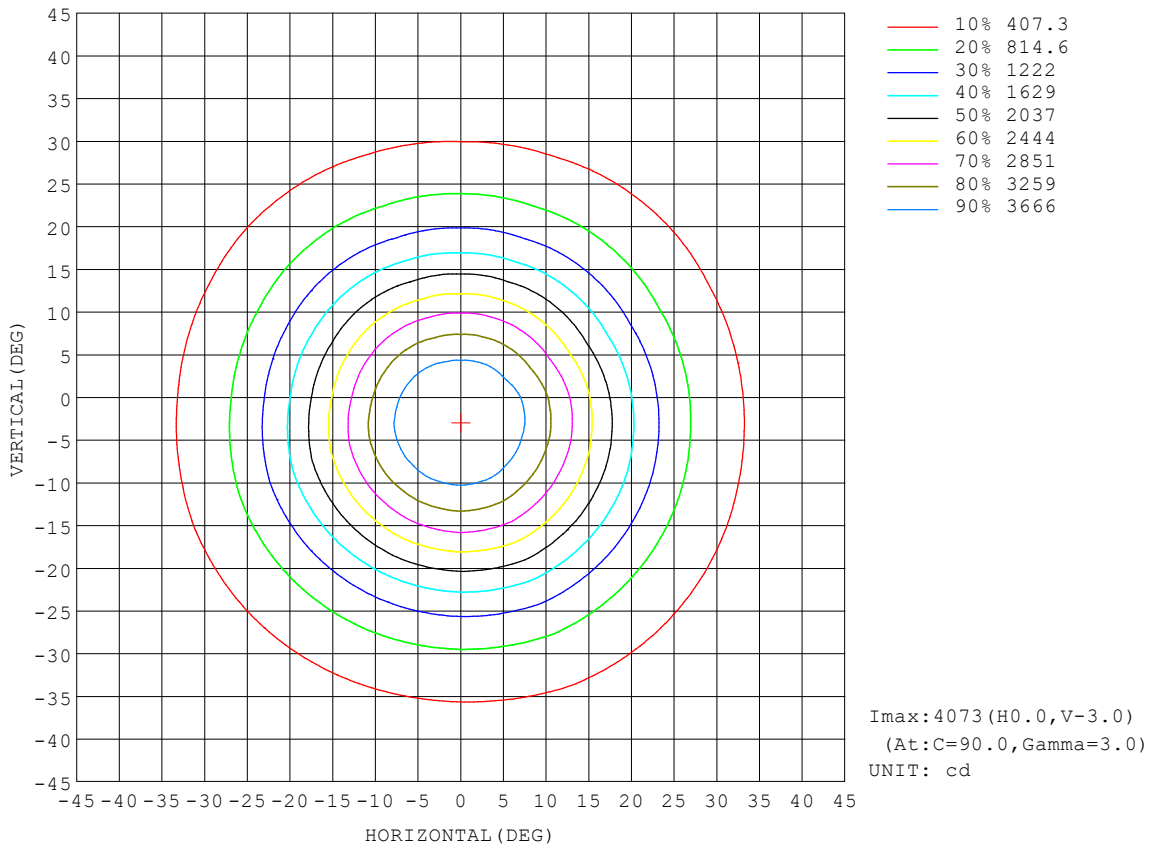
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	87	81	77	87	81	77	86	80	77	73
0.80	95	89	85	94	89	85	93	88	85	81
1.00	99	94	90	98	93	90	97	93	89	85
1.25	103	98	95	102	97	94	100	96	93	89
1.50	106	101	98	105	100	97	102	99	96	92
2.00	109	104	101	107	103	101	104	101	99	94
2.50	110	106	104	109	105	103	106	103	101	95
3.00	112	108	106	110	107	105	107	104	102	96
4.00	114	111	109	112	109	107	108	106	105	98
5.00	115	113	111	113	111	109	109	108	106	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-07-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:119.68V I:0.2306A P:27.265W PF:0.9878 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1831.69x1 lm		
NAME: ASD-TCS-2D30AC-WH	TYPE:	WEIGHT:
SPEC.: 3000K 90	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:

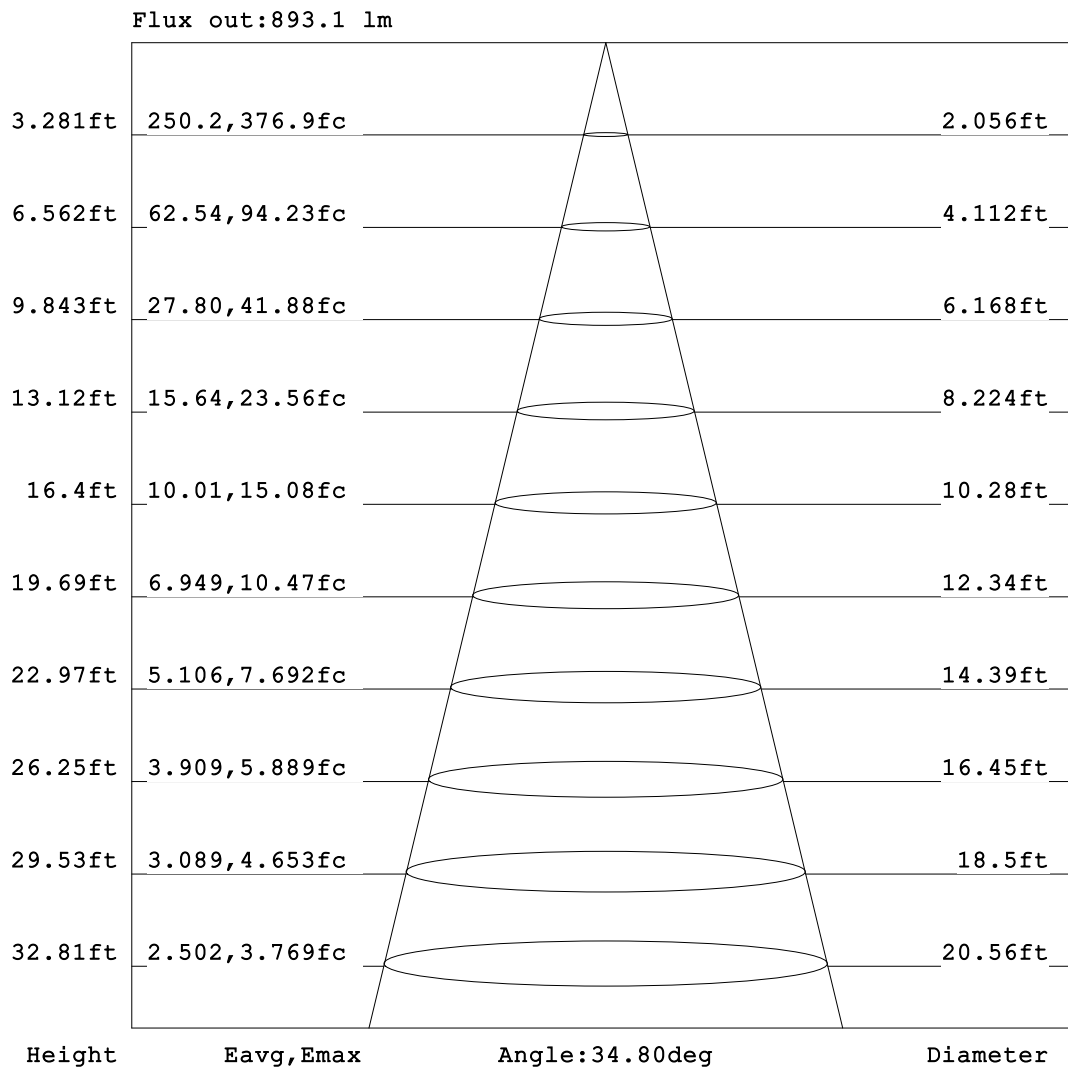


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-07-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

AAI Figure

Test:U:119.68V I:0.2306A P:27.265W PF:0.9878 Freq:59.98Hz		
UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1831.69x1 lm		
NAME: ASD-TCS-2D30AC-WH	TYPE:	WEIGHT:
SPEC.: 3000K 90	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:



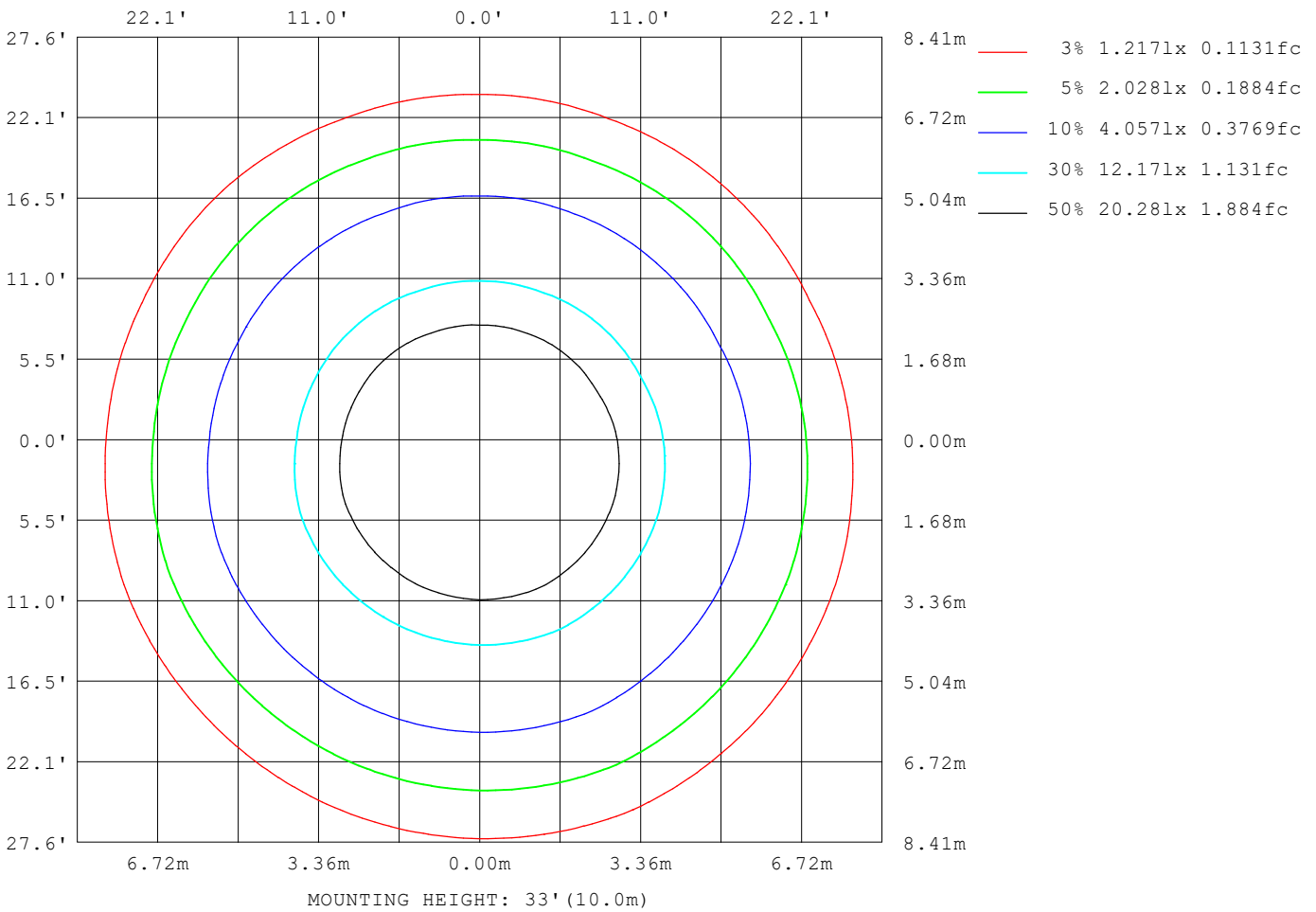
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-07-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:119.68V I:0.2306A P:27.265W PF:0.9878 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1831.69x1 lm		
NAME: ASD-TCS-2D30AC-WH	TYPE:	WEIGHT:
SPEC.: 3000K 90	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:
 Test Date:2023-07-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:119.68V I:0.2306A P:27.265W PF:0.9878 Freq:59.98Hz UTHDi:0.00% ITHDi:0.00% KDisp:0 Lamp Flux:1831.69x1 lm		
NAME: ASD-TCS-2D30AC-WH	TYPE:	WEIGHT:
SPEC.: 3000K 90	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP	SUR.:	Shielding Angle:

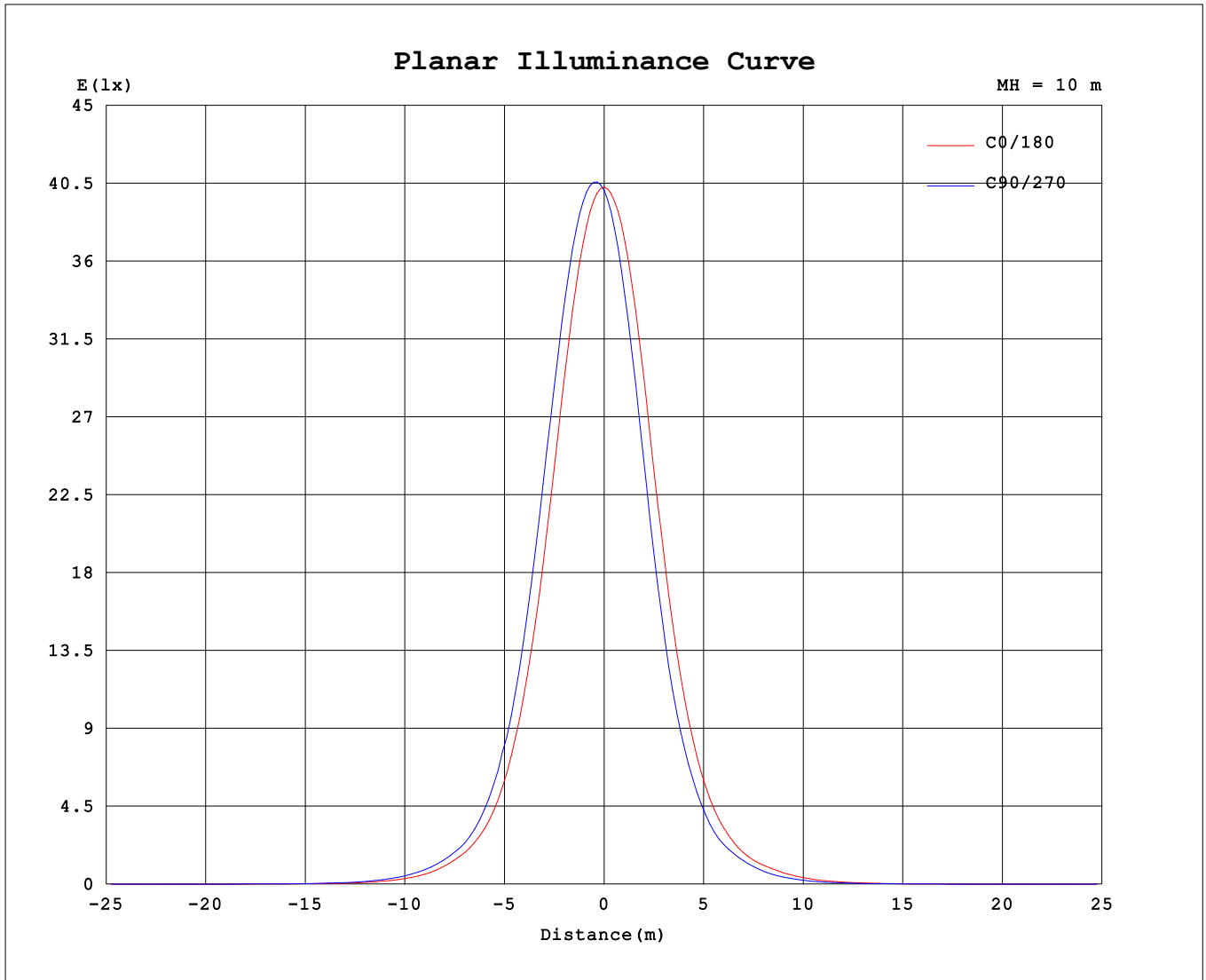
AvgL	cd/m2
L_0~180 (65) av	233
L_0~180 (75) av	144
L_0~180 (85) av	31
L_90~270 (65) av	234
L_90~270 (75) av	162
L_90~270 (85) av	45
L_45 (65) av	234
L_45 (75) av	164
L_45 (85) av	40

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3℃
 Operators:
 Test Date:2023-07-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3 °C
 Operators:
 Test Date: 2023-07-13

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.460
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

