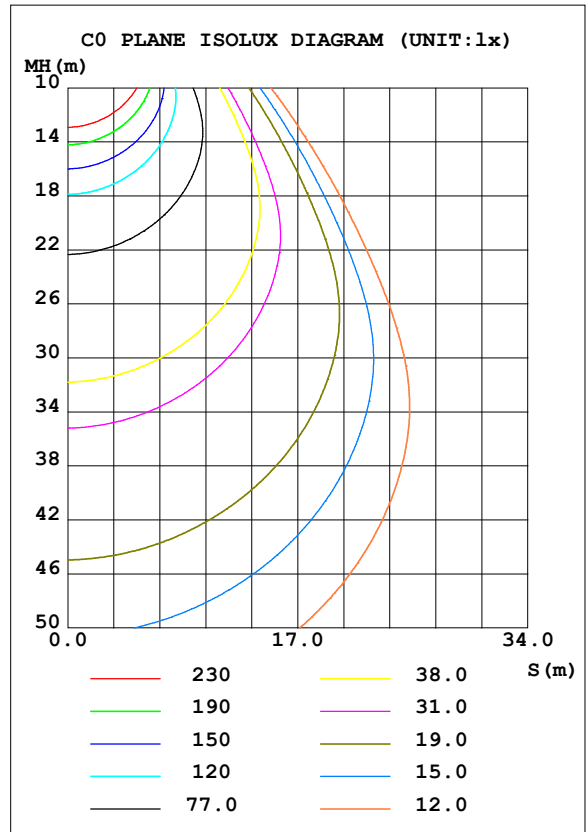
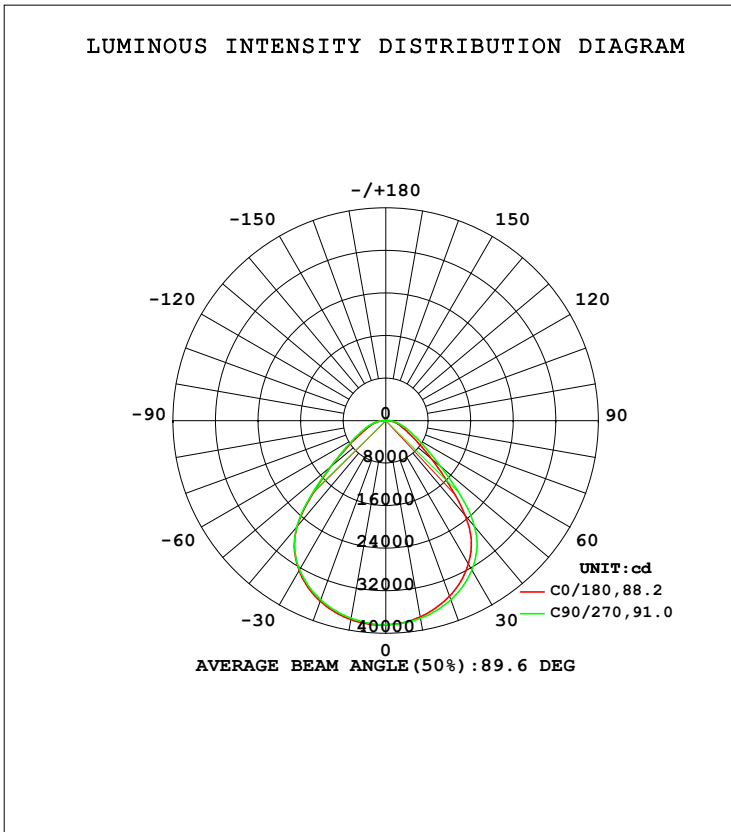


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:277.0V I:1.736A P:479.2W PF:0.9950 Freq:60.00Hz Lamp Flux:80048.5x1 lm		
NAME: ASD-WHB5A-HV-PRO-500-500W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:1*0.3	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 167.05 lm/W			
MODEL	ASD-WHB5A-HV-PRO-500	I _{max} (cd)	38447	S/MH (C0/180)	1.25
NOMINAL POWER (W)	500	LOR (%)	100.0	S/MH (C90/270)	1.25
RATED VOLTAGE (V)	277-480	TOTAL FLUX (lm)	80049	<input type="checkbox"/> UP, DN (C0-180)	0.5, 49.4
NOMINAL FLUX (lm)	80048.5	CIE CLASS	DIRECT	<input type="checkbox"/> UP, DN (C180-360)	0.5, 49.6
LAMPS INSIDE	1	<input type="checkbox"/> up (%)	1.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	277	<input type="checkbox"/> down (%)	99.0	CIBSE SHR MAX	1.30



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 27DEG
 Operators: jon
 Test Date: 2023-11-27

Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity: 56%
 Test Distance: 6.500m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

mm	C0	C45	C90	C135	C180	C225	C270	C315	mm	□ zone	□ total	%lum,lamp
10	3745	3746	3773	3801	3797	3794	3772	3732	0- 10	3631	3631	4.54,4.54
20	3512	3522	3583	3635	3612	3616	3582	3497	10- 20	10405	14036	17.5,17.5
30	3108	3135	3240	3311	3259	3279	3240	3090	20- 30	15709	29744	37.2,37.2
40	2326	2381	2601	2724	2592	2650	2605	2270	30- 40	18199	47943	59.9,59.9
50	1138	1191	1356	1492	1346	1410	1364	1088	40- 50	14558	62501	78.1,78.1
60	541.3	591.7	696.3	704.9	624.8	680.6	695.4	548.3	50- 60	8184	70685	88.3,88.3
70	307.2	345.5	394.7	393.4	340.1	384.9	392.5	322.7	60- 70	4740	75425	94.2,94.2
80	158.0	166.8	194.6	218.2	188.2	206.4	192.8	146.0	70- 80	2868	78293	97.8,97.8
90	2.893	3.001	8.540	19.61	4.161	12.09	3.269	3.382	80- 90	979.8	79273	99,99
100	4.737	4.877	4.771	4.154	4.669	4.794	5.242	5.618	90-100	44.24	79317	99.1,99.1
110	7.541	7.674	7.538	6.736	7.377	7.534	8.107	8.580	100-110	65.37	79382	99.2,99.2
120	10.96	11.10	10.89	10.07	10.70	10.83	11.52	12.02	110-120	91.93	79474	99.3,99.3
130	14.58	14.62	14.45	13.69	14.44	14.46	15.17	15.62	120-130	114.7	79589	99.4,99.4
140	17.81	18.10	17.90	17.16	17.91	18.01	18.65	19.11	130-140	126.4	79715	99.6,99.6
150	20.98	21.45	21.17	20.30	21.19	21.26	22.04	22.49	140-150	123.4	79839	99.7,99.7
160	24.65	25.04	24.72	23.73	25.11	25.05	25.87	26.25	150-160	106.7	79945	99.9,99.9
170	28.22	28.22	28.14	27.21	28.61	28.37	29.05	28.96	160-170	75.47	80021	100,100
180	29.86	29.69	30.08	29.47	29.88	29.69	30.09	29.40	170-180	27.72	80049	100,100
DEG	LUMINOUS INTENSITY:×10cd								UNIT:lm			

Conical surface Flux(90deg): 56128 lm

%lum = 70.1%

%lamp = 70.1%

Conical surface Flux(120deg): 70685 lm

%lum = 88.3%

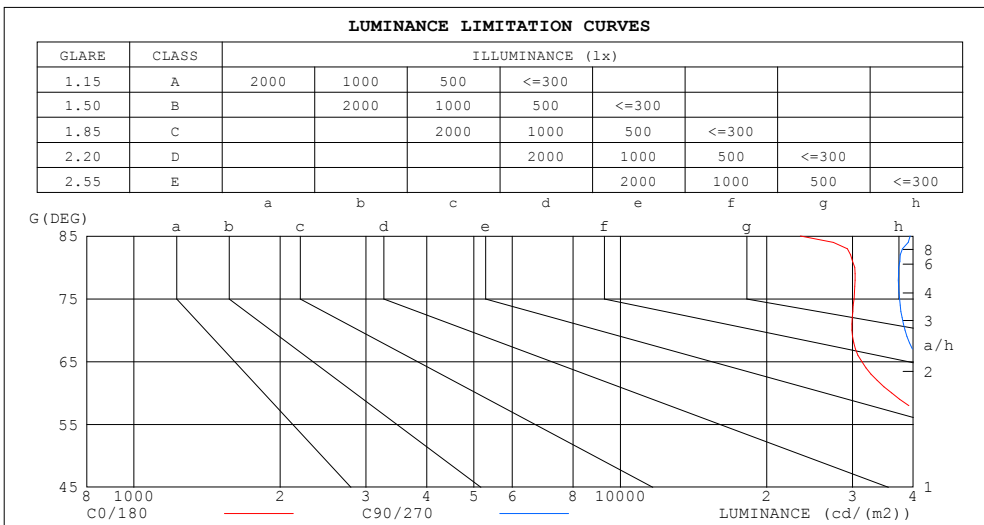
%lamp = 88.3%

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:jon
 Test Date:2023-11-27

□ Range: 0 - 180DEG
 □ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:277.0V I:1.736A P:479.2W PF:0.9950 Freq:60.00Hz Lamp Flux:80048.5x1 lm		
NAME: ASD-WHB5A-HV-PRO-500-500W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:1*0.3	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	23448	39429
80	30333	37356
75	30235	37509
70	29943	38465
65	31344	41204
60	36088	46421
55	45225	55080
50	59031	70333
45	78436	93755

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:jon
 Test Date:2023-11-27

Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:277.0V I:1.736A P:479.2W PF:0.9950 Freq:60.00Hz Lamp Flux:80048.5x1 lm		
NAME: ASD-WHB5A-HV-PRO-500-500W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:1*0.3	Shielding Angle:

<input type="checkbox"/> cc	80%	70%	50%	30%	10%	0
<input type="checkbox"/> w	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
<input type="checkbox"/> fc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio		Wall Exitance Coefficients (WEC)			
0.0						
1.0	.259 .147 .047	.252 .144 .046	.238 .137 .044	.226 .130 .042	.214 .124 .040	
2.0	.246 .135 .041	.240 .132 .041	.228 .127 .039	.217 .122 .038	.207 .117 .037	
3.0	.231 .123 .037	.226 .121 .036	.215 .117 .035	.206 .113 .035	.197 .109 .034	
4.0	.216 .112 .033	.212 .111 .033	.202 .107 .032	.194 .104 .031	.186 .101 .031	
5.0	.203 .103 .030	.198 .102 .030	.190 .099 .029	.183 .096 .029	.176 .094 .028	
6.0	.190 .095 .027	.187 .094 .027	.179 .092 .027	.172 .090 .026	.166 .087 .026	
7.0	.179 .089 .025	.176 .088 .025	.169 .086 .025	.163 .084 .024	.157 .082 .024	
8.0	.169 .082 .023	.166 .082 .023	.160 .080 .023	.154 .078 .023	.149 .077 .022	
9.0	.160 .077 .022	.157 .076 .021	.152 .075 .021	.147 .073 .021	.142 .072 .021	
10.0	.151 .072 .020	.149 .072 .020	.144 .070 .020	.139 .069 .020	.135 .068 .020	

<input type="checkbox"/> cc	80%	70%	50%	30%	10%	0
<input type="checkbox"/> w	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
<input type="checkbox"/> fc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio		Ceiling Cavity Exitance Coefficients (CCEC)			
0.0	.198 .198 .198	.169 .169 .169	.115 .115 .115	.066 .066 .066	.021 .021 .021	
1.0	.184 .164 .146	.158 .141 .126	.108 .097 .087	.062 .056 .050	.020 .018 .016	
2.0	.174 .140 .111	.149 .120 .096	.102 .083 .067	.059 .048 .039	.019 .016 .013	
3.0	.165 .122 .087	.141 .105 .076	.097 .073 .053	.056 .043 .031	.018 .014 .010	
4.0	.156 .108 .071	.134 .093 .061	.092 .065 .043	.053 .038 .026	.017 .012 .008	
5.0	.149 .097 .059	.128 .084 .051	.088 .059 .036	.051 .034 .021	.016 .011 .007	
6.0	.142 .088 .050	.122 .077 .044	.084 .054 .031	.049 .032 .018	.016 .010 .006	
7.0	.136 .081 .044	.117 .071 .038	.081 .050 .027	.047 .029 .016	.015 .010 .005	
8.0	.130 .076 .038	.112 .066 .034	.077 .046 .024	.045 .027 .014	.015 .009 .005	
9.0	.124 .071 .035	.107 .061 .030	.074 .043 .021	.043 .025 .013	.014 .008 .004	
10.0	.119 .066 .031	.103 .058 .027	.071 .041 .020	.041 .024 .012	.013 .008 .004	

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:jon
 Test Date:2023-11-27

Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:277.0V I:1.736A P:479.2W PF:0.9950 Freq:60.00Hz Lamp Flux:80048.5x1 lm										
NAME: ASD-WHB5A-HV-PRO-500-500W-4000K					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: ASD LIGHTING CORP.					SUR.:1*0.3			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	25.3	26.6	25.5	26.8	27.0	26.0	27.3	26.2	27.5	27.7
3H	25.9	27.1	26.2	27.3	27.6	26.7	27.9	27.0	28.2	28.4
4H	26.2	27.4	26.5	27.6	27.9	27.1	28.3	27.4	28.5	28.8
6H	26.5	27.6	26.9	27.9	28.2	27.5	28.5	27.8	28.8	29.1
8H	26.6	27.7	27.0	28.0	28.3	27.6	28.7	28.0	28.9	29.2
12H	26.7	27.7	27.1	28.0	28.3	27.7	28.7	28.1	29.0	29.4
4H 2H	25.5	26.6	25.8	26.9	27.2	26.1	27.2	26.4	27.5	27.8
3H	26.3	27.3	26.7	27.6	27.9	27.1	28.1	27.4	28.4	28.7
4H	26.8	27.7	27.2	28.1	28.4	27.6	28.5	28.0	28.9	29.2
6H	27.3	28.1	27.7	28.4	28.8	28.1	28.9	28.5	29.3	29.7
8H	27.5	28.2	27.9	28.6	29.0	28.4	29.1	28.8	29.5	29.9
12H	27.6	28.3	28.0	28.7	29.1	28.5	29.2	29.0	29.6	30.0
8H 4H	27.0	27.8	27.5	28.2	28.6	27.8	28.5	28.2	28.9	29.3
6H	27.7	28.3	28.1	28.7	29.1	28.4	29.0	28.9	29.5	29.9
8H	27.9	28.5	28.4	28.9	29.4	28.7	29.3	29.2	29.7	30.2
12H	28.1	28.6	28.6	29.0	29.5	29.0	29.5	29.5	30.0	30.4
12H 4H	27.0	27.7	27.5	28.1	28.5	27.8	28.4	28.2	28.8	29.3
6H	27.7	28.3	28.2	28.7	29.2	28.5	29.0	28.9	29.4	29.9
8H	28.0	28.5	28.5	29.0	29.5	28.8	29.3	29.3	29.7	30.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.6 / - 0.7					+ 0.5 / - 0.6				
1.5H	+ 0.6 / - 0.5					+ 0.5 / - 0.5				
2.0H	+ 1.3 / - 0.8					+ 1.4 / - 0.7				

CIE Pub.117, 80049 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 15.2)

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:jon
 Test Date:2023-11-27

Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:277.0V I:1.736A P:479.2W PF:0.9950 Freq:60.00Hz Lamp Flux:80048.5x1 lm		
NAME: ASD-WHB5A-HV-PRO-500-500W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:1*0.3	Shielding Angle:

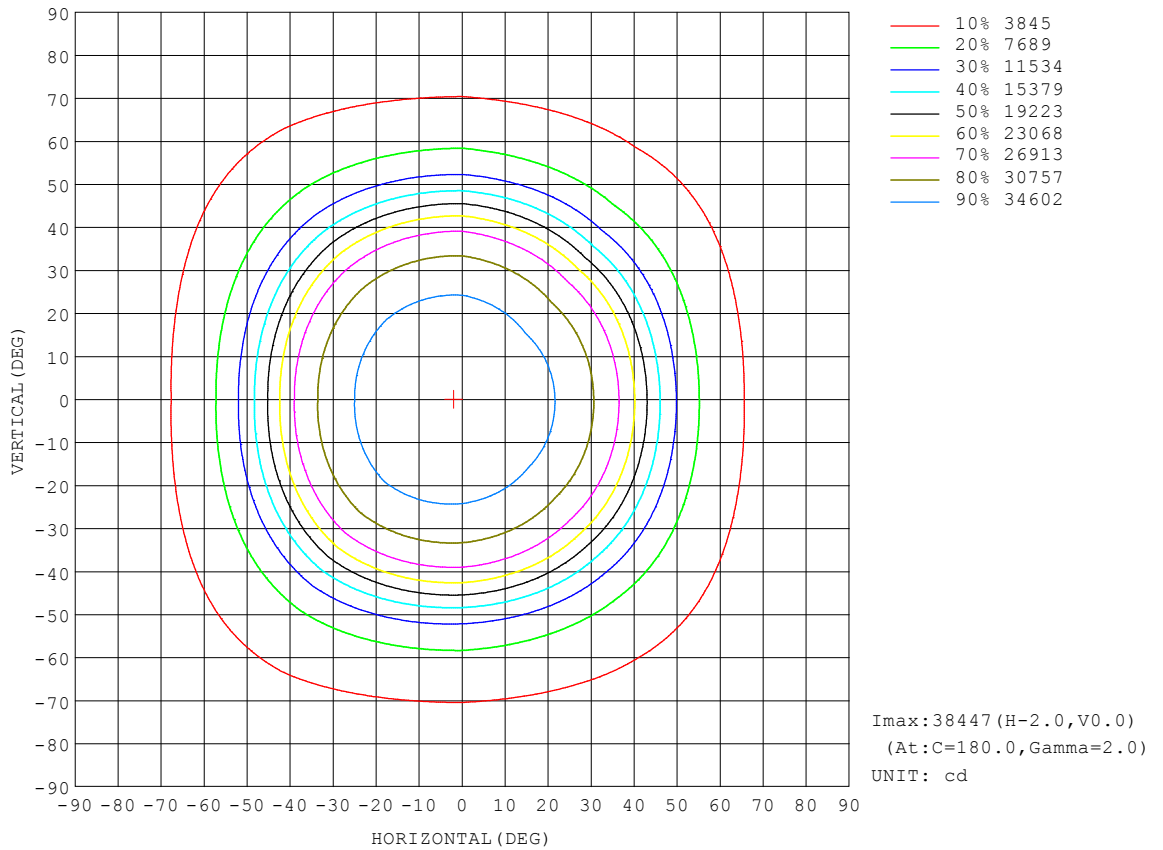
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	67	57	51	66	56	50	65	56	50	45
0.80	76	66	60	75	66	60	74	65	60	54
1.00	84	75	69	83	74	68	81	75	68	62
1.25	90	82	76	89	81	75	86	79	74	68
1.50	94	86	81	93	86	80	90	84	79	73
2.00	100	93	88	98	92	87	95	90	85	78
2.50	103	97	92	101	95	91	97	93	89	81
3.00	106	100	96	103	98	94	100	95	92	84
4.00	109	104	100	106	102	99	102	99	96	87
5.00	111	107	103	108	105	102	104	101	98	90
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:jon
 Test Date:2023-11-27

Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:277.0V I:1.736A P:479.2W PF:0.9950 Freq:60.00Hz Lamp Flux:80048.5x1 lm		
NAME: ASD-WHB5A-HV-PRO-500-500W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:1*0.3	Shielding Angle:

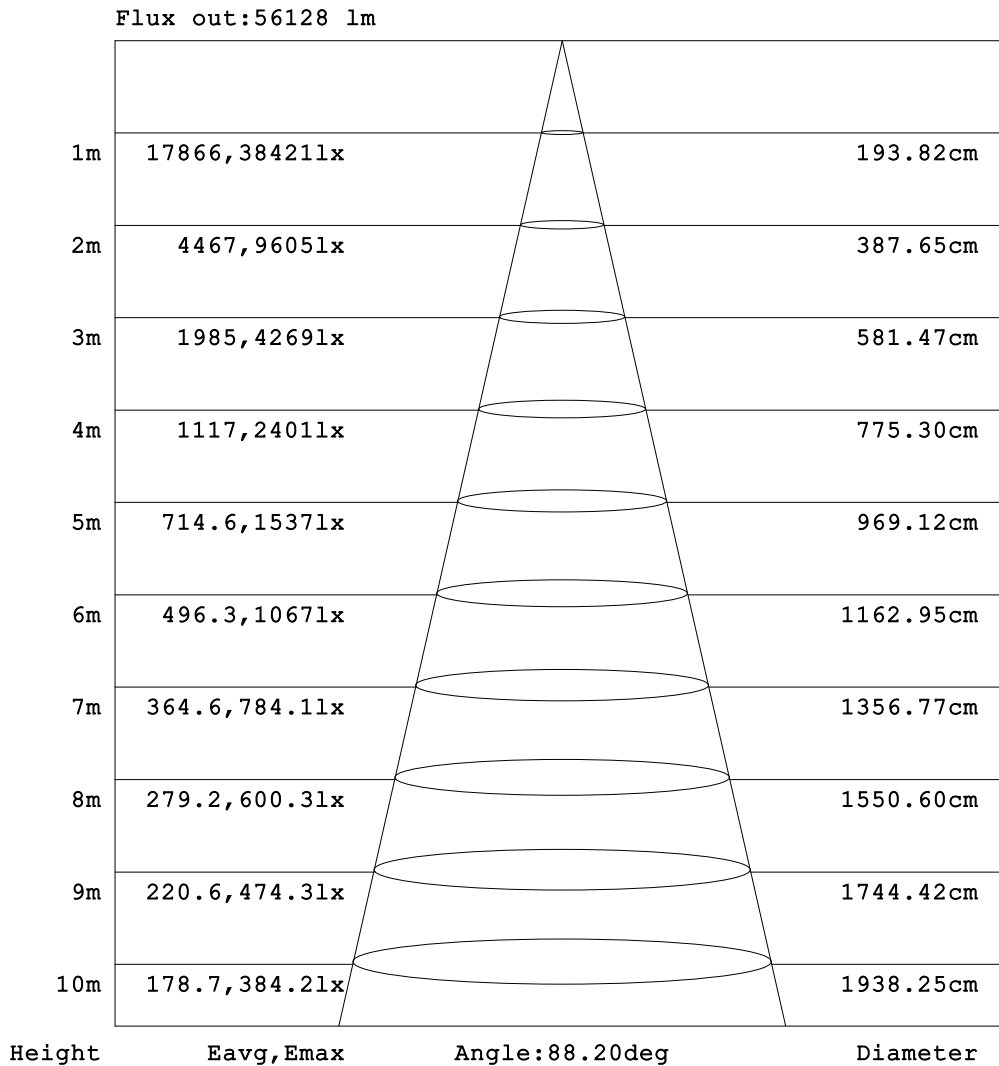


C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:jon
 Test Date:2023-11-27

Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

AAI Figure

Test:U:277.0V I:1.736A P:479.2W PF:0.9950 Freq:60.00Hz Lamp Flux:80048.5x1 lm		
NAME: ASD-WHB5A-HV-PRO-500-500W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:1*0.3	Shielding Angle:

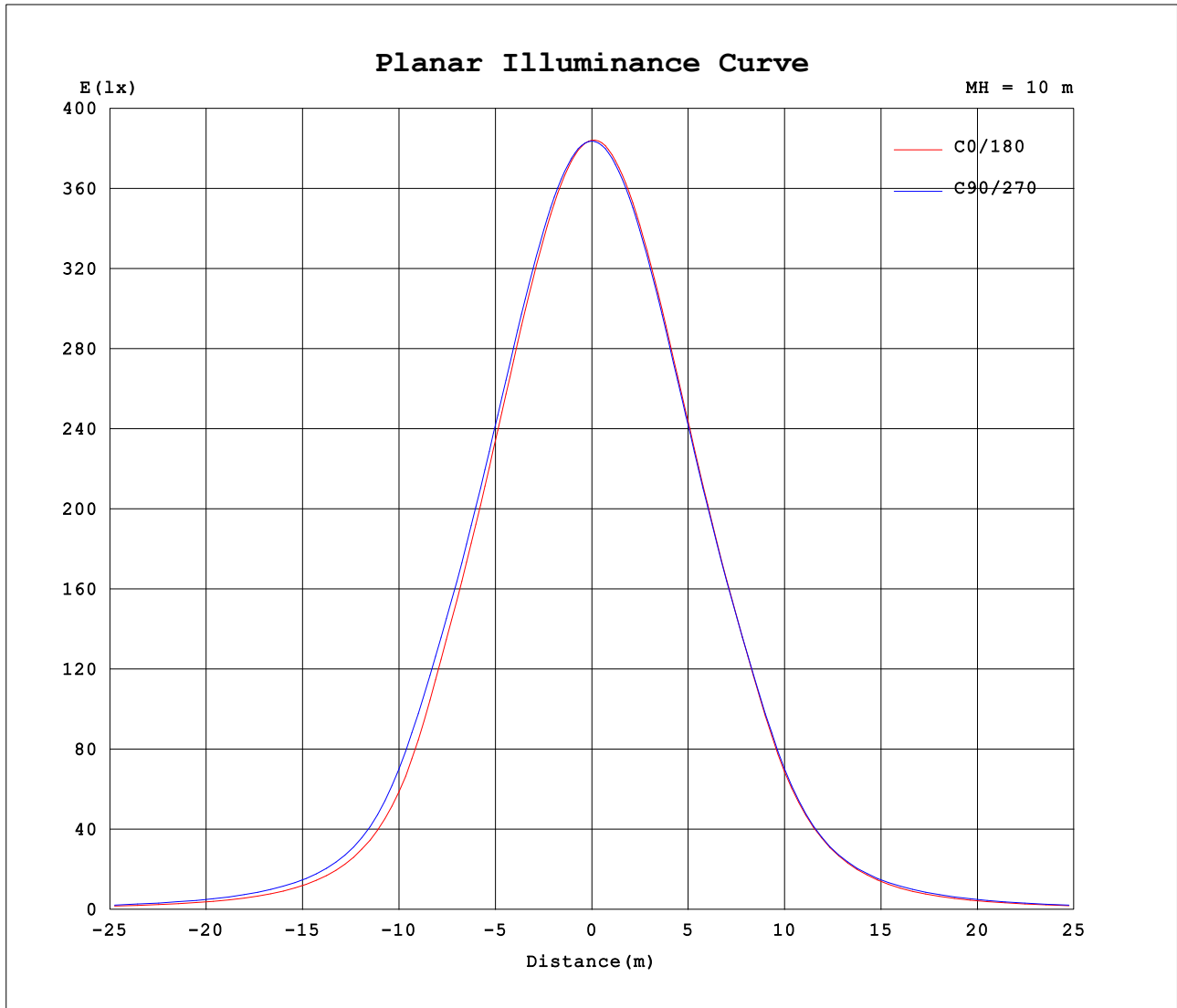


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:jon
 Test Date:2023-11-27

Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 27DEG
 Operators: jon
 Test Date: 2023-11-27

Range: 0 - 180DEG
 Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity: 56%
 Test Distance: 6.500m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:277.0V I:1.736A P:479.2W PF:0.9950 Freq:60.00Hz Lamp Flux:80048.5x1 lm		
NAME: ASD-WHB5A-HV-PRO-500-500W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:1*0.3	Shielding Angle:

Table--1

UNIT: x10cd

C (DEG) □ (DEG)	0	45	90	135	180	225	270	315											
0	3842	3837	3837	3834	3842	3837	3837	3834											
5	3811	3808	3821	3836	3837	3832	3820	3800											
10	3745	3746	3773	3801	3797	3794	3772	3732											
15	3645	3652	3694	3735	3722	3722	3694	3632											
20	3512	3522	3583	3635	3612	3616	3582	3497											
25	3336	3355	3435	3497	3460	3471	3433	3320											
30	3108	3135	3240	3311	3259	3279	3240	3090											
35	2808	2842	2981	3068	2992	3023	2982	2779											
40	2326	2381	2601	2724	2592	2650	2605	2270											
45	1664	1742	1989	2145	1947	2049	1988	1597											
50	1138	1191	1356	1492	1346	1410	1364	1088											
55	778	824	948	1014	913	964	953	761											
60	541	592	696	705	625	681	695	548											
65	397	445	522	512	447	499	520	416											
70	307	346	395	393	340	385	393	323											
75	235	258	291	305	264	296	289	236											
80	158	167	195	218	188	206	193	146											
85	61.3	72.6	103	127	102	117	103	43.4											
90	2.89	3.00	8.54	19.6	4.16	12.1	3.27	3.38											
95	3.69	3.82	3.72	3.24	3.61	3.72	4.09	4.39											
100	4.74	4.88	4.77	4.15	4.67	4.79	5.24	5.62											
105	6.05	6.18	6.06	5.33	5.95	6.08	6.60	7.03											
110	7.54	7.67	7.54	6.74	7.38	7.53	8.11	8.58											
115	9.19	9.35	9.17	8.32	8.95	9.12	9.76	10.3											
120	11.0	11.1	10.9	10.1	10.7	10.8	11.5	12.0											
125	12.8	12.9	12.7	11.9	12.5	12.6	13.3	13.8											
130	14.6	14.6	14.5	13.7	14.4	14.5	15.2	15.6											
135	16.2	16.4	16.2	15.5	16.2	16.2	17.0	17.4											
140	17.8	18.1	17.9	17.2	17.9	18.0	18.7	19.1											
145	19.3	19.8	19.5	18.8	19.5	19.6	20.3	20.8											
150	21.0	21.5	21.2	20.3	21.2	21.3	22.0	22.5											
155	22.7	23.2	22.9	21.9	23.0	23.0	23.9	24.3											
160	24.7	25.0	24.7	23.7	25.1	25.1	25.9	26.2											
165	26.6	26.8	26.5	25.5	27.0	26.9	27.7	27.9											
170	28.2	28.2	28.1	27.2	28.6	28.4	29.1	29.0											
175	29.5	29.3	29.4	28.6	29.6	29.3	29.9	29.5											
180	29.9	29.7	30.1	29.5	29.9	29.7	30.1	29.4											

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:27DEG
 Operators:jon
 Test Date:2023-11-27

□ Range: 0 - 180DEG
 □ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.364
 Humidity:56%
 Test Distance:6.500m [K=1.0000]
 Remarks: