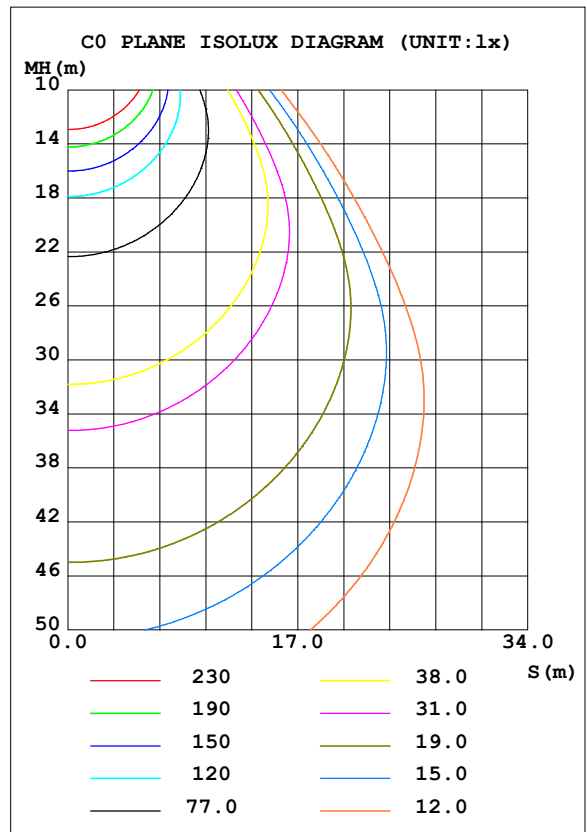
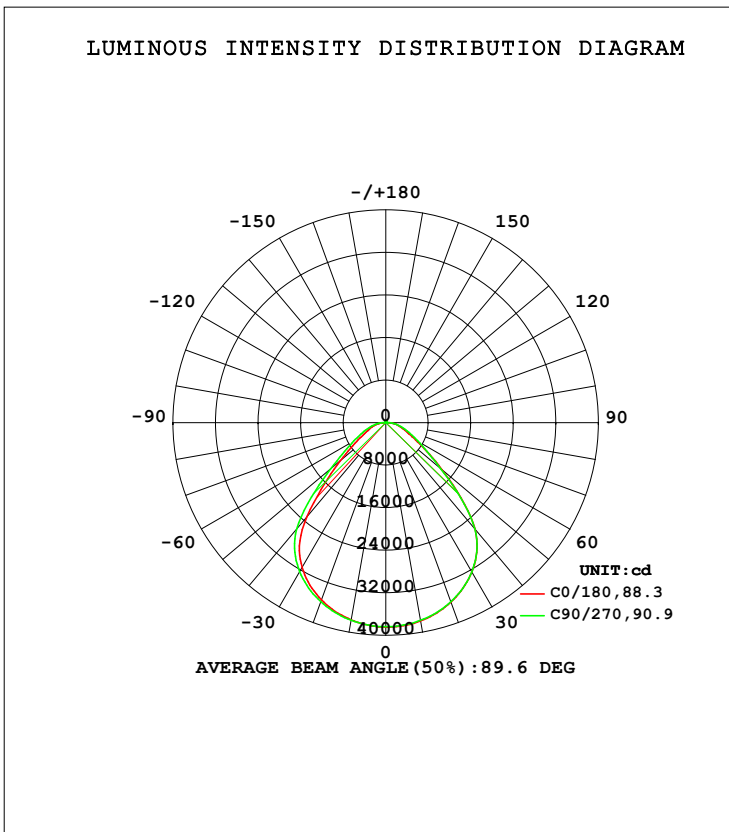


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.0V I:4.045A P:480.9W PF:0.9990 Freq:60.00Hz Lamp Flux:80269.3x1 lm		
NAME: ASD-WHB5A-PRO-500-500W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:1.0*0.3	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 166.91 lm/W			
MODEL	ASD-WHB5A-PRO-500	I _{max} (cd)	38463	S/MH (C0/180)	1.22
NOMINAL POWER (W)	500	LOR (%)	100.0	S/MH (C90/270)	1.25
RATED VOLTAGE (V)	120-277	TOTAL FLUX (lm)	80269	<input type="checkbox"/> UP, DN (C0-180)	0.5, 50.1
NOMINAL FLUX (lm)	80269.3	CIE CLASS	DIRECT	<input type="checkbox"/> UP, DN (C180-360)	0.5, 48.9
LAMPS INSIDE	1	<input type="checkbox"/> up (%)	1.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	120	<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	3786	3777	3774	3762	3764	3770	3773	3775	0- 10	3633	3633	4.53,4.53
20	3589	3581	3583	3556	3545	3567	3582	3581	10- 20	10414	14047	17.5,17.5
30	3240	3229	3238	3178	3147	3195	3238	3233	20- 30	15725	29772	37.1,37.1
40	2612	2589	2603	2437	2302	2462	2603	2603	30- 40	18240	48012	59.8,59.8
50	1386	1365	1358	1219	1118	1220	1354	1364	40- 50	14577	62589	78,78
60	651.5	663.2	702.3	606.5	532.9	609.7	695.7	661.5	50- 60	8211	70801	88.2,88.2
70	350.0	379.1	398.3	354.4	315.9	355.4	394.5	376.3	60- 70	4789	75589	94.2,94.2
80	195.6	199.8	196.0	172.6	151.1	174.4	194.1	198.4	70- 80	2907	78497	97.8,97.8
90	9.190	4.788	8.849	3.273	3.624	3.632	4.238	11.10	80- 90	977.9	79475	99,99
100	4.641	4.592	4.773	4.824	5.476	5.526	6.179	5.930	90-100	48.34	79523	99.1,99.1
110	7.033	7.180	7.540	7.555	8.312	8.423	8.947	8.381	100-110	68.79	79592	99.2,99.2
120	10.25	10.49	10.90	10.97	11.81	11.82	12.33	11.50	110-120	94.58	79686	99.3,99.3
130	13.82	14.05	14.47	14.56	15.66	15.43	15.92	15.14	120-130	117.0	79803	99.4,99.4
140	17.14	17.58	17.93	17.96	19.07	18.90	19.30	18.69	130-140	128.3	79932	99.6,99.6
150	20.44	21.01	21.26	21.13	22.30	22.04	22.55	22.02	140-150	124.9	80056	99.7,99.7
160	24.24	24.79	25.05	24.76	26.11	25.89	26.26	25.69	150-160	107.9	80164	99.9,99.9
170	28.22	28.36	28.72	28.32	29.83	29.37	29.77	29.15	160-170	76.72	80241	100,100
180	30.46	30.28	30.72	30.23	30.50	30.28	30.75	30.22	170-180	28.34	80269	100,100
DEG	LUMINOUS INTENSITY:×10cd								UNIT:lm			

Conical surface Flux(90deg): 56217 lm

%lum = 70.0%

%lamp = 70.0%

Conical surface Flux(120deg): 70801 lm

%lum = 88.2%

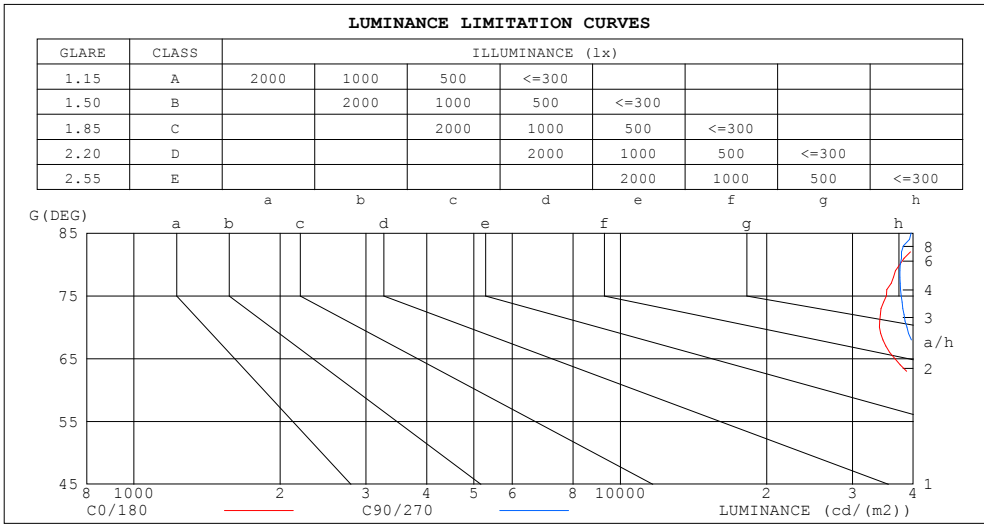
%lamp = 88.2%

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:

LUMINANCE LIMITATION CURVES

Test:U:120.0V I:4.045A P:480.9W PF:0.9990 Freq:60.00Hz Lamp Flux:80269.3x1 lm		
NAME: ASD-WHB5A-PRO-500-500W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:1.0*0.3	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	42886	39587
80	37552	37617
75	35263	37789
70	34110	38815
65	36635	41570
60	43433	46822
55	54956	55368
50	71865	70398
45	94393	93729

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:120.0V I:4.045A P:480.9W PF:0.9990 Freq:60.00Hz Lamp Flux:80269.3x1 lm		
NAME: ASD-WHB5A-PRO-500-500W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:1.0*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 .148 .047	.252 .144 .046	.239 .137 .044	.226 .130 .042	.215 .124 .040	
2.0	.246 .135 .041	.240 .132 .041	.228 .127 .039	.218 .122 .038	.207 .117 .037	
3.0	.231 .123 .037	.226 .121 .036	.215 .117 .035	.206 .113 .035	.197 .109 .034	
4.0	.217 .113 .033	.212 .111 .033	.203 .107 .032	.194 .104 .031	.186 .101 .031	
5.0	.203 .103 .030	.199 .102 .030	.190 .099 .029	.183 .097 .029	.176 .094 .028	
6.0	.190 .095 .027	.187 .094 .027	.179 .092 .027	.173 .090 .026	.166 .088 .026	
7.0	.179 .089 .025	.176 .088 .025	.169 .086 .025	.163 .084 .024	.157 .082 .024	
8.0	.169 .083 .023	.166 .082 .023	.160 .080 .023	.155 .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	.116 .116 .116	.066 .066 .066	.021 .021 .021	
1.0	.184 .164 .146	.158 .141 .126	.108 .097 .087	.062 .056 .051	.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	.157 .108 .071	.134 .093 .062	.092 .065 .043	.053 .038 .026	.017 .012 .008	
5.0	.149 .097 .059	.128 .084 .051	.088 .059 .036	.051 .035 .022	.016 .011 .007	
6.0	.142 .089 .050	.122 .077 .044	.084 .054 .031	.049 .032 .018	.016 .010 .006	
7.0	.136 .082 .044	.117 .071 .038	.081 .050 .027	.047 .029 .016	.015 .010 .005	
8.0	.130 .076 .039	.112 .066 .034	.077 .046 .024	.045 .027 .014	.015 .009 .005	
9.0	.124 .071 .035	.107 .061 .030	.074 .043 .022	.043 .026 .013	.014 .008 .004	
10.0	.119 .067 .032	.103 .058 .028	.071 .041 .020	.042 .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:120.0V I:4.045A P:480.9W PF:0.9990 Freq:60.00Hz Lamp Flux:80269.3x1 lm										
NAME: ASD-WHB5A-PRO-500-500W-4000K					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: ASD LIGHTING CORP.					SUR.:1.0*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	26.2	27.6	26.5	27.8	28.0	26.3	27.6	26.6	27.8	28.0
3H	26.8	28.0	27.1	28.3	28.5	27.0	28.2	27.3	28.5	28.7
4H	27.1	28.3	27.5	28.6	28.8	27.4	28.5	27.7	28.8	29.1
6H	27.5	28.6	27.8	28.9	29.1	27.7	28.8	28.1	29.1	29.4
8H	27.7	28.7	28.0	29.0	29.3	27.9	28.9	28.2	29.2	29.5
12H	27.8	28.8	28.2	29.1	29.4	28.0	29.0	28.3	29.3	29.6
4H 2H	26.4	27.6	26.7	27.8	28.1	26.5	27.6	26.8	27.9	28.2
3H	27.2	28.2	27.6	28.5	28.8	27.4	28.4	27.8	28.7	29.0
4H	27.7	28.6	28.1	29.0	29.3	27.9	28.9	28.3	29.2	29.5
6H	28.2	29.0	28.7	29.4	29.8	28.5	29.3	28.9	29.6	30.0
8H	28.5	29.2	28.9	29.6	30.0	28.7	29.4	29.1	29.8	30.2
12H	28.7	29.4	29.2	29.8	30.2	28.9	29.5	29.3	29.9	30.4
8H 4H	27.9	28.7	28.3	29.0	29.4	28.1	28.9	28.5	29.3	29.7
6H	28.6	29.2	29.1	29.7	30.1	28.8	29.4	29.3	29.8	30.3
8H	29.0	29.5	29.5	30.0	30.4	29.1	29.7	29.6	30.1	30.6
12H	29.3	29.8	29.8	30.3	30.7	29.4	29.9	29.9	30.3	30.8
12H 4H	27.9	28.6	28.4	29.0	29.4	28.1	28.8	28.6	29.2	29.6
6H	28.7	29.2	29.2	29.7	30.1	28.9	29.4	29.3	29.9	30.3
8H	29.1	29.6	29.6	30.0	30.5	29.2	29.7	29.7	30.2	30.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.6 / - 0.6					+ 0.6 / - 0.6				
1.5H	+ 0.4 / - 0.4					+ 0.4 / - 0.4				
2.0H	+ 1.3 / - 0.8					+ 1.2 / - 0.7				

CIE Pub.117, 80269 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:120.0V I:4.045A P:480.9W PF:0.9990 Freq:60.00Hz Lamp Flux:80269.3x1 lm		
NAME: ASD-WHB5A-PRO-500-500W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:1.0*0.3	Shielding Angle:

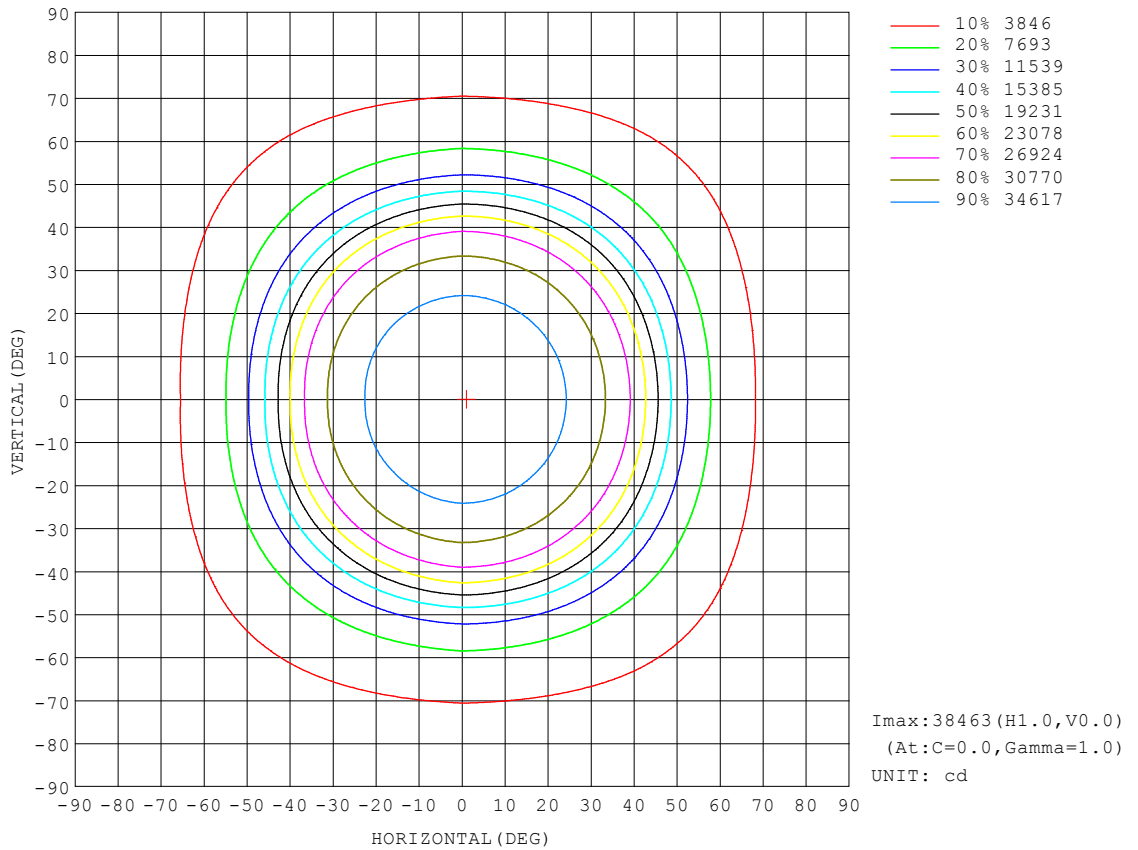
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	66	56	51	66	56	50	65	56	50	45
0.80	76	66	60	75	66	60	74	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	85	80	90	84	79	72
2.00	100	93	88	98	92	87	95	90	85	78
2.50	103	97	92	101	95	91	97	92	89	81
3.00	106	100	95	103	98	94	99	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	89
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:120.0V I:4.045A P:480.9W PF:0.9990 Freq:60.00Hz Lamp Flux:80269.3x1 lm		
NAME: ASD-WHB5A-PRO-500-500W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:1.0*0.3	Shielding Angle:

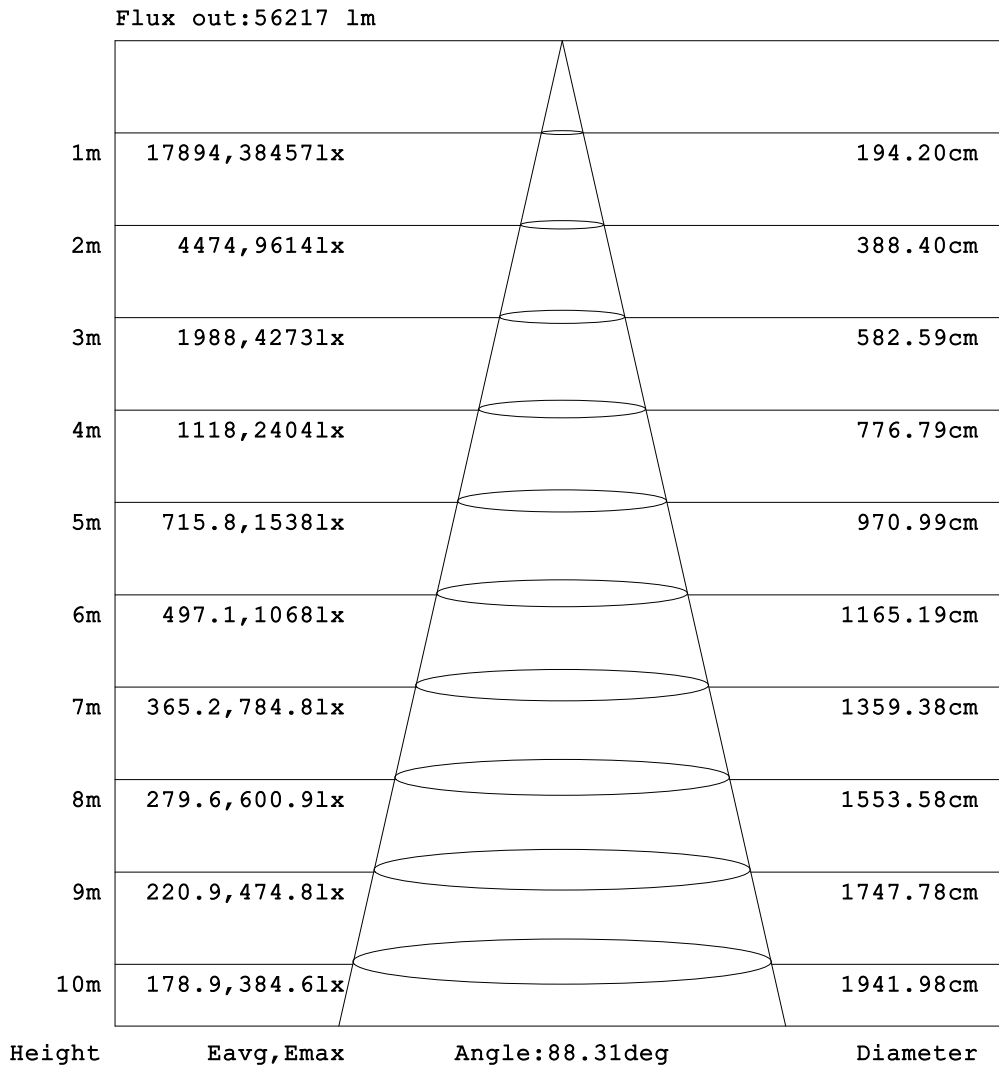


C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 27DEG
 Operators: jon
 Test Date: 2023-11-27

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:120.0V I:4.045A P:480.9W PF:0.9990 Freq:60.00Hz Lamp Flux:80269.3x1 lm		
NAME: ASD-WHB5A-PRO-500-500W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:1.0*0.3	Shielding Angle:

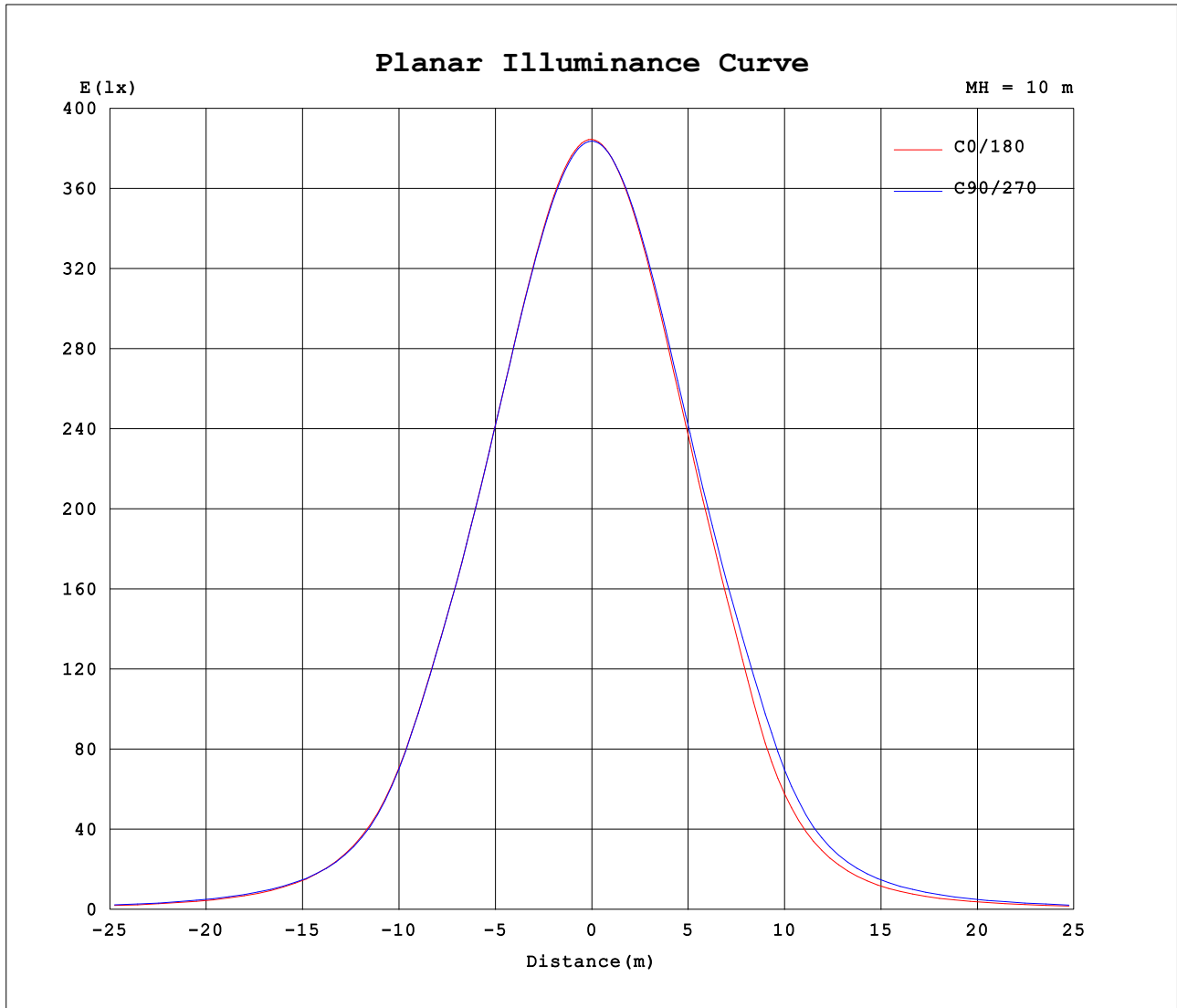


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:120.0V I:4.045A P:480.9W PF:0.9990 Freq:60.00Hz Lamp Flux:80269.3x1 lm		
NAME: ASD-WHB5A-PRO-500-500W-4000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: ASD LIGHTING CORP.	SUR.:1.0*0.3	Shielding Angle:

Table--1

UNIT: x10cd

C (DEG) □ (DEG)	0	45	90	135	180	225	270	315											
0	3846	3840	3837	3836	3846	3840	3837	3836											
5	3833	3825	3821	3815	3822	3821	3821	3822											
10	3786	3777	3774	3762	3764	3770	3773	3775											
15	3705	3696	3696	3677	3674	3686	3694	3695											
20	3589	3581	3583	3556	3545	3567	3582	3581											
25	3436	3428	3434	3393	3373	3406	3432	3429											
30	3240	3229	3238	3178	3147	3195	3238	3233											
35	2984	2970	2981	2892	2833	2911	2981	2977											
40	2612	2589	2603	2437	2302	2462	2603	2603											
45	2002	1974	1988	1781	1639	1789	1976	1987											
50	1386	1365	1358	1219	1118	1220	1354	1364											
55	946	939	953	846	761	851	950	935											
60	651	663	702	607	533	610	696	662											
65	464	490	527	455	394	457	522	487											
70	350	379	398	354	316	355	394	376											
75	274	290	293	265	233	266	291	288											
80	196	200	196	173	151	174	194	198											
85	112	109	104	73.9	42.8	76.5	102	103											
90	9.19	4.79	8.85	3.27	3.62	3.63	4.24	11.1											
95	3.68	3.66	3.72	3.90	4.43	4.47	5.15	4.88											
100	4.64	4.59	4.77	4.82	5.48	5.53	6.18	5.93											
105	5.65	5.74	6.07	6.09	6.81	6.91	7.33	7.08											
110	7.03	7.18	7.54	7.56	8.31	8.42	8.95	8.38											
115	8.55	8.75	9.17	9.20	9.99	10.1	10.6	9.90											
120	10.3	10.5	10.9	11.0	11.8	11.8	12.3	11.5											
125	12.0	12.3	12.7	12.8	13.7	13.6	14.1	13.3											
130	13.8	14.0	14.5	14.6	15.7	15.4	15.9	15.1											
135	15.5	15.8	16.2	16.3	17.4	17.1	17.7	16.9											
140	17.1	17.6	17.9	18.0	19.1	18.9	19.3	18.7											
145	18.8	19.3	19.6	19.5	20.7	20.5	20.9	20.4											
150	20.4	21.0	21.3	21.1	22.3	22.0	22.5	22.0											
155	22.2	22.9	23.1	22.9	24.1	23.8	24.3	23.8											
160	24.2	24.8	25.0	24.8	26.1	25.9	26.3	25.7											
165	26.3	26.7	27.0	26.7	28.2	27.9	28.2	27.6											
170	28.2	28.4	28.7	28.3	29.8	29.4	29.8	29.1											
175	29.8	29.6	30.0	29.6	30.6	30.2	30.6	30.0											
180	30.5	30.3	30.7	30.2	30.5	30.3	30.7	30.2											

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: