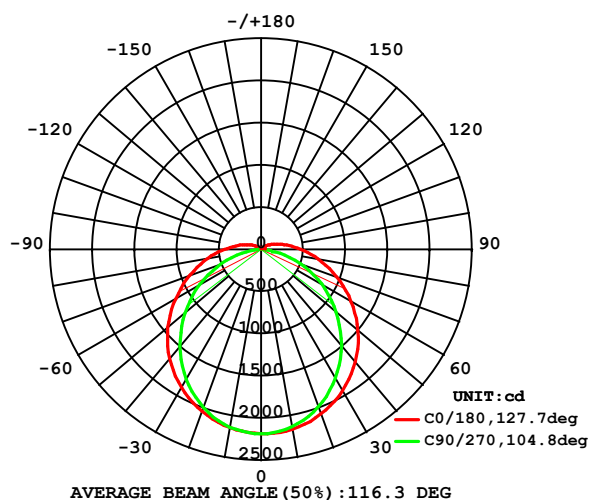


LUMINAIRE PHOTOMETRIC TEST REPORT

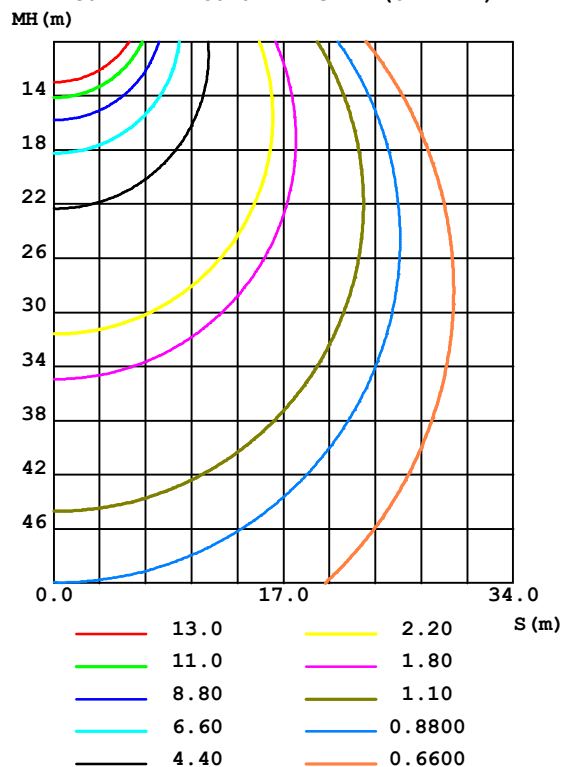
Test:U:220.8V I:0.2713A P:57.84W PF:0.9657 Lamp Flux:7980.00x1 lm		
NAME: ASD Lighting Corp	TYPE:	WEIGHT:
SPEC.: ASD-LVP2SM-8D6040PRM	DIM.:	SERIAL No.:027
MFR.:ASD Lighting Corp	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 133 lm/W			
MODEL	ASD-LVP2SM-8D6040PRM	I _{max} (cd)	2188	S/MH (C0/180)	1.32
NOMINAL POWER (W)	60	LOR (%)	100.0	S/MH (C90/270)	1.21
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	7980,00	η UP, DN (C0-180)	3.4, 47.2
NOMINAL FLUX (lm)	7980,00	CIE CLASS	DIRECT	η UP, DN (C180-360)	3.0, 46.3
LAMPS INSIDE	1	η up (%)	6.4	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	220.8	η down (%)	93.6	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



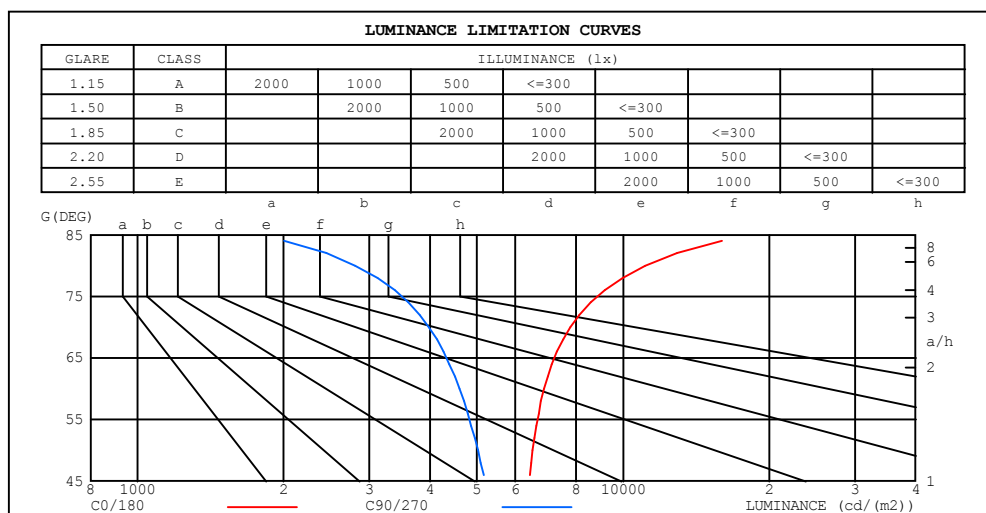
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-04-14

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity: 65.0%
Test Distance: 18.825m [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	2164	2134	2146	2139					0- 10	206.8	206.8	2.86, 2.86
20	2079	1989	2046	1998					10- 20	591.5	798.3	11.1, 11.1
30	1936	1766	1892	1777					20- 30	895.5	1694	23.5, 23.5
40	1741	1485	1689	1497					30- 40	1082	2776	38.5, 38.5
50	1501	1166	1446	1181					40- 50	1133	3908	54.1, 54.1
60	1232	831.8	1171	844.1					50- 60	1050	4958	68.7, 68.7
70	954.7	492.4	895.1	500.3					60- 70	857.1	5816	80.6, 80.6
80	691.5	176.3	642.9	181.1					70- 80	595.9	6411	88.8, 88.8
90	475.5	1.644	437.5	2.310					80- 90	342.7	6754	93.6, 93.6
100	311.6	0.8249	282.1	0.7711					90-100	204.8	6959	96.4, 96.4
110	194.7	1.271	170.5	1.025					100-110	126.3	7085	98.2, 98.2
120	114.0	1.873	94.76	1.560					110-120	71.18	7156	99.1, 99.1
130	61.29	2.430	46.95	2.184					120-130	36.01	7192	99.6, 99.6
140	28.68	2.987	19.33	2.630					130-140	15.78	7208	99.9, 99.9
150	11.48	3.432	6.910	3.142					140-150	5.985	7214	99.9, 99.9
160	4.600	3.767	3.779	3.499					150-160	2.233	7216	100, 100
170	3.868	4.012	3.979	3.744					160-170	1.093	7218	100, 100
180	4.045	4.079	4.023	4.034					170-180	0.3766	7218	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



LUMINANCE cd/(m2)		
G(°)	C0/180	C90/270
85	19176	2400
80	11108	2809
75	9117	3846
70	7786	3982
65	7396	4553
60	6875	4602
55	6791	4984
50	6514	5018
45	6508	5333

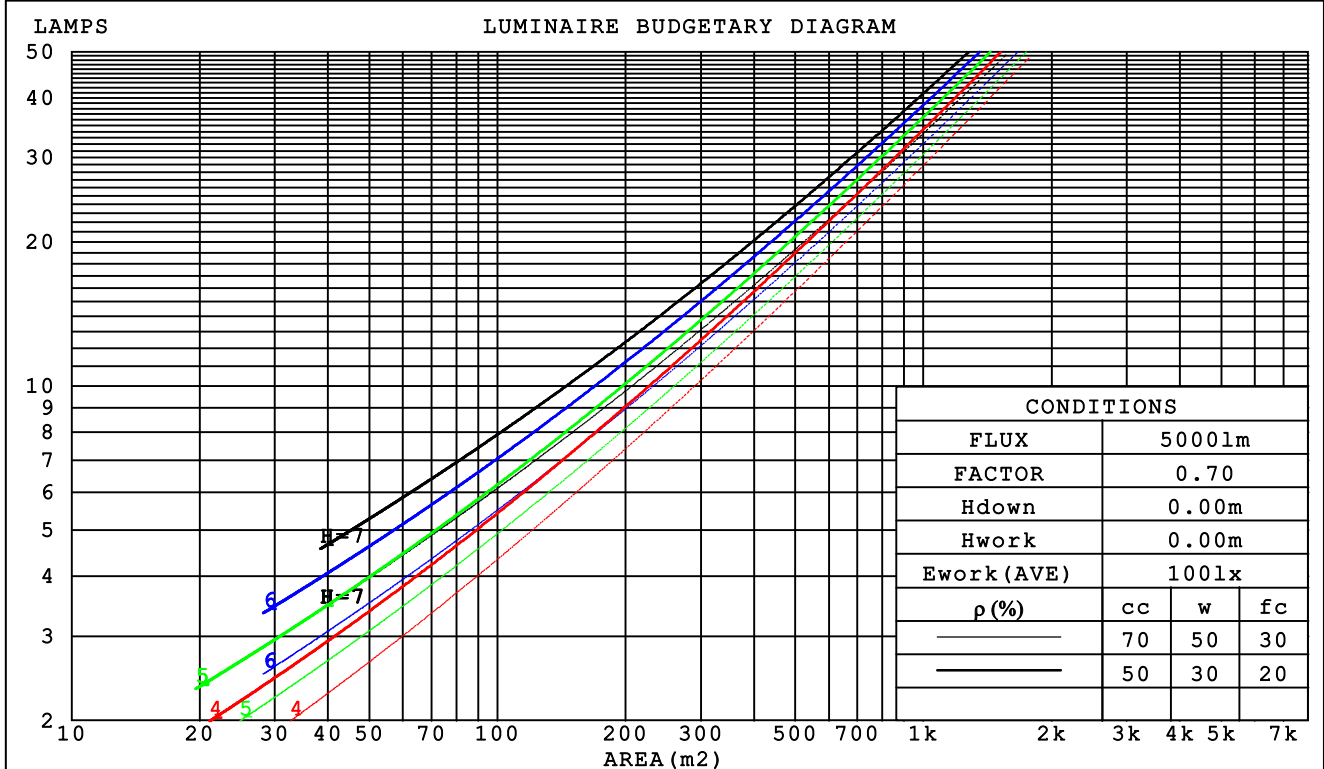
C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-04-14

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity: 65.0%
 Test Distance: 18.825m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.8V I:0.2713A P:57.84W PF:0.9657 Lamp Flux:7980.00x1 lm		
NAME: ASD Lighting Corp	TYPE:	WEIGHT:
SPEC.:ASD-LVP2SM-8D6040PRM	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	.96	.96	.96	.94
1.0	1.00	.96	.91	.97	.93	.89	.92	.88	.85	.87	.84	.81	.82	.80	.78	.75
2.0	.87	.79	.73	.84	.78	.72	.80	.74	.69	.75	.71	.67	.71	.68	.64	.62
3.0	.76	.67	.60	.74	.66	.59	.70	.63	.57	.66	.60	.56	.63	.58	.54	.51
4.0	.67	.58	.51	.65	.57	.50	.62	.54	.49	.59	.52	.47	.56	.50	.46	.44
5.0	.60	.50	.44	.58	.49	.43	.55	.48	.42	.53	.46	.41	.50	.44	.40	.37
6.0	.54	.44	.38	.52	.44	.37	.50	.42	.37	.47	.41	.36	.45	.39	.35	.33
7.0	.49	.40	.33	.47	.39	.33	.45	.38	.32	.43	.37	.32	.41	.35	.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	.27	.23	.33	.27	.23	.21



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-04-14

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.825m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:220.8V I:0.2713A P:57.84W PF:0.9657 Lamp Flux:7980.00x1 lm		
NAME: ASD Lighting Corp	TYPE:	WEIGHT:
SPEC.:ASD-LVP2SM-8D6040PRM	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	.347	.197	.063	.338	.193	.061	.321	.184	.059	.305	.176	.056	.291	.168	.054		
2.0	.312	.171	.052	.304	.167	.052	.289	.161	.050	.275	.154	.048	.262	.148	.047		
3.0	.283	.150	.045	.275	.148	.044	.262	.142	.043	.249	.137	.042	.237	.131	.041		
4.0	.258	.134	.039	.251	.131	.039	.239	.127	.038	.228	.122	.037	.217	.118	.036		
5.0	.236	.120	.035	.230	.118	.034	.219	.114	.034	.209	.110	.033	.200	.107	.032		
6.0	.218	.109	.031	.213	.107	.031	.203	.104	.030	.193	.100	.030	.185	.097	.029		
7.0	.202	.100	.028	.197	.098	.028	.188	.095	.027	.180	.092	.027	.172	.089	.026		
8.0	.188	.092	.026	.184	.090	.026	.175	.088	.025	.168	.085	.025	.161	.082	.024		
9.0	.176	.085	.024	.172	.084	.023	.164	.081	.023	.157	.079	.023	.151	.077	.022		
10.0	.165	.079	.022	.161	.078	.022	.154	.076	.021	.148	.074	.021	.142	.071	.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	.239	.239	.239	.205	.205	.205	.140	.140	.140	.080	.080	.080	.026	.026	.026	
1.0	.232	.205	.181	.199	.176	.156	.136	.121	.108	.078	.070	.063	.025	.023	.020	
2.0	.225	.181	.145	.192	.156	.126	.132	.108	.088	.076	.063	.051	.024	.020	.017	
3.0	.217	.164	.122	.186	.142	.106	.128	.098	.074	.074	.058	.044	.024	.019	.014	
4.0	.209	.151	.107	.179	.131	.093	.123	.091	.066	.071	.053	.039	.023	.017	.013	
5.0	.201	.141	.097	.173	.122	.084	.119	.085	.059	.069	.050	.035	.022	.016	.012	
6.0	.194	.133	.089	.167	.115	.078	.115	.081	.055	.067	.047	.033	.022	.016	.011	
7.0	.187	.126	.083	.161	.109	.073	.111	.077	.052	.065	.045	.031	.021	.015	.010	
8.0	.181	.120	.079	.155	.104	.069	.108	.073	.049	.063	.043	.029	.020	.014	.010	
9.0	.174	.116	.076	.150	.100	.066	.104	.070	.047	.061	.042	.028	.020	.014	.009	
10.0	.169	.111	.073	.145	.097	.064	.101	.068	.045	.059	.040	.027	.019	.013	.009	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-04-14

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:65.0%
Test Distance:18.825m [K=1.0000]
Remarks:

Uncorrected UGR Table

Test:U:220.8V I:0.2713A P:57.84W PF:0.9657 Lamp Flux:7980.00x1 lm											
NAME: ASD Lighting Corp						TYPE:			WEIGHT:		
SPEC.:ASD-LVP2SM-8D6040PRM						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		19.2	20.7	19.6	21.0	21.3	17.8	19.3	18.2	19.6	20.0
	3H	21.4	22.8	21.8	23.1	23.5	19.2	20.6	19.6	20.9	21.3
	4H	22.5	23.8	22.9	24.2	24.6	19.7	21.0	20.1	21.4	21.8
	6H	23.7	25.0	24.2	25.4	25.8	20.1	21.3	20.5	21.7	22.1
	8H	24.4	25.6	24.8	26.0	26.4	20.1	21.3	20.6	21.7	22.1
	12H	25.2	26.3	25.6	26.7	27.2	20.1	21.3	20.6	21.7	22.1
4H	2H	19.7	21.0	20.1	21.4	21.8	18.7	20.0	19.1	20.3	20.7
	3H	22.1	23.2	22.5	23.7	24.1	20.3	21.4	20.7	21.9	22.3
	4H	23.4	24.4	23.9	24.9	25.4	21.0	22.0	21.5	22.5	22.9
	6H	24.8	25.7	25.3	26.2	26.7	21.5	22.4	22.0	22.9	23.4
	8H	25.6	26.5	26.1	26.9	27.5	21.6	22.5	22.1	23.0	23.5
	12H	26.5	27.3	27.0	27.8	28.3	21.7	22.5	22.2	23.0	23.5
8H	4H	23.6	24.5	24.2	25.0	25.5	21.6	22.5	22.1	23.0	23.5
	6H	25.3	26.0	25.8	26.5	27.1	22.3	23.1	22.9	23.6	24.2
	8H	26.2	26.9	26.8	27.4	28.0	22.6	23.3	23.2	23.8	24.4
	12H	27.4	27.9	27.9	28.5	29.1	22.8	23.4	23.4	23.9	24.5
12H	4H	23.7	24.5	24.2	25.0	25.5	21.7	22.6	22.3	23.1	23.6
	6H	25.3	26.0	25.9	26.5	27.1	22.6	23.3	23.2	23.8	24.4
	8H	26.4	26.9	26.9	27.5	28.1	23.0	23.6	23.6	24.1	24.8
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					+ 0.2 / - 0.4				

CIE Pub.117 Corrected 7218 lm Total Lamp Luminous Flux.(8log(F/F0) = 6.9)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-04-14

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:65.0%
Test Distance:18.825m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.8V I:0.2713A P:57.84W PF:0.9657 Lamp Flux:7980.00x1 lm		
NAME: ASD Lighting Corp	TYPE:	WEIGHT:
SPEC.:ASD-LVP2SM-8D6040PRM	DIM.:	SERIAL No.:027
MFR.: ASD Lighting Corp	SUR.:	PROTECTION ANGLE:

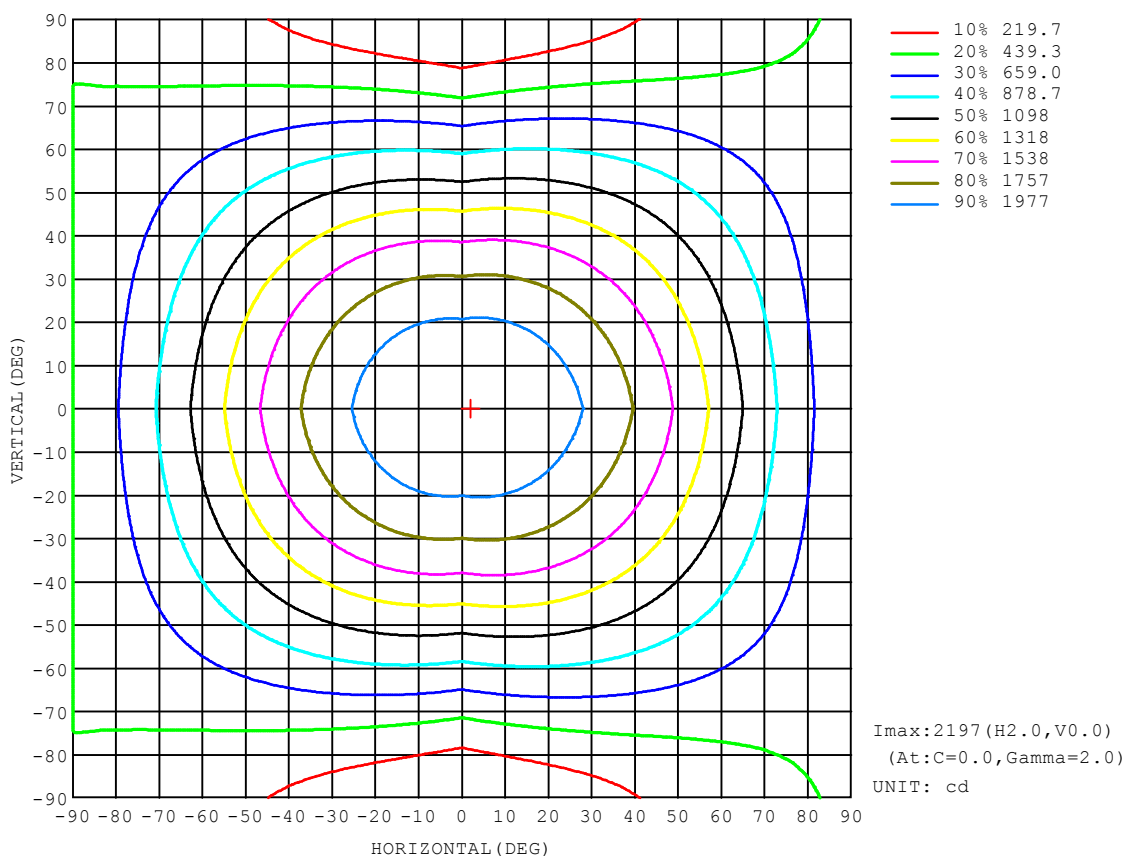
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	54	42	35	53	41	35	52	41	34	28
0.80	63	51	43	62	51	43	60	50	43	36
1.00	71	60	52	70	59	51	67	60	51	43
1.25	78	67	59	77	66	59	73	64	58	50
1.50	83	72	65	81	71	64	78	69	63	54
2.00	90	81	73	88	79	72	84	76	71	61
2.50	95	86	79	92	84	78	87	81	75	65
3.00	98	90	84	95	88	82	90	85	80	69
4.00	102	96	90	99	93	88	94	89	85	74
5.00	105	99	94	102	97	92	96	92	89	77
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:2017-04-14

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:65.0%
Test Distance:18.825m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.8V I:0.2713A P:57.84W PF:0.9657 Lamp Flux:7980.00x1 lm		
NAME: ASD Lighting Corp	TYPE:	WEIGHT:
SPEC.:ASD-LVP2SM-8D6040PRM	DIM.:	SERIAL No.:027
MFR.:ASD Lighting Corp	SUR.:	PROTECTION ANGLE:

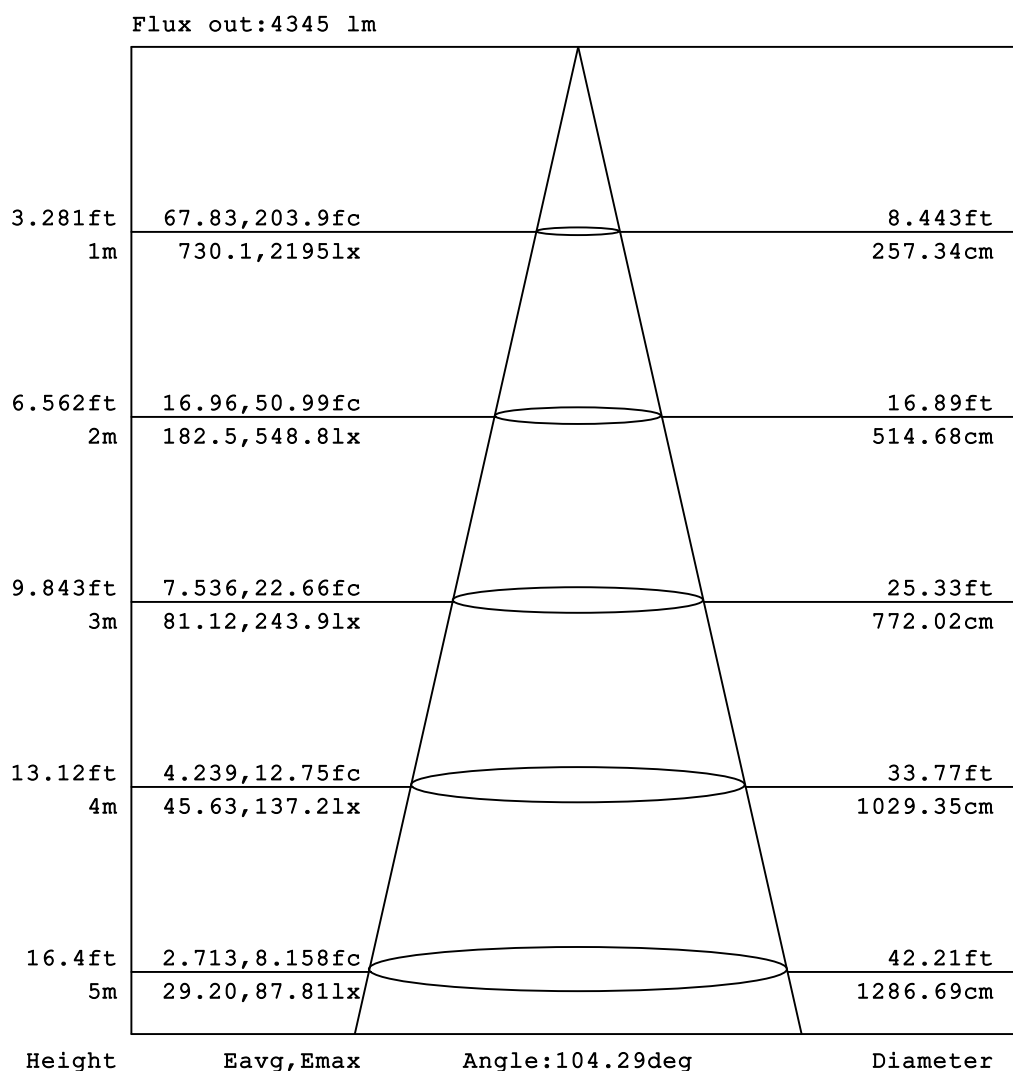


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-04-14

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:65.0%
Test Distance:18.825m [K=1.0000]
Remarks:

AAI Figure

Test:U:220.8V I:0.2713A P:57.84W PF:0.9657 Lamp Flux:7980.00x1 lm		
NAME: ASD Lighting Corp	TYPE:	WEIGHT:
SPEC.:ASD-LVP2SM-8D6040PRM	DIM.:	SERIAL No.:027
MFR.:ASD Lighting Corp	SUR.:	PROTECTION ANGLE:



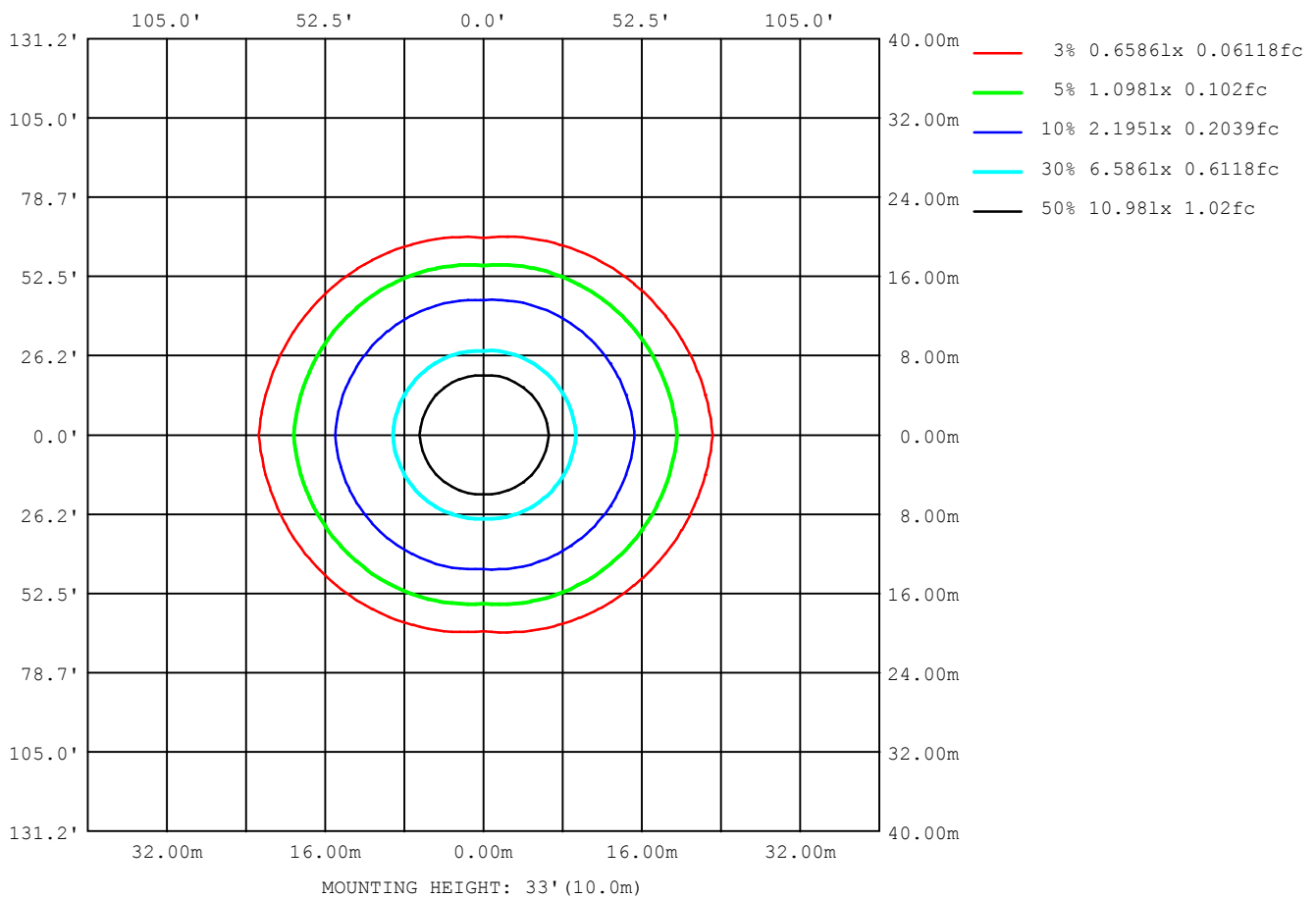
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-04-14

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:65.0%
Test Distance:18.825m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

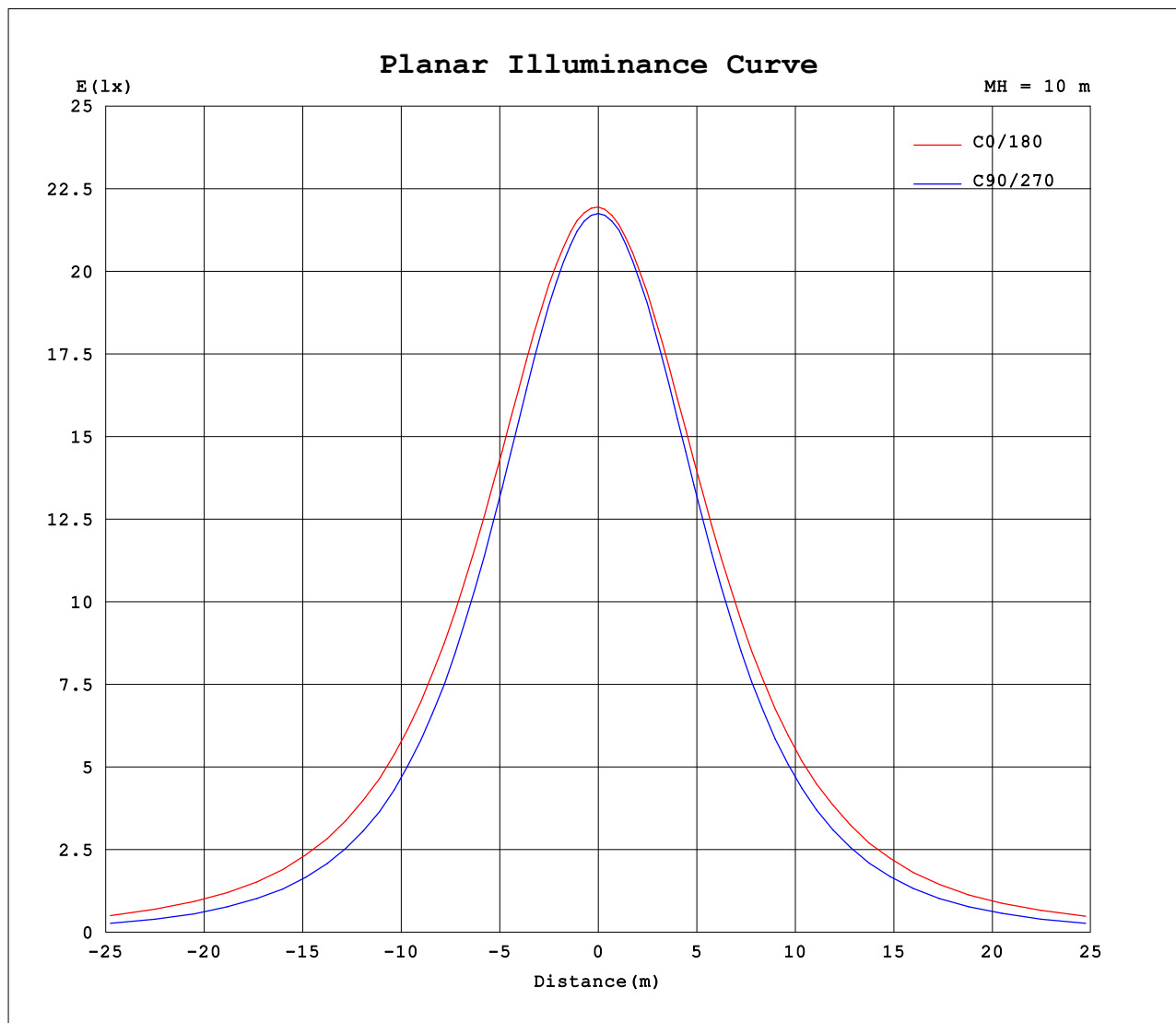
Test:U:220.8V I:0.2713A P:57.84W PF:0.9657 Lamp Flux:7980.00x1 lm		
NAME: ASD Lighting Corp	TYPE:	WEIGHT:
SPEC.:ASD-LVP2SM-8D6040PRM	DIM.:	SERIAL No.:027
MFR.:ASD Lighting Corp	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-04-14

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
 Humidity:65.0%
 Test Distance:18.825m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-04-14

γ Range: 0 - 180DEG
 γ Interval: 2.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity: 65.0%
Test Distance: 18.825m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.8V I:0.2713A P:57.84W PF:0.9657 Lamp Flux:7980.00x1 lm		
NAME: ASD Lighting Corp	TYPE:	WEIGHT:
SPEC.:ASD-LVP2SM-8D6040PRM	DIM.:	SERIAL No.:027
MFR.:ASD Lighting Corp	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270															
0	2186	2186	2186	2186															
5	2185	2177	2177	2179															
10	2164	2134	2146	2139															
15	2138	2087	2112	2093															
20	2079	1989	2046	1998															
25	2029	1908	1991	1918															
30	1936	1766	1892	1777															
35	1863	1659	1816	1671															
40	1741	1485	1689	1497															
45	1650	1363	1596	1373															
50	1501	1166	1446	1181															
55	1396	1033	1338	1047															
60	1232	832	1171	844															
65	1121	696	1059	706															
70	955	492	895	500															
75	846	360	790	367															
80	692	176	643	181															
85	599	75.6	555	79.3															
90	476	1.64	437	2.31															
95	404	0.74	369	0.74															
100	312	0.82	282	0.77															
105	260	1.00	233	0.81															
110	195	1.27	170	1.03															
115	158	1.52	136	1.25															
120	114	1.87	94.8	1.56															
125	90.2	2.07	72.7	1.89															
130	61.3	2.43	47.0	2.18															
135	46.1	2.65	33.7	2.32															
140	28.7	2.99	19.3	2.63															
145	20.3	3.14	13.0	3.01															
150	11.5	3.43	6.91	3.14															
155	7.70	3.57	4.73	3.32															
160	4.60	3.77	3.78	3.50															
165	3.93	3.88	3.85	3.61															
170	3.87	4.01	3.98	3.74															
175	3.87	4.06	4.04	3.83															
180	4.04	4.08	4.02	4.03															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-04-14

γ Range: 0 - 180DEG
γ Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.281
Humidity:65.0%
Test Distance:18.825m [K=1.0000]
Remarks: