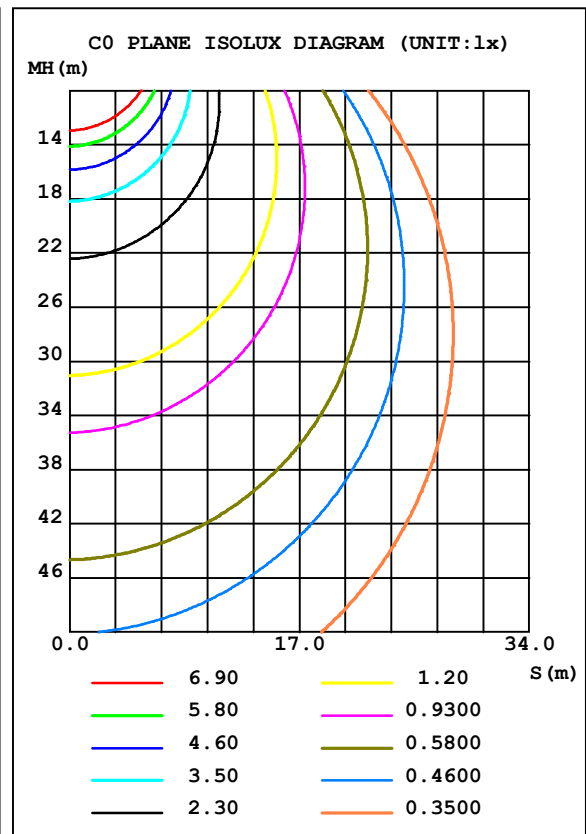
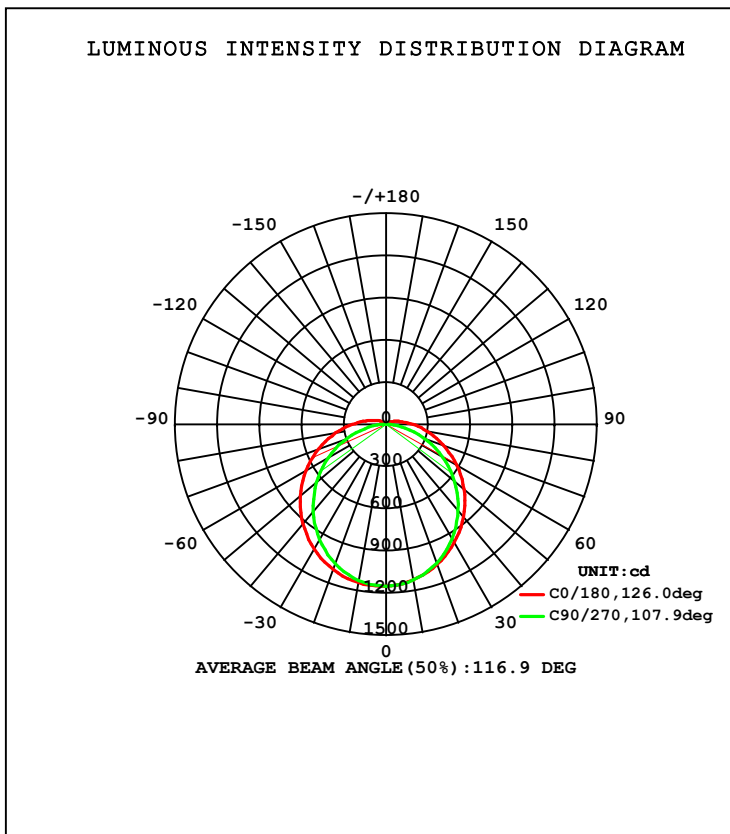


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.4V I:0.2677A P:31.99W PF:0.9927 Lamp Flux:3797.98x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:027
MFR.: ASD Lighting Corp	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 118.72 lm/W			
MODEL	ASD-LVP4N3150MHE	I _{max} (cd)	1153	S/MH (C0/180)	1.26
NOMINAL POWER (W)	32	LOR (%)	100.0	S/MH (C90/270)	1.22
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	3798.0	η UP, DN (C0-180)	2.5, 45.6
NOMINAL FLUX (lm)	3797.98	CIE CLASS	DIRECT	η UP, DN (C180-360)	3.2, 48.7
LAMPS INSIDE	1	η up (%)	5.8	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	120.4	η down (%)	94.2	CIBSE SHR MAX	1.35



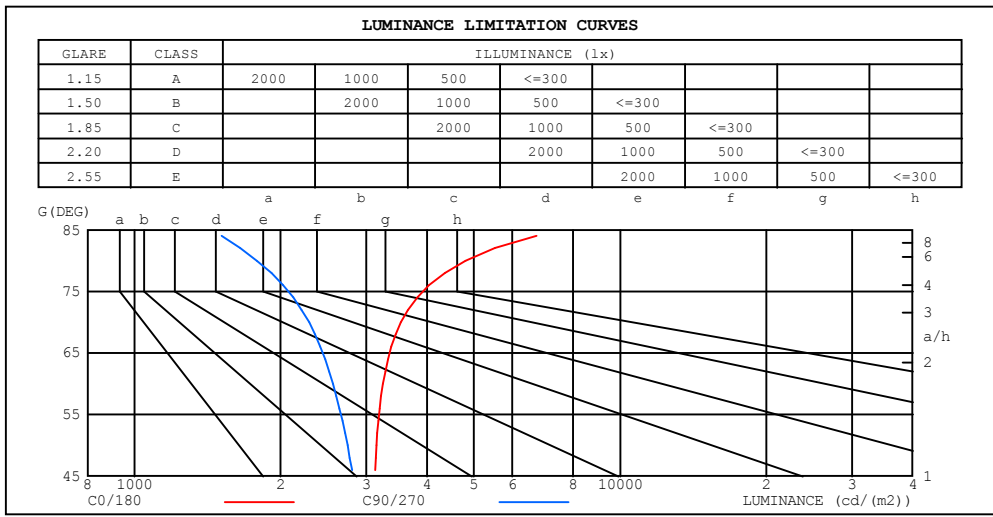
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2015-10-15

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity: 65.0%
 Test Distance: 18.400m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM
AND LUMINANCE LIMITATION CURVES

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270				γ	Φ zone	Φ total	%lum, lamp	
10	1123	1125	1143	1128				0- 10	108.9	108.9	2.87,2.87	
20	1062	1052	1100	1057				10- 20	311.5	420.3	11.1,11.1	
30	971.8	940.4	1025	947.0				20- 30	471.7	892.1	23.5,23.5	
40	857.1	798.9	922.4	807.3				30- 40	570.6	1463	38.5,38.5	
50	725.9	637.9	798.9	647.9				40- 50	599.5	2062	54.3,54.3	
60	581.7	463.7	659.7	475.6				50- 60	559.5	2622	69,69	
70	433.6	282.9	510.8	296.4				60- 70	459.0	3081	81.1,81.1	
80	299.0	112.2	366.1	125.1				70- 80	318.9	3400	89.5,89.5	
90	191.5	13.86	243.0	17.21				80- 90	180.0	3580	94.2,94.2	
100	117.1	6.373	151.2	7.508				90-100	100.9	3680	96.9,96.9	
110	70.21	2.157	91.64	3.140				100-110	58.24	3739	98.4,98.4	
120	36.53	3.054	52.17	3.140				110-120	32.40	3771	99.3,99.3	
130	13.04	2.841	23.29	2.692				120-130	15.12	3786	99.7,99.7	
140	6.307	2.884	6.896	2.791				130-140	5.333	3792	99.8,99.8	
150	5.291	3.333	5.839	3.161				140-150	2.859	3794	99.9,99.9	
160	4.550	3.802	4.887	3.545				150-160	1.985	3796	100,100	
170	4.062	4.165	4.147	3.951				160-170	1.177	3798	100,100	
180	3.534	4.400	3.639	4.229				170-180	0.3874	3798	100,100	
DEG	LUMINOUS INTENSITY:cd								UNIT:lm			



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	8073	1814
80	4806	1787
75	4069	2260
70	3538	2286
65	3447	2562
60	3247	2564
55	3257	2744
50	3152	2743
45	3183	2880

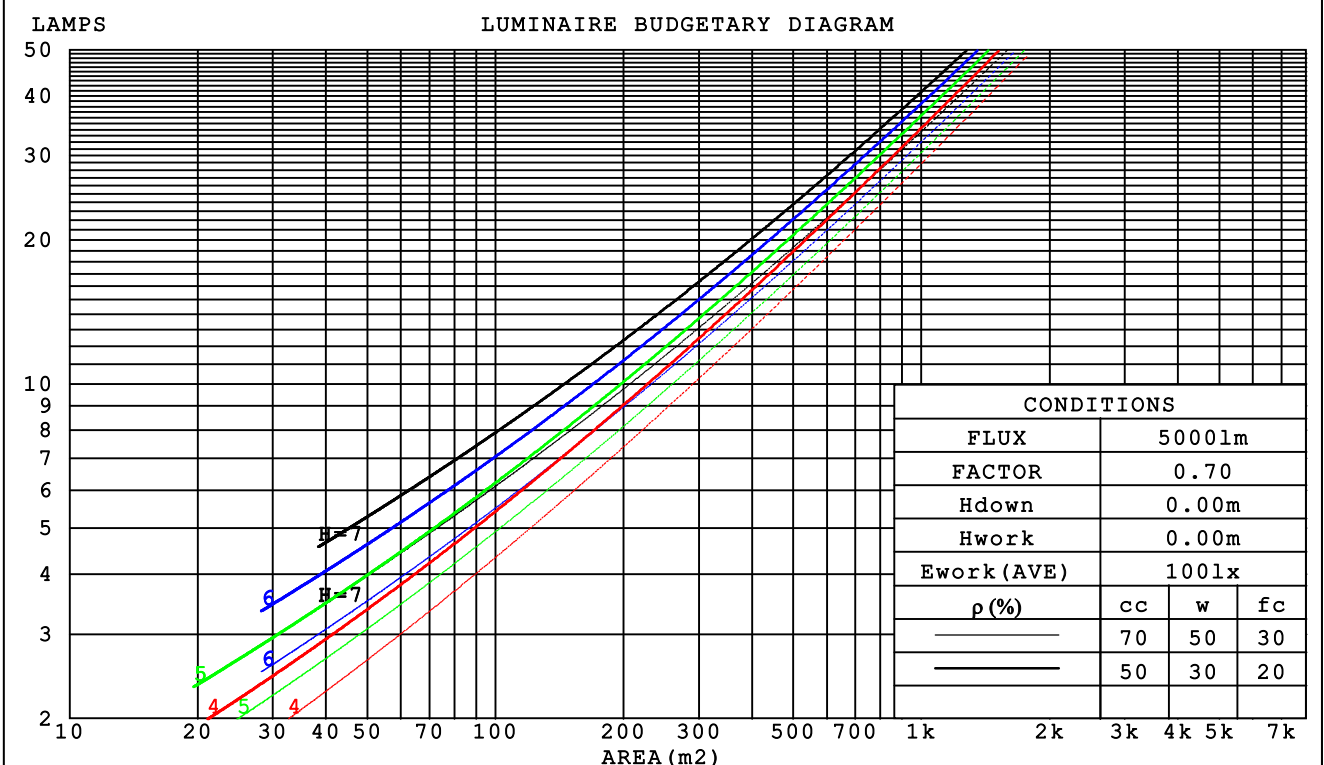
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2015-10-15

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.400m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.4V I:0.2677A P:31.99W PF:0.9927 Lamp Flux:3797.98x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:027
MFR.: ASD Lighting Corp	SUR.:	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.18	1.18	1.18	1.14	1.14	1.14	1.08	1.08	1.08	1.02	1.02	1.02	.97	.97	.97	.94
1.0	1.01	.96	.91	.98	.93	.89	.92	.89	.85	.87	.84	.82	.83	.80	.78	.76
2.0	.87	.79	.73	.84	.78	.72	.80	.74	.69	.76	.71	.67	.72	.68	.65	.62
3.0	.76	.67	.60	.74	.66	.59	.70	.63	.58	.66	.61	.56	.63	.58	.54	.52
4.0	.67	.58	.51	.65	.57	.50	.62	.55	.49	.59	.53	.47	.56	.51	.46	.44
5.0	.60	.50	.43	.58	.49	.43	.55	.48	.42	.53	.46	.41	.50	.45	.40	.38
6.0	.54	.44	.38	.52	.44	.37	.50	.42	.37	.48	.41	.36	.46	.40	.35	.33
7.0	.48	.40	.33	.47	.39	.33	.45	.38	.32	.43	.37	.32	.42	.36	.31	.29
8.0	.44	.36	.30	.43	.35	.29	.41	.34	.29	.40	.33	.28	.38	.32	.28	.26
9.0	.41	.32	.27	.40	.32	.26	.38	.31	.26	.37	.30	.25	.35	.29	.25	.23
10.0	.37	.29	.24	.37	.29	.24	.35	.28	.23	.34	.28	.23	.33	.27	.23	.21



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2015-10-15

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.400m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:120.4V I:0.2677A P:31.99W PF:0.9927 Lamp Flux:3797.98x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:027
MFR.: ASD Lighting Corp	SUR.:	PROTECTION 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	.348	.198	.063	.339	.193	.061	.322	.185	.059	.307	.177	.057	.293	.170	.055	
2.0	.313	.172	.053	.305	.168	.052	.290	.161	.050	.277	.155	.049	.264	.149	.047	
3.0	.284	.151	.045	.277	.148	.045	.263	.143	.043	.251	.138	.042	.240	.133	.041	
4.0	.259	.134	.039	.252	.132	.039	.240	.127	.038	.229	.123	.037	.219	.119	.036	
5.0	.237	.121	.035	.231	.119	.035	.221	.115	.034	.211	.111	.033	.201	.108	.032	
6.0	.218	.109	.031	.213	.108	.031	.204	.104	.030	.195	.101	.030	.186	.098	.029	
7.0	.202	.100	.028	.198	.099	.028	.189	.096	.028	.181	.093	.027	.173	.090	.026	
8.0	.188	.092	.026	.184	.091	.026	.176	.088	.025	.169	.086	.025	.162	.083	.024	
9.0	.176	.085	.024	.172	.084	.024	.165	.082	.023	.158	.079	.023	.152	.077	.022	
10.0	.165	.079	.022	.162	.078	.022	.155	.076	.021	.149	.074	.021	.143	.072	.021	

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	.234	.234	.234	.200	.200	.200	.137	.137	.137	.079	.079	.079	.025	.025	.025	
1.0	.227	.200	.176	.194	.172	.151	.133	.118	.104	.077	.068	.061	.025	.022	.020	
2.0	.220	.176	.140	.188	.152	.121	.129	.105	.084	.074	.061	.049	.024	.020	.016	
3.0	.212	.159	.117	.182	.137	.102	.125	.095	.071	.072	.056	.042	.023	.018	.014	
4.0	.204	.146	.102	.175	.126	.088	.120	.088	.062	.070	.052	.037	.022	.017	.012	
5.0	.196	.136	.091	.169	.118	.079	.116	.082	.056	.067	.048	.033	.022	.016	.011	
6.0	.189	.128	.084	.163	.111	.073	.112	.077	.052	.065	.046	.031	.021	.015	.010	
7.0	.182	.121	.078	.157	.105	.068	.108	.073	.048	.063	.043	.029	.020	.014	.009	
8.0	.175	.115	.074	.151	.100	.064	.105	.070	.046	.061	.041	.027	.020	.014	.009	
9.0	.169	.110	.070	.146	.096	.061	.101	.067	.044	.059	.040	.026	.019	.013	.009	
10.0	.163	.106	.068	.141	.092	.059	.098	.065	.042	.057	.038	.025	.018	.013	.008	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2015-10-15

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.400m [K=1.0000]
 Remarks:

Uncorrected UGR Table

Test:U:120.4V I:0.2677A P:31.99W PF:0.9927 Lamp Flux:3797.98x1 lm										
NAME:				TYPE:				WEIGHT:		
SPEC.:				DIM.:				SERIAL No.:027		
MFR.: ASD Lighting Corp				SUR.:				PROTECTION 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	16.5	18.0	16.8	18.3	18.6	15.7	17.2	16.0	17.5	17.8
3H	18.5	19.9	18.9	20.2	20.6	17.1	18.5	17.5	18.9	19.2
4H	19.5	20.8	19.9	21.2	21.6	17.7	19.0	18.1	19.4	19.8
6H	20.6	21.8	21.0	22.2	22.6	18.1	19.3	18.5	19.7	20.1
8H	21.2	22.4	21.6	22.8	23.2	18.2	19.4	18.6	19.8	20.2
12H	21.8	23.0	22.3	23.4	23.8	18.3	19.4	18.7	19.8	20.2
4H 2H	17.0	18.3	17.4	18.7	19.1	16.4	17.7	16.8	18.1	18.5
3H	19.2	20.4	19.7	20.8	21.2	18.1	19.3	18.5	19.7	20.1
4H	20.4	21.5	20.9	21.9	22.4	18.8	19.9	19.3	20.3	20.8
6H	21.7	22.6	22.2	23.1	23.6	19.4	20.3	19.9	20.8	21.3
8H	22.4	23.2	22.9	23.7	24.2	19.5	20.4	20.0	20.9	21.4
12H	23.1	24.0	23.7	24.5	25.0	19.7	20.5	20.2	21.0	21.5
8H 4H	20.7	21.6	21.2	22.0	22.6	19.3	20.2	19.8	20.7	21.2
6H	22.2	22.9	22.7	23.4	24.0	20.1	20.8	20.6	21.3	21.9
8H	23.0	23.7	23.6	24.2	24.8	20.4	21.1	21.0	21.6	22.2
12H	24.0	24.6	24.6	25.1	25.7	20.6	21.2	21.2	21.8	22.4
12H 4H	20.7	21.5	21.2	22.0	22.5	19.4	20.2	19.9	20.7	21.3
6H	22.2	22.9	22.8	23.4	24.0	20.3	21.0	20.9	21.5	22.1
8H	23.2	23.7	23.7	24.3	24.9	20.7	21.3	21.3	21.8	22.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.1 / - 0.4				

CIE Pub.117 Corrected 3798 lm Total Lamp Luminous Flux. (8log(F/F0) = 4.6)

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2015-10-15

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.400m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.4V I:0.2677A P:31.99W PF:0.9927 Lamp Flux:3797.98x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:027
MFR.: ASD Lighting Corp	SUR.:	PROTECTION ANGLE:

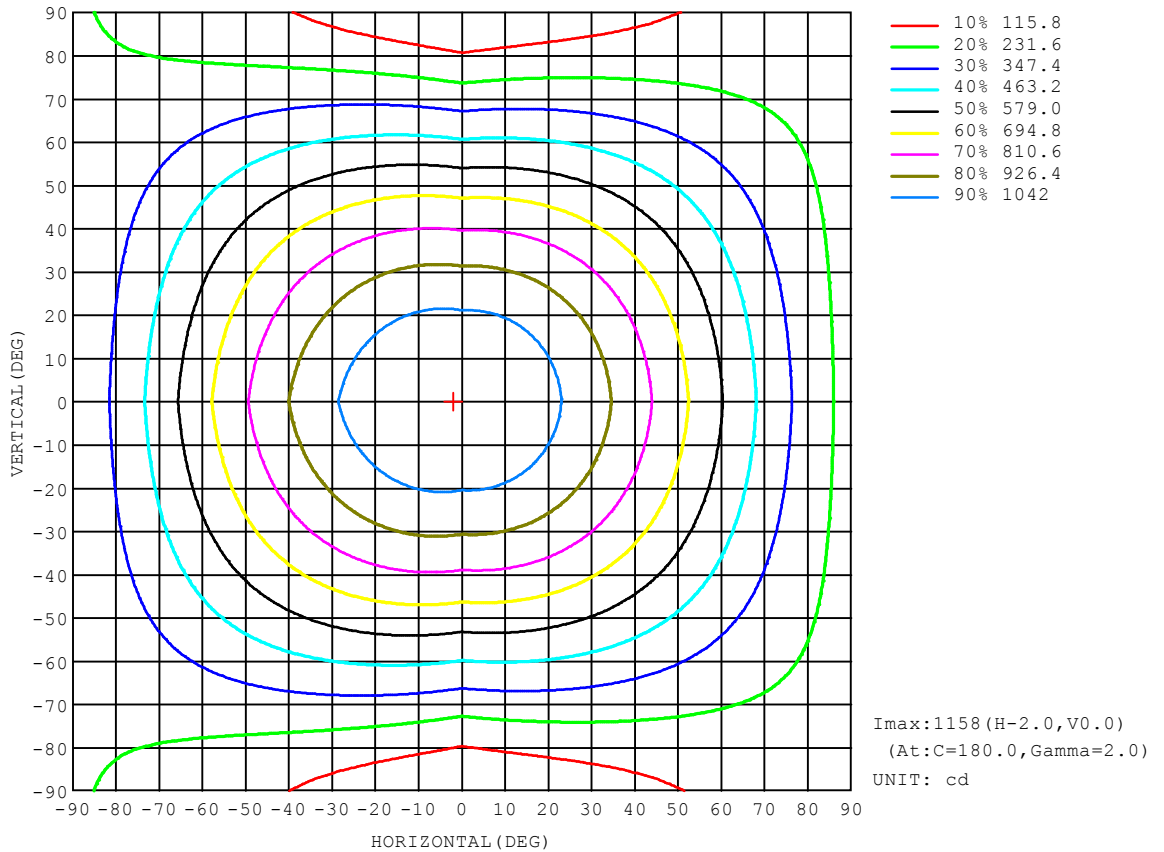
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	54	42	35	53	42	35	52	41	34	28
0.80	63	51	44	62	51	43	60	50	43	36
1.00	72	60	52	70	59	51	68	60	51	43
1.25	79	67	59	77	66	59	74	64	58	50
1.50	84	73	65	82	72	64	78	69	63	54
2.00	91	81	74	88	79	73	84	77	71	62
2.50	95	86	79	92	84	78	88	81	75	66
3.00	98	90	84	96	88	83	91	85	80	70
4.00	103	96	90	100	94	89	95	90	85	75
5.00	105	99	95	102	97	93	97	93	89	78
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2015-10-15

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.400m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.4V I:0.2677A P:31.99W PF:0.9927 Lamp Flux:3797.98x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:027
MFR.: ASD Lighting Corp	SUR.:	PROTECTION ANGLE:

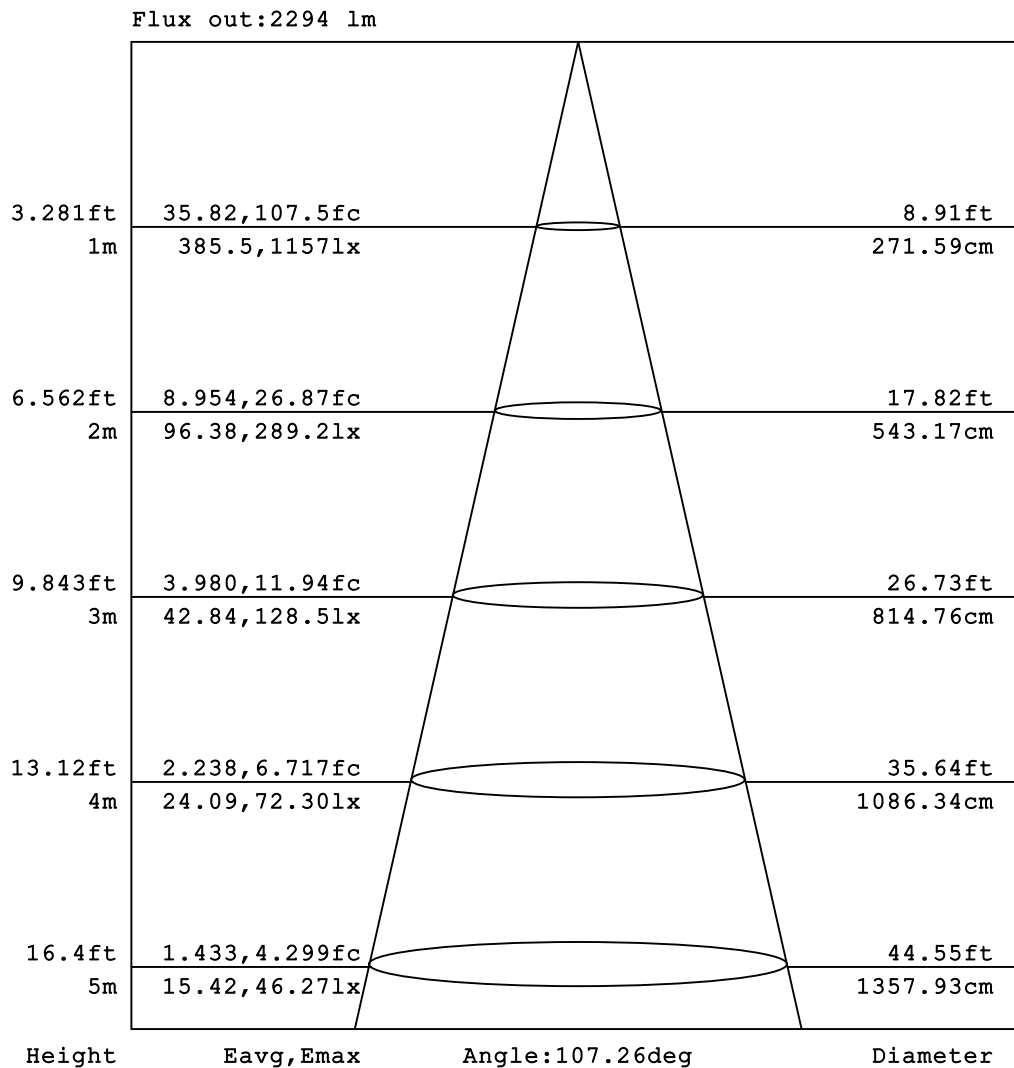


C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2015-10-15

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.400m [K=1.0000]
 Remarks:

AAI Figure

Test:U:120.4V I:0.2677A P:31.99W PF:0.9927 Lamp Flux:3797.98x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:027
MFR.: ASD Lighting Corp	SUR.:	PROTECTION ANGLE:



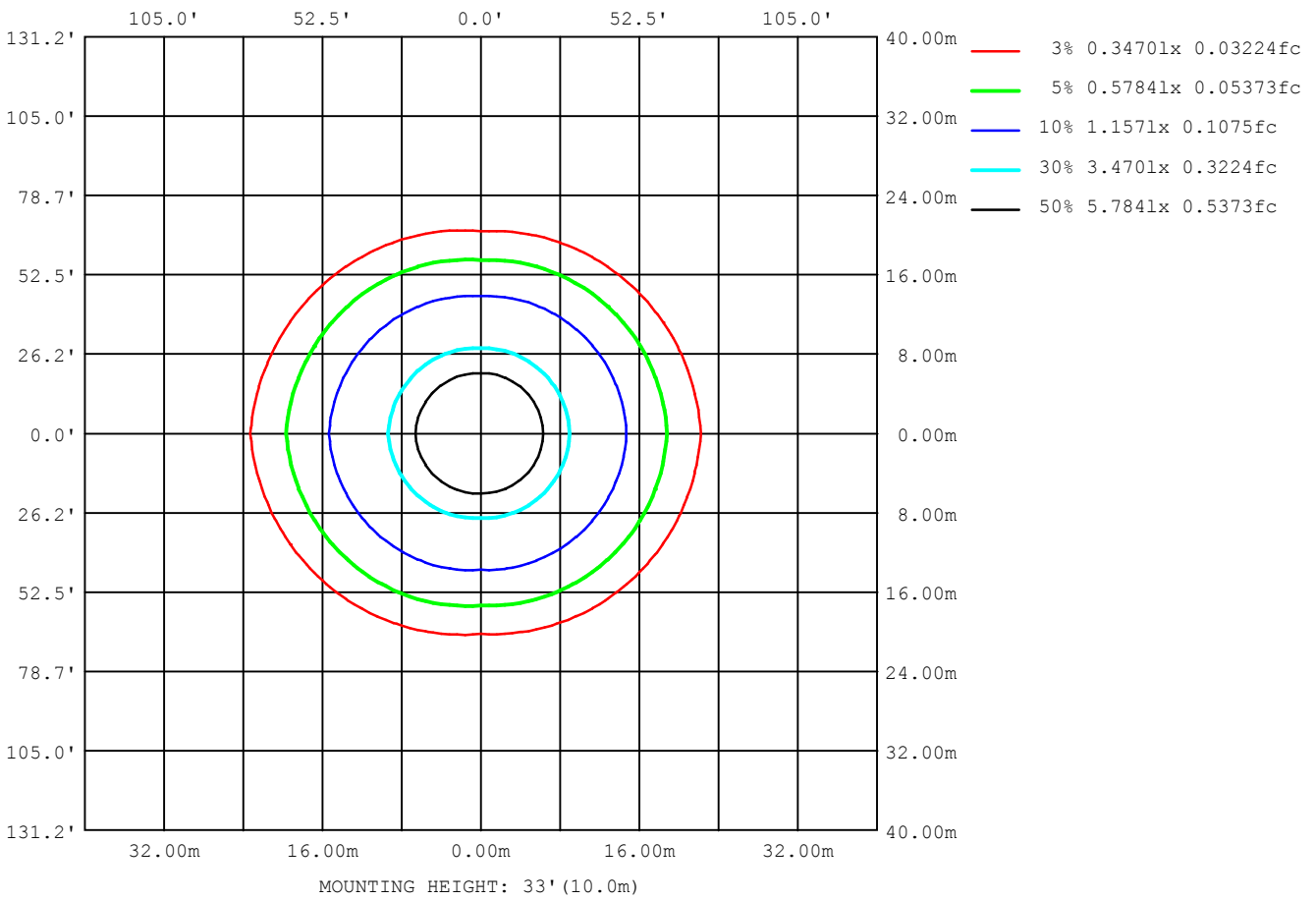
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2015-10-15

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity: 65.0%
 Test Distance: 18.400m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

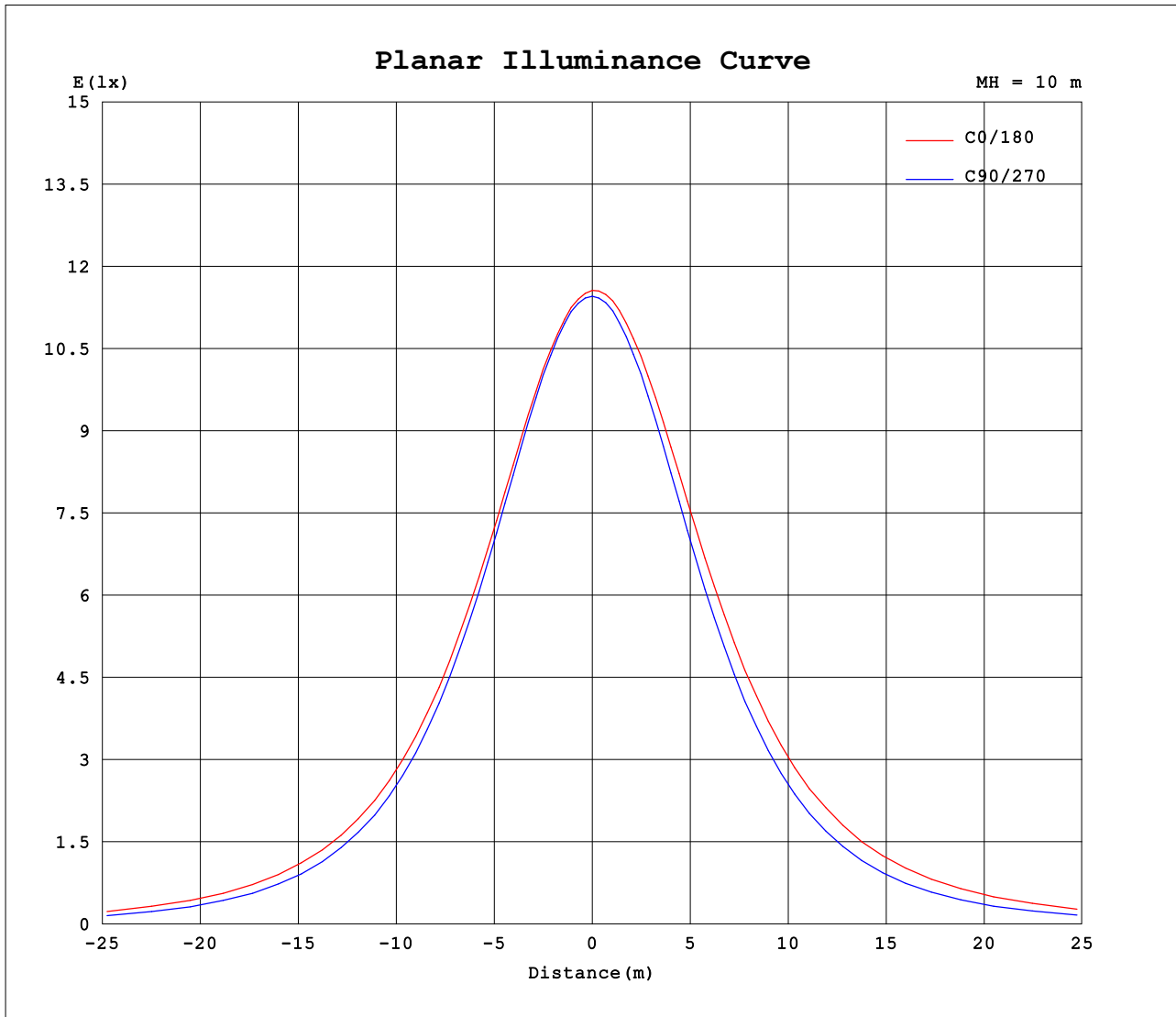
Test:U:120.4V I:0.2677A P:31.99W PF:0.9927 Lamp Flux:3797.98x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:027
MFR.: ASD Lighting Corp	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2015-10-15

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.400m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2015-10-15

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity: 65.0%
 Test Distance: 18.400m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.4V I:0.2677A P:31.99W PF:0.9927 Lamp Flux:3797.98x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:027
MFR.: ASD Lighting Corp	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C (DEG) \ γ (DEG)	0	90	180	270															
0	1151	1151	1151	1151															
5	1144	1147	1152	1148															
10	1123	1125	1143	1128															
15	1103	1102	1130	1105															
20	1062	1052	1100	1057															
25	1029	1012	1074	1017															
30	972	940	1025	947															
35	928	887	987	894															
40	857	799	922	807															
45	806	737	875	746															
50	726	638	799	648															
55	669	569	745	580															
60	582	464	660	476															
65	522	392	601	404															
70	434	283	511	296															
75	377	212	451	225															
80	299	112	366	125															
85	252	57.2	314	68.0															
90	192	13.9	243	17.2															
95	158	10.9	202	12.4															
100	117	6.37	151	7.51															
105	96.0	3.33	124	3.74															
110	70.2	2.16	91.6	3.14															
115	55.5	3.42	74.4	3.01															
120	36.5	3.05	52.2	3.14															
125	25.9	2.86	39.3	2.86															
130	13.0	2.84	23.3	2.69															
135	7.36	2.83	14.7	2.72															
140	6.31	2.88	6.90	2.79															
145	5.90	3.05	6.49	2.84															
150	5.29	3.33	5.84	3.16															
155	4.97	3.48	5.46	3.23															
160	4.55	3.80	4.89	3.54															
165	4.30	3.97	4.55	3.82															
170	4.06	4.17	4.15	3.95															
175	4.06	4.34	3.87	4.12															
180	3.53	4.40	3.64	4.23															

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2015-10-15

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.400m [K=1.0000]
 Remarks: