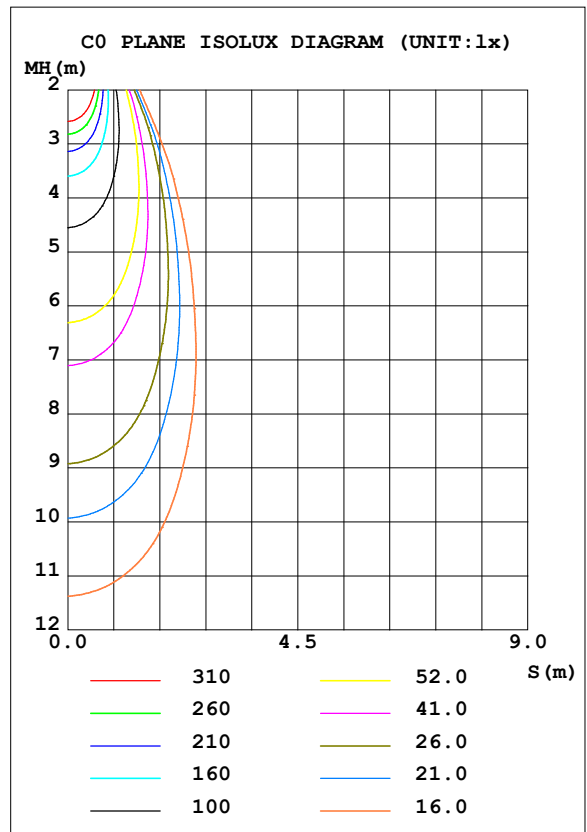
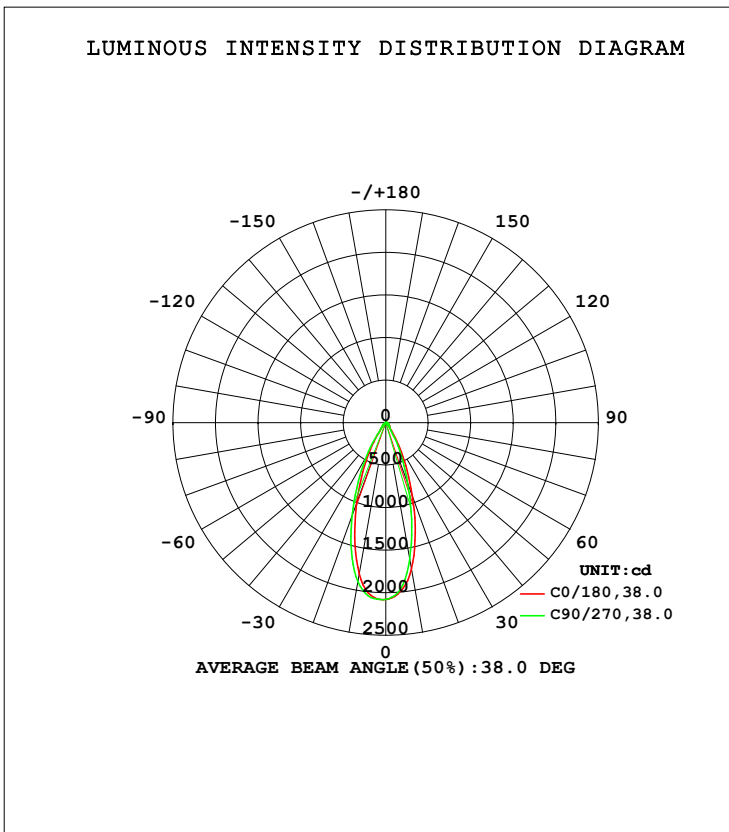


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:119.96V I:0.1082A P:12.783W PF:0.9484 Freq:59.98Hz Lamp Flux:1029.27x1 lm		
NAME: ASD-CD-TR-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:4000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 80.52 lm/W			
MODEL		I _{max} (cd)	2082	S/MH (C0/180)	0.63
NOMINAL POWER (W)	15	LOR (%)	100.0	S/MH (C90/270)	0.68
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	1029.3	<input type="checkbox"/> UP, DN (C0-180)	0.0, 46.4
NOMINAL FLUX (lm)	1029.27	CIE CLASS	DIRECT	<input type="checkbox"/> UP, DN (C180-360)	0.0, 53.6
LAMPS INSIDE	1	<input type="checkbox"/> up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	120	<input type="checkbox"/> down (%)	100.0	CIBSE SHR MAX	0.65



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2021-10-19

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.421
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

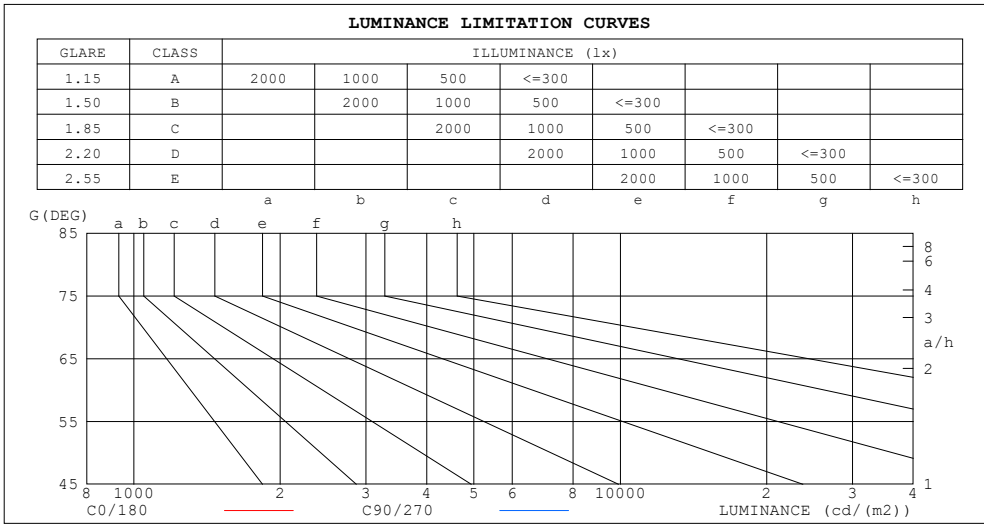
°	C0	C45	C90	C135	C180	C225	C270	C315	°	□ zone	□ total	%lum, lamp
10	1747	1700	1624	1760	1803	1841	1900	1842	0- 10	185.0	185.0	18,18
20	919.4	860.0	754.5	984.8	1003	1070	1160	1004	10- 20	379.0	564.0	54.8,54.8
30	306.0	281.8	227.9	355.8	367.4	402.2	446.5	343.9	20- 30	279.0	843.0	81.9,81.9
40	72.52	69.52	63.39	77.02	79.00	79.39	77.08	74.10	30- 40	97.74	940.8	91.4,91.4
50	40.62	40.19	37.82	39.40	39.46	39.56	39.99	41.13	40- 50	41.05	981.8	95.4,95.4
60	22.25	21.80	20.11	20.78	21.11	19.74	18.89	21.65	50- 60	26.18	1008	97.9,97.9
70	11.88	11.10	8.766	9.653	10.65	8.464	7.473	9.755	60- 70	14.79	1023	99.4,99.4
80	4.270	2.434	1.188	1.932	3.474	1.405	0.7331	1.643	70- 80	5.919	1029	99.9,99.9
90	0.0328	0.0324	0.0300	0.0263	0.0456	0.0427	0.0403	0.0527	80- 90	0.5764	1029	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:25.3DEG
 Operators:
 Test Date:2021-10-19

□ Range: 0 - 90DEG
 □ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.421
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:119.96V I:0.1082A P:12.783W PF:0.9484 Freq:59.98Hz Lamp Flux:1029.27x1 lm		
NAME: ASD-CD-TR-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:4000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	57	29
80	220	62
75	269	153
70	311	231
65	356	303
60	399	362
55	472	428
50	566	530
45	674	606

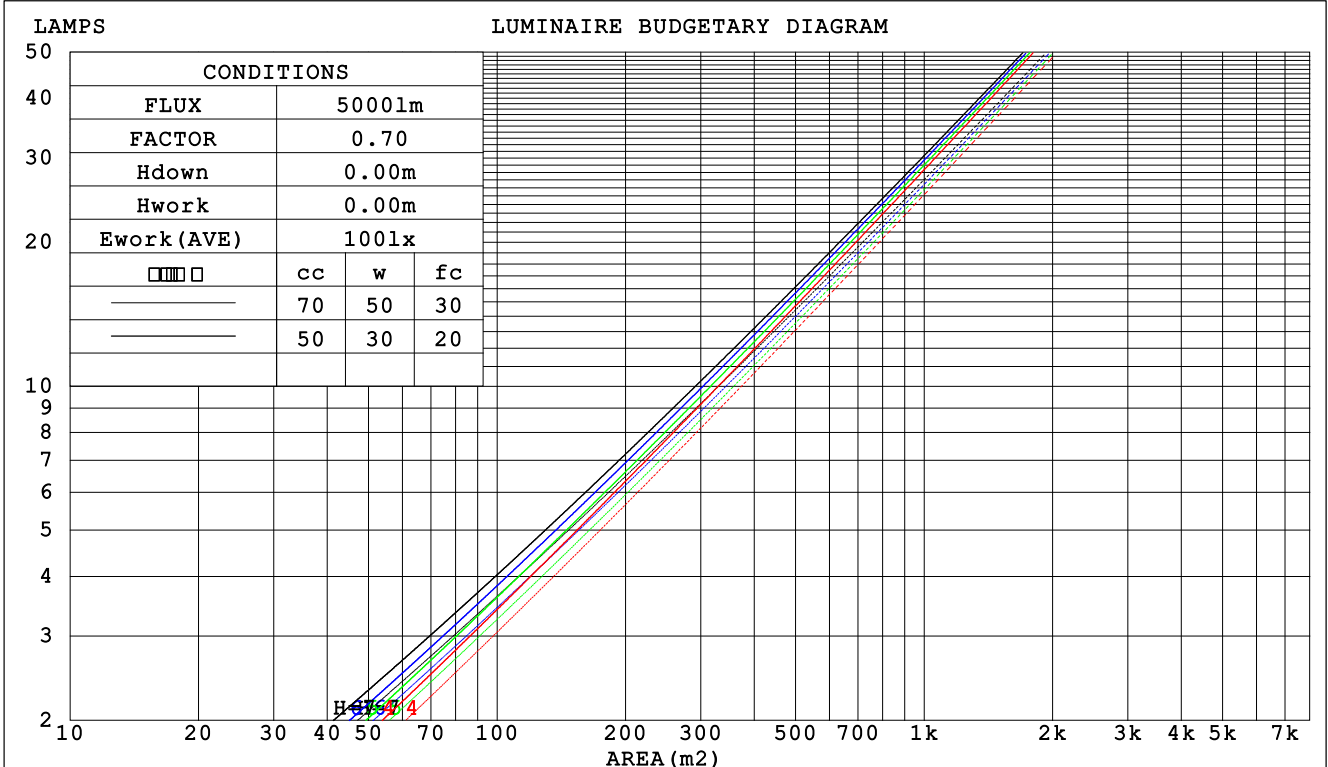
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-10-19

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.421
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:119.96V I:0.1082A P:12.783W PF:0.9484 Freq:59.98Hz Lamp Flux:1029.27x1 lm		
NAME: ASD-CD-TR-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:4000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

□cc	80%			70%			50%			30%			10%			0
□w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
□fc	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	.00
1.0	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.03	1.02	1.01	.00	.99	.98	.97	.96	.94
2.0	1.04	1.00	.97	1.02	.99	.96	.99	.96	.94	.96	.94	.92	.93	.92	.90	.88
3.0	.98	.93	.89	.96	.92	.89	.94	.90	.87	.91	.88	.86	.89	.87	.85	.83
4.0	.92	.87	.83	.91	.86	.83	.89	.85	.82	.87	.84	.81	.85	.82	.80	.79
5.0	.87	.82	.78	.86	.81	.78	.85	.80	.77	.83	.79	.76	.82	.78	.76	.74
6.0	.83	.77	.74	.82	.77	.73	.81	.76	.73	.79	.75	.72	.78	.75	.72	.71
7.0	.79	.73	.70	.78	.73	.69	.77	.72	.69	.76	.72	.69	.75	.71	.68	.67
8.0	.75	.70	.66	.75	.70	.66	.74	.69	.66	.73	.68	.65	.72	.68	.65	.64
9.0	.72	.67	.63	.71	.66	.63	.70	.66	.63	.70	.65	.62	.69	.65	.62	.61
10.0	.69	.64	.60	.68	.63	.60	.68	.63	.60	.67	.63	.60	.66	.62	.60	.58



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-10-19

□ Range: 0 - 90DEG
 □ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.421
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:119.96V I:0.1082A P:12.783W PF:0.9484 Freq:59.98Hz Lamp Flux:1029.27x1 lm		
NAME: ASD-CD-TR-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:4000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	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	.170 .097 .031	.163 .093 .030	.151 .086 .028	.139 .080 .026	.128 .074 .024	
2.0	.161 .088 .027	.155 .086 .026	.145 .081 .025	.135 .076 .024	.126 .071 .023	
3.0	.152 .081 .024	.147 .079 .024	.138 .075 .023	.130 .071 .022	.122 .068 .021	
4.0	.143 .075 .022	.139 .073 .022	.132 .070 .021	.125 .067 .020	.118 .064 .020	
5.0	.136 .069 .020	.132 .068 .020	.126 .065 .019	.119 .063 .019	.114 .061 .018	
6.0	.129 .065 .018	.126 .063 .018	.120 .061 .018	.114 .059 .017	.109 .058 .017	
7.0	.122 .061 .017	.120 .060 .017	.115 .058 .017	.110 .056 .016	.105 .055 .016	
8.0	.117 .057 .016	.114 .056 .016	.110 .055 .016	.106 .054 .015	.102 .052 .015	
9.0	.112 .054 .015	.109 .053 .015	.105 .052 .015	.102 .051 .015	.098 .050 .014	
10.0	.107 .051 .014	.105 .051 .014	.101 .050 .014	.098 .049 .014	.095 .048 .014	

<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	.190 .190 .190	.163 .163 .163	.111 .111 .111	.064 .064 .064	.020 .020 .020	
1.0	.171 .157 .145	.146 .135 .125	.100 .093 .087	.057 .054 .050	.018 .017 .016	
2.0	.155 .133 .114	.133 .114 .098	.091 .079 .069	.052 .046 .040	.017 .015 .013	
3.0	.142 .114 .091	.122 .098 .079	.083 .068 .055	.048 .040 .033	.015 .013 .011	
4.0	.131 .099 .074	.112 .085 .064	.077 .059 .045	.045 .035 .027	.014 .011 .009	
5.0	.121 .087 .061	.104 .075 .053	.072 .052 .038	.042 .031 .022	.013 .010 .007	
6.0	.113 .077 .051	.098 .067 .045	.067 .047 .032	.039 .028 .019	.013 .009 .006	
7.0	.107 .070 .044	.092 .060 .038	.063 .042 .027	.037 .025 .016	.012 .008 .005	
8.0	.101 .063 .037	.087 .055 .033	.060 .038 .023	.035 .023 .014	.011 .007 .005	
9.0	.095 .058 .033	.082 .050 .028	.057 .035 .020	.033 .021 .012	.011 .007 .004	
10.0	.090 .053 .029	.078 .046 .025	.054 .033 .018	.032 .019 .011	.010 .006 .004	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-10-19

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.421
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:119.96V I:0.1082A P:12.783W PF:0.9484 Freq:59.98Hz Lamp Flux:1029.27x1 lm										
NAME: ASD-CD-TR-2D15AC-WH					TYPE:			WEIGHT:		
SPEC.:4000K 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	5.1	5.9	5.3	6.1	6.2	4.4	5.3	4.6	5.5	5.6
3H	5.7	6.5	6.0	6.7	6.9	5.0	5.8	5.2	6.0	6.2
4H	6.0	6.7	6.3	7.0	7.2	5.1	5.8	5.3	6.0	6.3
6H	6.1	6.9	6.4	7.1	7.3	5.0	5.8	5.3	6.0	6.2
8H	6.1	6.8	6.4	7.1	7.3	5.0	5.7	5.3	5.9	6.2
12H	6.1	6.7	6.4	7.0	7.3	5.0	5.6	5.3	5.9	6.2
4H 2H	5.3	6.0	5.6	6.3	6.5	4.7	5.5	5.0	5.7	5.9
3H	6.1	6.8	6.4	7.1	7.3	5.4	6.1	5.8	6.4	6.6
4H	6.5	7.1	6.8	7.4	7.7	5.6	6.2	5.9	6.5	6.8
6H	6.7	7.2	7.1	7.6	7.9	5.6	6.1	6.0	6.4	6.8
8H	6.7	7.2	7.1	7.5	7.9	5.5	6.0	5.9	6.4	6.7
12H	6.7	7.1	7.1	7.5	7.9	5.5	5.9	5.9	6.3	6.7
8H 4H	6.5	7.0	6.9	7.3	7.7	5.6	6.1	6.0	6.5	6.9
6H	6.8	7.2	7.2	7.6	8.0	5.7	6.1	6.1	6.5	6.9
8H	6.8	7.1	7.2	7.6	8.0	5.6	6.0	6.1	6.4	6.8
12H	6.7	7.0	7.2	7.5	8.0	5.6	5.9	6.0	6.3	6.8
12H 4H	6.4	6.9	6.9	7.3	7.7	5.6	6.1	6.0	6.4	6.8
6H	6.7	7.1	7.2	7.5	7.9	5.6	6.0	6.1	6.4	6.8
8H	6.7	7.0	7.2	7.5	8.0	5.6	5.9	6.0	6.3	6.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.6 / - 0.7					+ 0.7 / - 0.9				
1.5H	+ 0.8 / - 0.4					+ 0.5 / - 0.5				
2.0H	+ 0.9 / - 0.8					+ 1.0 / - 1.0				

CIE Pub.117, 1029 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.1)
 Area: 0.111111 m2

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-10-19

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.421
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:119.96V I:0.1082A P:12.783W PF:0.9484 Freq:59.98Hz Lamp Flux:1029.27x1 lm		
NAME: ASD-CD-TR-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:4000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

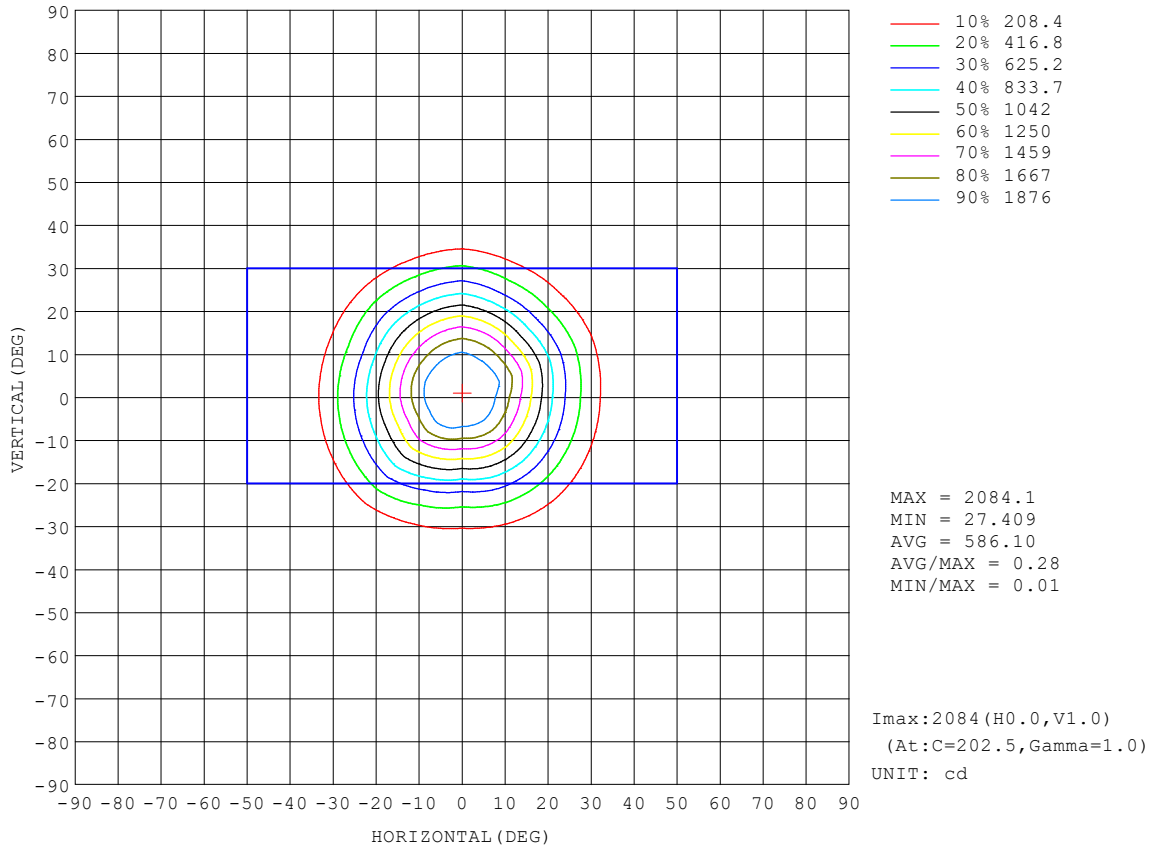
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	86	80	76	86	79	76	85	79	75	72
0.80	94	88	84	93	87	84	92	87	83	79
1.00	98	92	89	97	92	88	96	92	88	84
1.25	102	97	93	101	96	93	99	95	92	88
1.50	105	100	97	104	99	96	102	98	95	91
2.00	108	104	100	107	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	102	100	94
3.00	111	108	105	110	106	104	106	104	102	95
4.00	114	111	108	111	109	107	108	106	104	97
5.00	115	112	111	113	111	109	109	107	106	98
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:25.3DEG
 Operators:
 Test Date:2021-10-19

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.421
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:119.96V I:0.1082A P:12.783W PF:0.9484 Freq:59.98Hz Lamp Flux:1029.27x1 lm		
NAME: ASD-CD-TR-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:4000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

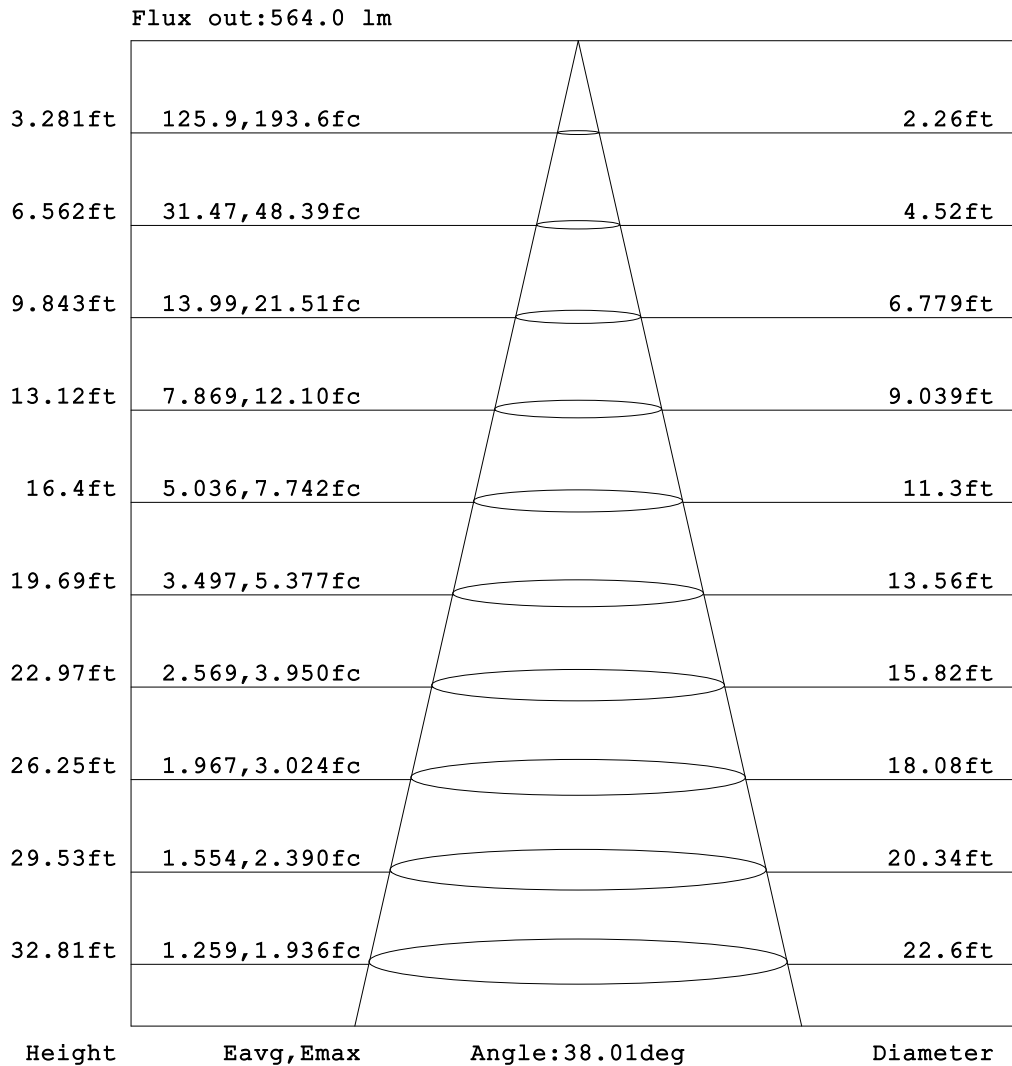


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-10-19

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.421
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

AAI Figure

Test:U:119.96V I:0.1082A P:12.783W PF:0.9484 Freq:59.98Hz Lamp Flux:1029.27x1 lm		
NAME: ASD-CD-TR-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:4000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



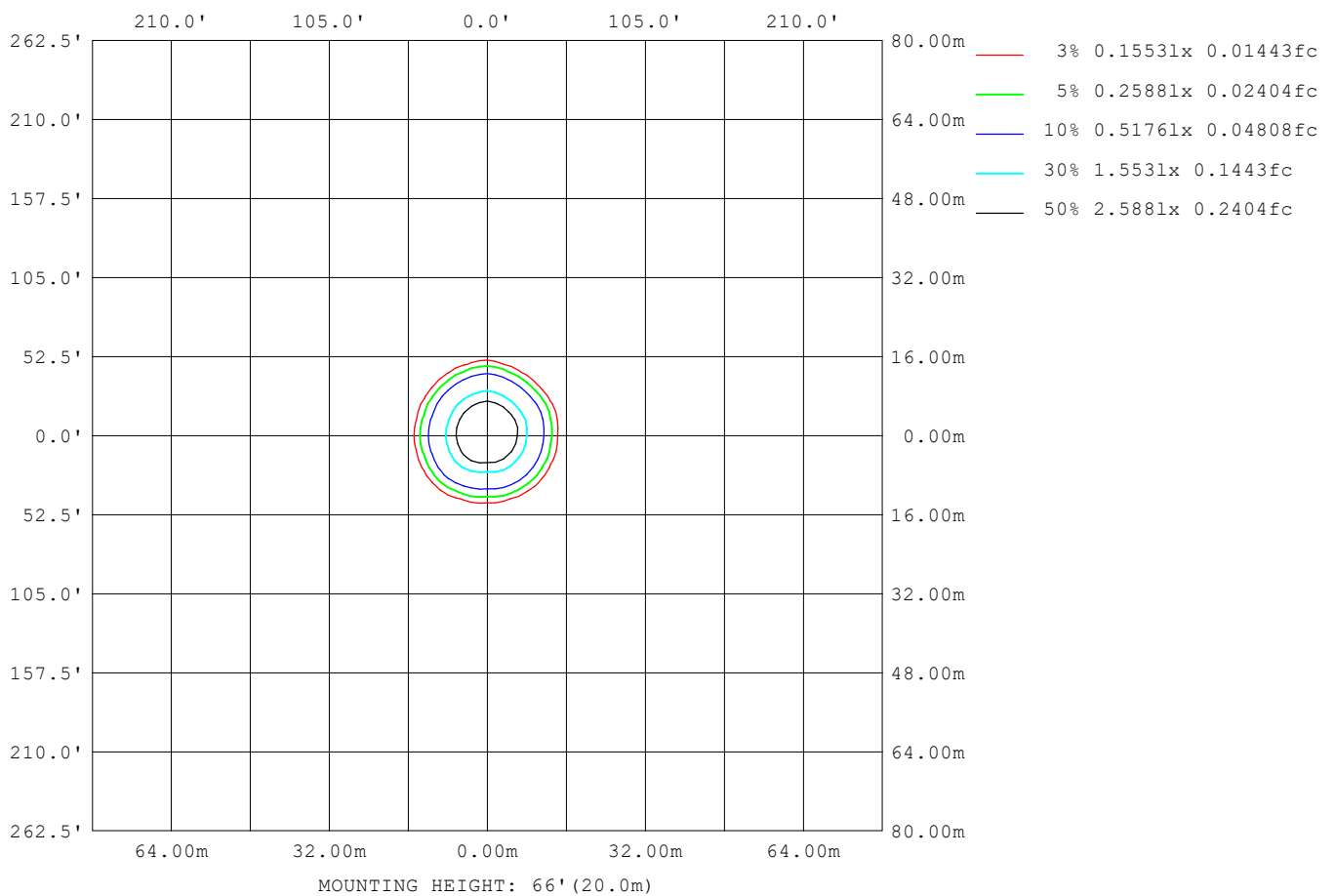
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-10-19

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.421
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:119.96V I:0.1082A P:12.783W PF:0.9484 Freq:59.98Hz Lamp Flux:1029.27x1 lm		
NAME: ASD-CD-TR-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:4000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2021-10-19

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.421
 Humidity:65.0%
 Test Distance:3.080m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:119.96V I:0.1082A P:12.783W PF:0.9484 Freq:59.98Hz Lamp Flux:1029.27x1 lm		
NAME: ASD-CD-TR-2D15AC-WH	TYPE:	WEIGHT:
SPEC.:4000K 90	DIM.:	SERIAL No.:
MFR.: ASD Lighting Corp	SUR.:	Shielding Angle:

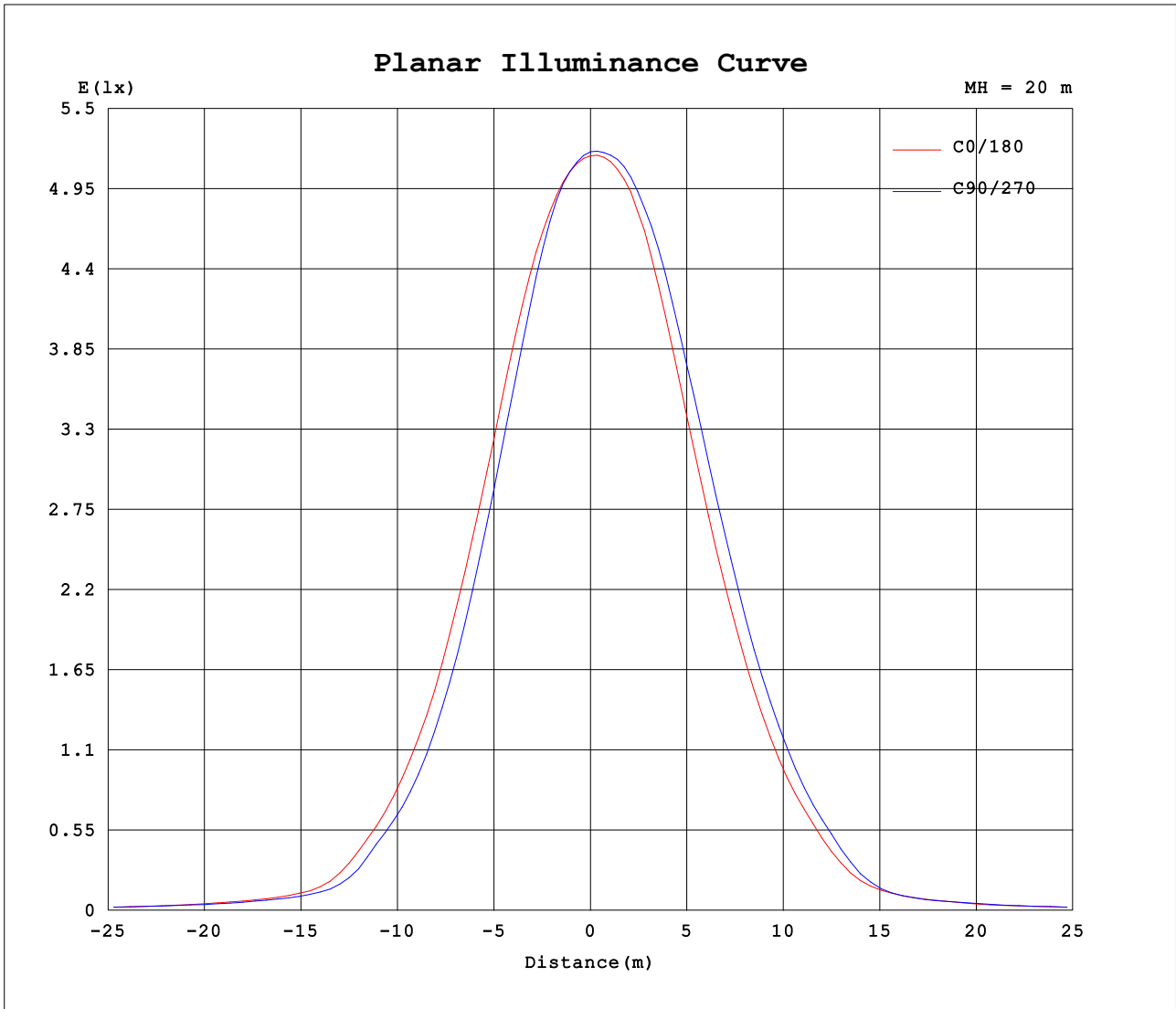
AvgL	cd/m2
L_0~180 (65) av	343
L_0~180 (75) av	252
L_0~180 (85) av	56
L_90~270 (65) av	285
L_90~270 (75) av	138
L_90~270 (85) av	18
L_45 (65) av	320
L_45 (75) av	186
L_45 (85) av	19

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
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Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.421
 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: 25.3DEG
 Operators:
 Test Date: 2021-10-19

Range: 0 - 90DEG
 Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.421
 Humidity: 65.0%
 Test Distance: 3.080m [K=1.0000]
 Remarks:

