

Floodlight Summary:

Report based on lamp delivering 1000 lumens.

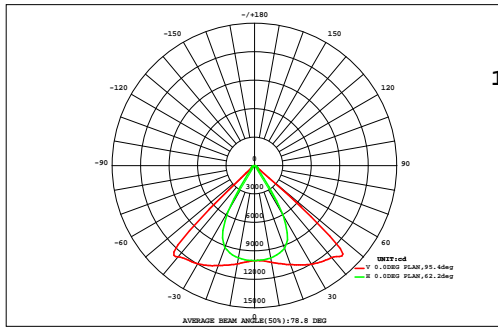
Maximum Intensity (Luminaire orientation as tested.)		746.4 cd per klm. 0.0 degrees vertical 0.0 degrees horizontal
Beam Spread	At 10% of I _{max} At 50% of I _{max} At 90% of I _{max}	75.7V x 98.3H 61.2V x 90.4H 50.2V x 85.7H
Beam Flux	Total To 10% of I _{max} To 50% of I _{max} To 90% of I _{max}	999.8 lumens per klm. 940.2 lumens per klm. 846.6 lumens per klm. 159.7 lumens per klm.
	Upward LOR Downward LOR	0.0 % 100.0 %
Luminaire Efficiency(Light Output Ratio)		100.0 %

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:Ryan Chan
Test Date:2015-08-28

V(B) Range:-90 - 90DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:10.000m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.9V I:0.8673A P:181.0W PF:0.9447 Lamp Flux:19005x1 lm		
NAME: LED Flood Light	TYPE:YHL-FL3-180	WEIGHT:
SPEC.:IP65	DIM.:	SERIAL No.:20150828
MFR.:Yaham Optoelectronics Co.,Ltd.	SUR.:	PROTECTION ANGLE:



DATA OF LAMP		Eff:105.2 lm/W	
108mm	CSW219BT-V1-5000K-Ra70	Imax(cd)	13627
NOMINAL POWER(W)	181	AVAILABILITY(%)	94.2
RATED VOLTAGE(V)	276	Avai. FLUX(lm)	17202
NOMINAL FLUX(lm)	19005	LOR(%)	100.0
LAMPS INSIDE	1	TOTAL FLUX(lm)	19005
TEST VOLTAGE(V)	276.9	q @50%(H,V)	90,61DEG

VERTICAL(DEG)	AREA FLUX DIAGRAM																UNIT:lm			F t	F a	
	72	64	56	48	40	32	24	16	8	0	8	16	24	32	40	48	56	64	72			
72	0.30	0.63	1.13	1.73	2.33	3.37	4.78	5.16	5.01	4.92	4.95	4.72	3.48	2.35	1.76	1.15	0.64	0.29	48.7	0.00		
64	0.55	1.00	1.63	2.39	3.15	4.56	6.64	7.29	7.29	7.17	7.10	6.78	4.93	3.17	2.42	1.66	1.04	0.58	69.4	0.00		
56	0.73	1.28	2.04	3.10	4.07	5.96	8.53	9.14	8.85	8.74	8.93	8.72	6.48	4.14	3.12	2.07	1.32	0.77	88.0	0.00		
48	0.84	1.59	2.66	4.70	7.97	10.5	11.0	11.4	11.4	11.4	11.2	10.9	9.52	7.22	4.55	2.65	1.62	0.89	122	0.00		
40	0.91	1.89	3.49	10.1	40.5	53.0	44.8	39.8	36.5	35.1	35.5	37.3	42.9	32.1	8.31	3.41	1.92	0.96	429	357		
32	0.98	2.14	4.77	39.4	142	177	165	149	139	137	143	155	167	139	35.3	4.68	2.18	1.02	1603	1578		
24	1.05	2.38	6.66	84.4	192	211	203	192	183	181	188	200	213	204	88.4	6.68	2.43	1.09	2159	2138		
16	1.11	2.58	8.91	127	192	203	203	198	193	192	197	203	206	199	134	9.19	2.64	1.15	2273	2253		
8	1.16	2.69	13.2	150	191	202	204	201	196	196	201	204	205	196	159	12.3	2.73	1.19	2337	2318		
0	1.16	2.70	13.5	150	193	203	204	201	196	196	201	205	206	198	158	14.3	2.72	1.18	2346	2327		
-8	1.11	2.58	10.2	128	197	206	204	198	192	192	198	205	210	205	136	11.1	2.61	1.14	2299	2281		
-16	1.05	2.36	7.18	88.1	196	209	199	188	180	179	186	199	212	203	96.9	7.96	2.41	1.08	2157	2139		
-24	0.97	2.12	4.71	38.1	132	158	150	140	132	130	135	144	152	131	43.0	5.36	2.16	1.01	1501	1480		
-32	0.90	1.87	3.48	8.74	34.6	45.7	42.3	40.2	38.4	37.2	36.6	36.4	38.9	33.2	11.4	3.67	1.89	0.94	416	330		
-40	0.83	1.59	2.68	4.60	6.27	8.28	10.1	10.7	10.8	10.6	10.5	9.91	7.92	6.29	4.71	2.68	1.62	0.87	111	0.00		
-48	0.72	1.30	2.08	3.15	4.20	6.10	8.54	9.08	8.84	8.74	8.79	8.55	6.18	4.11	3.10	2.06	1.34	0.76	87.6	0.00		
-56	0.55	1.03	1.66	2.44	3.22	4.50	6.44	7.08	7.12	7.06	6.95	6.58	4.71	3.15	2.41	1.66	1.05	0.58	68.2	0.00		
-64	0.30	0.66	1.18	1.80	2.41	3.36	4.81	5.16	5.11	5.03	5.06	4.88	3.50	2.38	1.77	1.15	0.63	0.29	49.5	0.00		
-72	-72	-64	-56	-48	-40	-32	-24	-16	HORIZONTAL(DEG)	16	24	32	40	48	56	64	72					
F t	15.2	32.4	91.0	847	1544	1715	1679	1612	1549	1538	1584	1650	1699	1574	893	93.7	33.0	15.8	18165	---		
F a	0.00	0.00	28.4	799	1502	1660	1607	1536	1471	1461	1508	1579	1643	1533	845	30.4	0.00	0.00	---	17202		

one-half-peak spread: U:9.6,D:10.1 , L:9.6,R:9.1 NEMA Beam Type: Type 5

H(B) Range:-90 - 90DEG
H(B) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:Ryan Chan
Test Date:2015-08-28

V(B) Range:-90 - 90DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:10.000m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

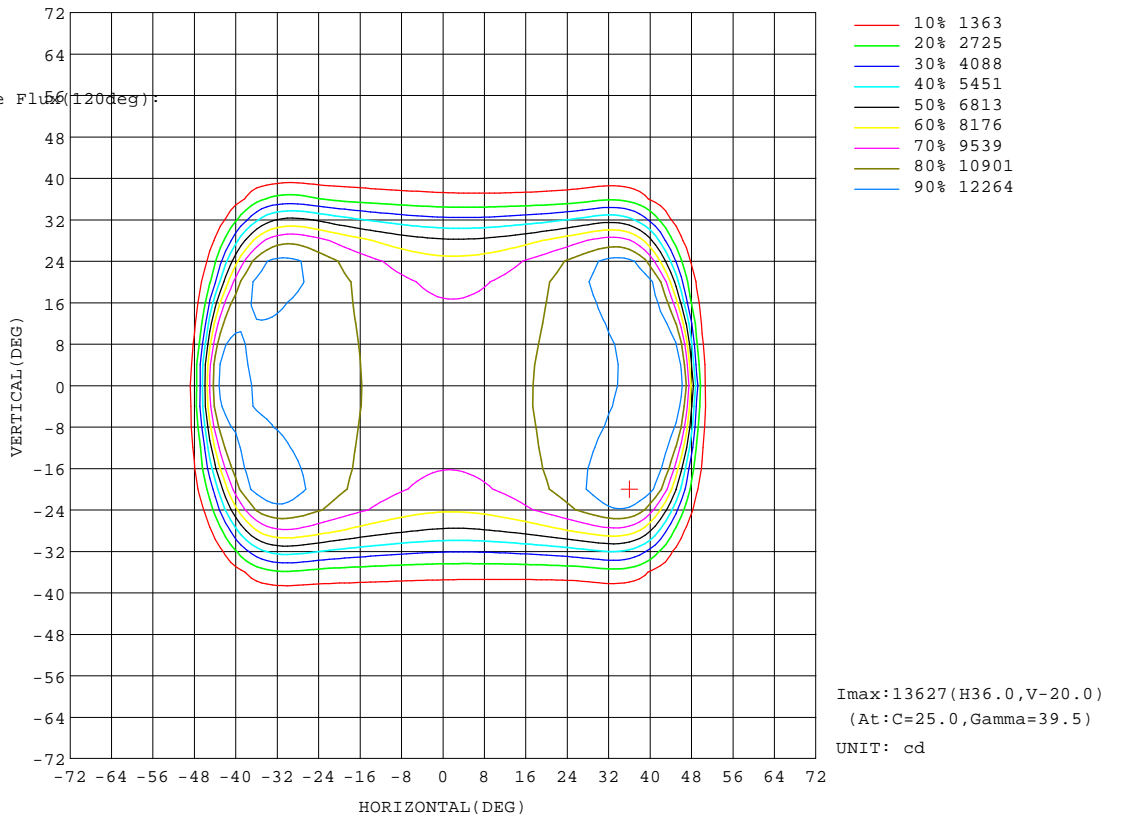
Test:U:220.9V I:0.8673A P:181.0W PF:0.9447 Lamp Flux:19005x1 lm		
NAME: LED Flood Light	TYPE:YHL-FL3-180	WEIGHT:
SPEC.:IP65	DIM.:	SERIAL No.:20150828
MFR.:Yaham Optoelectronics Co.,Ltd.	SUR.:	PROTECTION ANGLE:

Conical surface Flux(90deg):

16139 lm
 %lum = 88.4%
 %lamp = 88.4%

Conical surface Flux(120deg):

17829 lm
 %lum = 97.7%
 %lamp = 97.7%

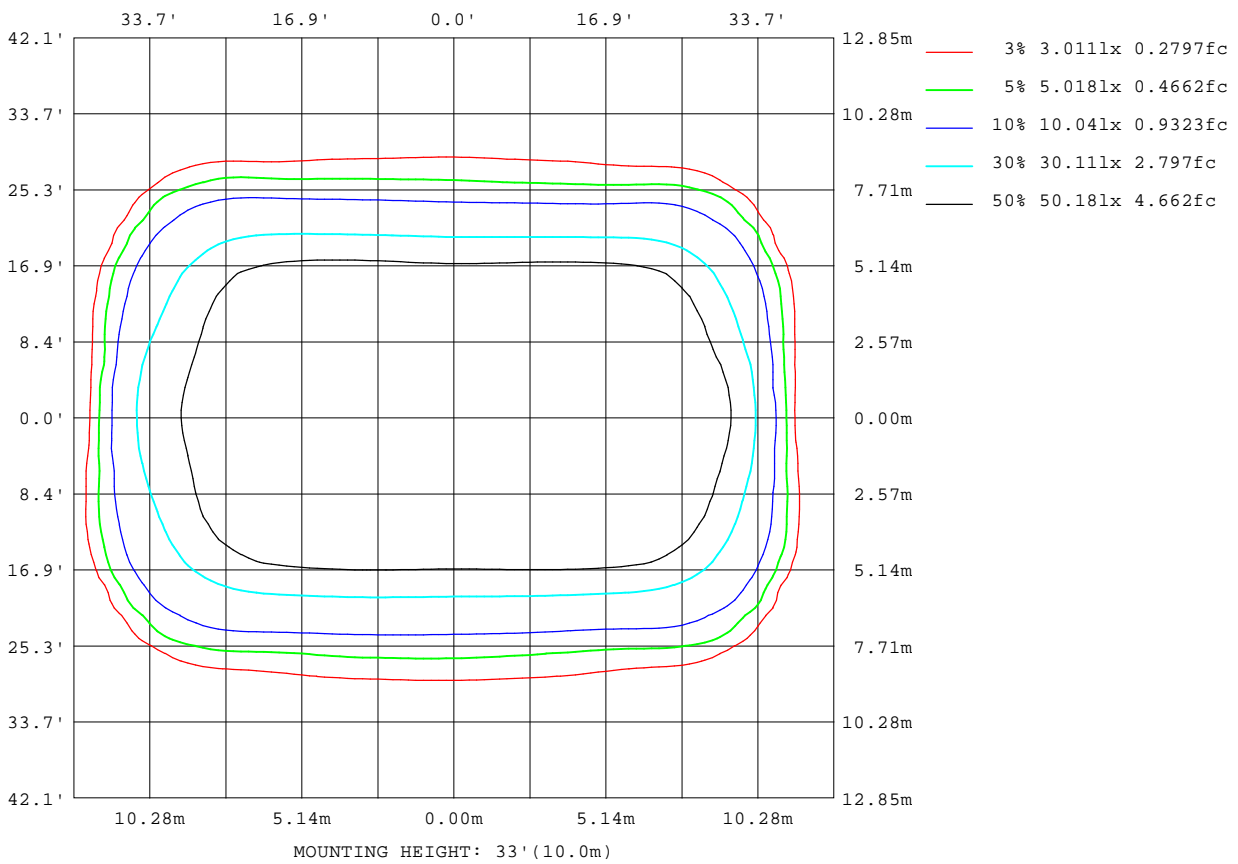


H(B) Range:-90 - 90DEG
 H(B) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25DEG
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 V(B) Interval: 2.0DEG
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 Humidity:65.0%
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 Remarks:

ISOLUX DIAGRAM

Test:U:220.9V I:0.8673A P:181.0W PF:0.9447 Lamp Flux:19005x1 lm		
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SPEC.:IP65	DIM.:	SERIAL No.:20150828
MFR.:Yaham Optoelectronics Co.,Ltd.	SUR.:	PROTECTION ANGLE:



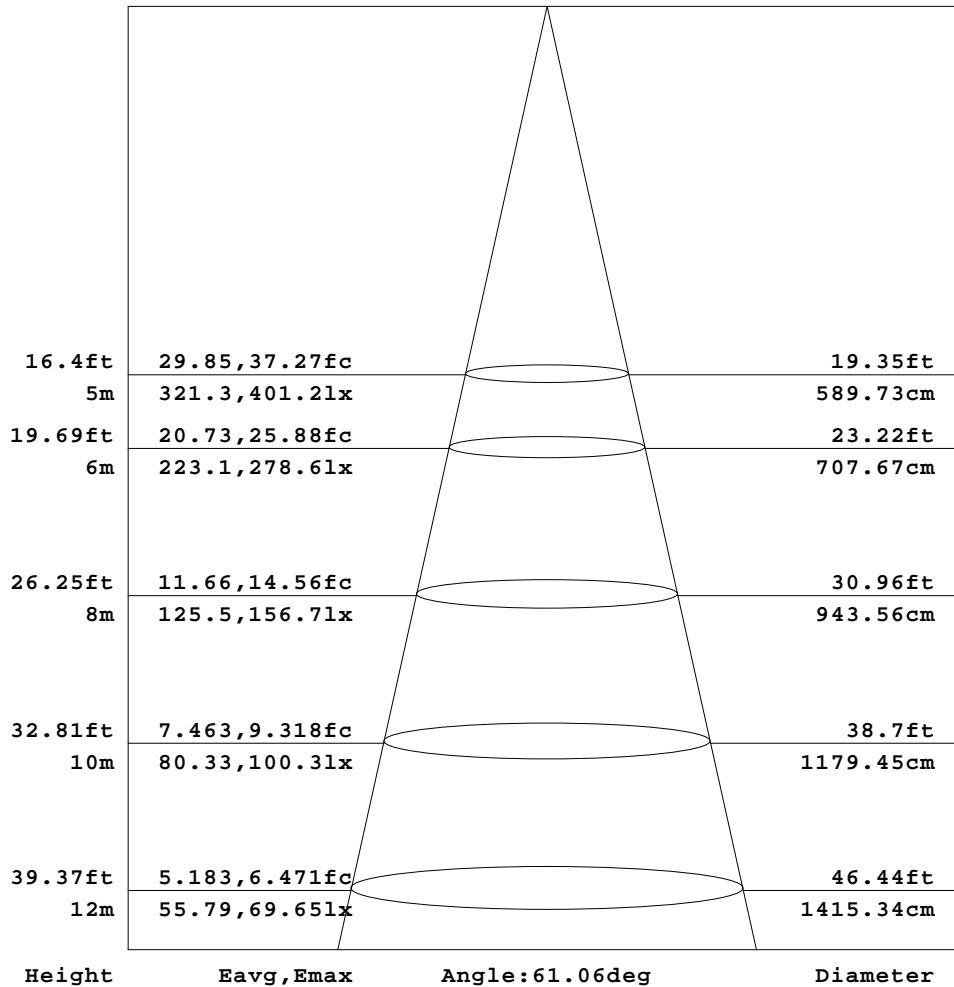
H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:Ryan Chan
Test Date:2015-08-28

V(B) Range:-90 - 90DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:10.000m [K=1.0000]
Remarks:

AAI Figure

Test:U:220.9V I:0.8673A P:181.0W PF:0.9447 Lamp Flux:19005x1 lm		
NAME: LED Flood Light	TYPE:YHL-FL3-180	WEIGHT:
SPEC.:IP65	DIM.:	SERIAL No.:20150828
MFR.:Yaham Optoelectronics Co.,Ltd.	SUR.:	PROTECTION ANGLE:

Flux out:9111 lm

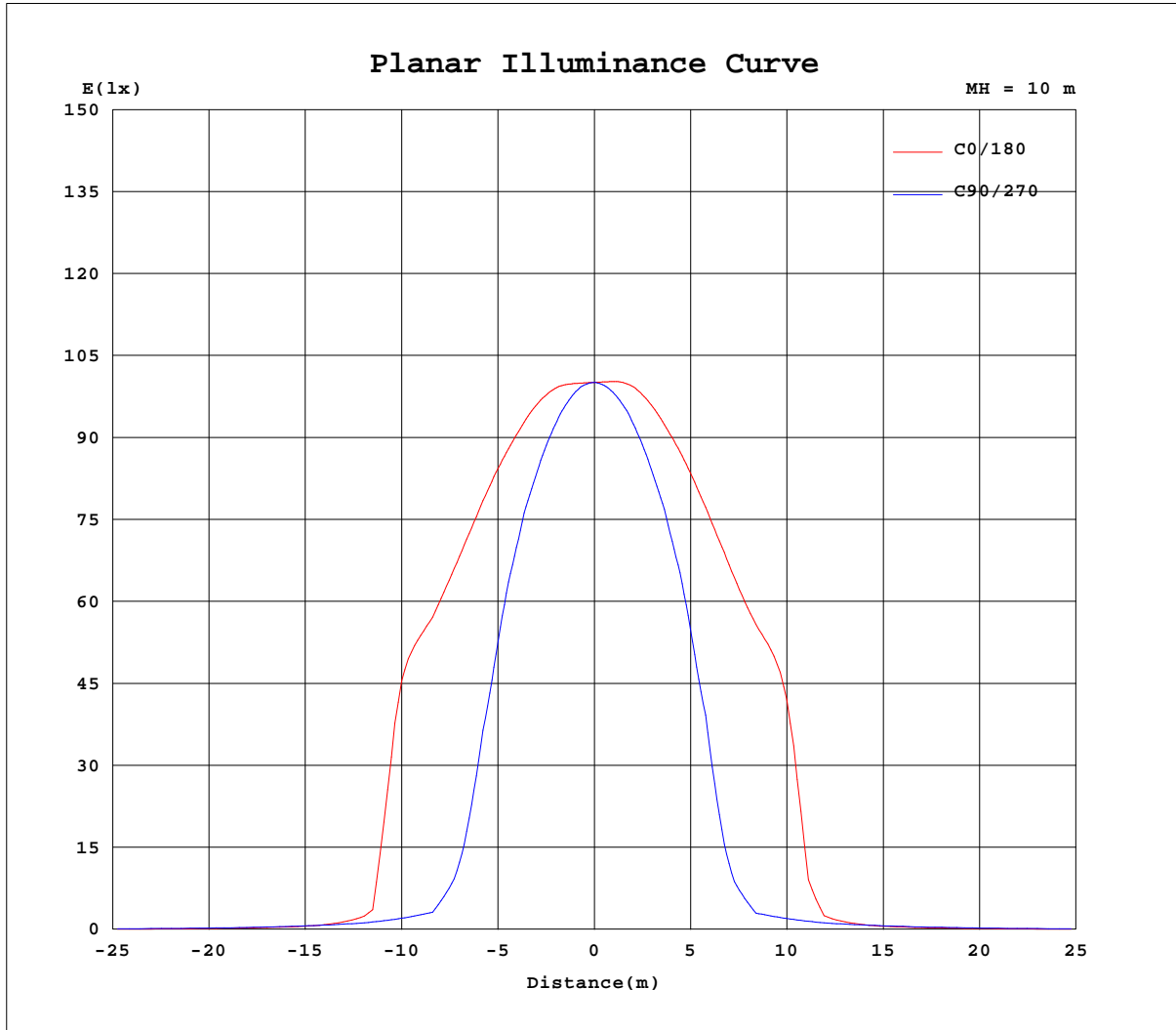


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H_(b) Range:-90 - 90DEG
H_(b) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:Ryan Chan
Test Date:2015-08-28

V(B) Range:-90 - 90DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:10.000m [K=1.0000]
Remarks:

Planar Illuminance Curve



H(β) Range:-90 - 90DEG
 H(β) Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:Ryan Chan
 Test Date:2015-08-28

V(B) Range:-90 - 90DEG
 V(B) Interval: 2.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.266
 Humidity:65.0%
 Test Distance:10.000m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.9V I:0.8673A P:181.0W PF:0.9447 Lamp Flux:19005x1 lm		
NAME: LED Flood Light	TYPE:YHL-FL3-180	WEIGHT:
SPEC.:IP65	DIM.:	SERIAL No.:20150828
MFR.:Yaham Optoelectronics Co.,Ltd.	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: x10cd

H(DEG) V(DEG)	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
-90	0.07	0.11	0.11	0.11	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.07	0.07	0.07	0.07	0.06	0.07
-85	0.07	0.11	0.13	0.16	0.18	0.28	0.54	0.89	1.57	2.99	4.35	5.30	5.30	3.25	3.44	3.76	4.13	4.39	4.44
-80	0.04	0.10	0.15	0.20	0.27	0.40	0.93	1.71	2.90	5.87	9.79	12.5	13.7	9.61	8.11	8.95	9.85	10.7	11.0
-75	0.04	0.10	0.17	0.34	0.98	1.84	2.67	3.90	5.39	7.93	10.9	13.1	14.5	13.7	14.5	15.4	15.7	16.0	15.8
-70	0.05	0.13	0.25	1.03	2.82	4.49	5.97	7.96	9.93	11.7	13.2	14.6	16.5	22.2	24.8	24.9	24.4	23.7	23.0
-65	0.05	0.14	0.48	2.05	4.53	6.44	7.93	9.94	12.1	13.9	15.6	17.2	19.4	26.0	29.1	29.6	30.0	28.9	27.9
-60	0.03	0.10	0.33	2.31	5.52	8.77	10.2	12.1	14.3	16.5	18.5	20.3	22.2	28.9	34.6	36.7	36.7	37.8	35.5
-55	0.03	0.10	0.56	3.11	6.49	9.99	11.5	13.5	16.1	19.1	21.4	23.5	26.0	34.0	40.4	42.7	42.0	42.0	40.0
-50	0.04	0.18	2.08	5.62	9.72	12.7	14.3	16.6	20.7	24.1	26.9	29.4	35.1	45.3	50.7	51.3	48.6	48.0	46.7
-45	0.04	0.22	2.58	6.24	10.2	13.6	16.0	19.1	24.0	31.0	37.9	44.5	49.5	55.3	59.6	59.8	57.5	57.2	56.1
-40	0.02	0.11	1.67	5.77	9.24	13.4	16.9	20.9	26.1	35.7	49.5	61.7	72.2	69.9	71.7	73.0	71.3	70.8	70.5
-35	0.02	0.11	2.03	6.28	9.81	13.8	18.3	22.7	30.2	47.4	91.5	218	262	233	211	199	189	181	176
-30	0.04	0.50	4.20	8.35	11.9	16.8	22.0	29.5	49.1	151	530	760	780	727	675	632	597	573	561
-25	0.04	0.60	4.49	8.74	12.3	17.6	23.3	33.2	64.1	337	839	1079	1077	999	922	859	809	775	763
-20	0.02	0.15	3.14	7.78	11.3	16.2	22.5	31.1	58.4	330	1022	1286	1283	1200	1113	1042	984	941	921
-15	0.02	0.16	3.30	8.07	11.7	16.8	23.4	33.4	68.3	475	1148	1285	1259	1193	1122	1061	1011	975	957
-10	0.04	1.00	5.23	9.89	13.5	20.1	28.0	46.3	164	1074	1237	1235	1201	1153	1103	1058	1021	996	989
-5	0.04	1.06	5.35	10.1	13.9	20.5	28.6	48.5	188	1180	1232	1220	1192	1150	1106	1067	1031	1005	998
0	0.02	0.23	3.59	8.65	12.6	18.1	25.4	36.8	80.0	969	1258	1217	1195	1162	1121	1085	1052	1020	1002
5	0.02	0.23	3.60	8.65	12.6	18.0	25.2	36.4	77.7	937	1252	1213	1192	1160	1120	1084	1048	1016	999
10	0.04	1.02	5.31	10.00	13.6	20.2	28.0	44.5	132	1115	1224	1210	1184	1147	1103	1062	1024	998	989
15	0.04	0.97	5.21	9.79	13.4	19.7	27.1	41.7	110	934	1223	1228	1197	1150	1098	1051	1010	982	972
20	0.02	0.20	3.20	7.85	11.5	16.1	22.6	30.9	53.6	262	1007	1268	1267	1199	1122	1054	997	953	929
25	0.02	0.19	3.04	7.56	11.1	15.5	21.5	29.0	47.5	172	771	1190	1257	1183	1085	1000	933	884	858
30	0.05	0.60	4.29	8.37	12.0	16.8	22.1	29.5	45.9	133	537	863	931	863	781	711	657	620	603
35	0.04	0.52	4.00	7.96	11.7	16.1	20.7	26.4	37.9	73.1	244	454	486	424	369	332	304	283	272
40	0.03	0.15	1.88	5.80	9.37	13.7	17.0	20.7	25.6	34.1	47.4	62.8	85.5	73.5	67.5	67.7	65.8	65.8	67.2
45	0.03	0.14	1.54	5.24	8.90	12.9	15.6	18.5	22.7	29.3	38.4	48.6	63.4	60.5	60.0	61.3	59.6	58.6	58.9
50	0.05	0.23	2.25	5.73	9.96	12.6	14.1	16.3	20.0	23.3	25.9	28.1	34.0	44.7	50.3	51.5	48.9	47.6	46.4
55	0.05	0.21	1.71	4.92	8.82	11.1	12.7	14.9	18.0	20.8	23.1	25.1	29.9	39.9	45.0	46.2	45.1	43.7	42.5
60	0.04	0.11	0.37	2.37	5.64	8.57	9.86	11.9	14.0	16.2	18.1	19.9	21.9	29.5	35.9	38.3	38.1	38.8	36.8
65	0.04	0.10	0.29	1.62	4.14	6.69	7.91	9.86	11.9	14.0	15.7	17.3	19.2	25.5	30.9	32.8	32.5	32.6	30.9
70	0.05	0.11	0.25	0.93	2.73	4.22	5.66	7.54	9.48	11.2	12.6	14.1	16.2	21.6	24.0	24.5	23.9	22.8	22.1
75	0.06	0.10	0.20	0.64	1.74	2.69	3.77	5.22	6.91	9.06	11.4	13.2	14.9	16.1	17.7	18.3	18.3	17.9	17.5
80	0.06	0.06	0.11	0.17	0.23	0.31	0.68	1.39	2.38	4.55	8.38	11.5	13.1	9.51	7.70	8.79	9.66	10.5	10.7
85	0.06	0.06	0.08	0.12	0.16	0.21	0.43	0.86	1.45	2.75	5.05	6.90	7.91	5.73	4.64	5.30	5.82	6.31	6.46
90	0.06	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05

H(h) Range:-90 - 90DEG
H(h) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:Ryan Chan
Test Date:2015-08-28

V(B) Range:-90 - 90DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:10.000m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

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SPEC.:IP65	DIM.:	SERIAL No.:20150828
MFR.:Yaham Optoelectronics Co.,Ltd.	SUR.:	PROTECTION ANGLE:

Table--2

UNIT: x10cd

H(DEG) V(DEG)	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
-90	0.07	0.08	0.08	0.09	0.09	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.05
-85	4.31	3.93	3.56	3.19	3.37	5.16	4.89	4.10	2.44	1.09	0.62	0.31	0.17	0.16	0.14	0.10	0.09	0.05
-80	10.9	10.1	9.15	8.23	7.43	11.5	12.6	10.7	7.63	3.60	1.77	0.92	0.37	0.27	0.22	0.15	0.10	0.06
-75	15.9	15.5	15.2	14.8	13.6	13.7	13.3	11.7	9.21	5.99	4.12	2.82	1.87	1.17	0.47	0.19	0.11	0.06
-70	23.5	23.7	24.7	24.3	21.0	15.5	13.8	12.6	10.8	8.87	6.82	4.98	3.40	1.86	0.41	0.18	0.10	0.03
-65	29.0	28.7	29.6	28.9	24.8	18.2	16.2	14.8	13.0	11.0	8.95	7.22	5.82	3.37	1.17	0.22	0.10	0.03
-60	36.5	37.9	36.2	36.4	33.2	24.9	20.5	18.7	17.1	15.2	12.9	11.1	9.99	7.42	3.37	0.78	0.14	0.05
-55	40.8	41.5	41.6	42.0	38.3	29.4	23.7	21.5	19.5	17.1	14.4	12.5	11.3	8.57	4.39	1.31	0.15	0.05
-50	47.1	47.9	50.8	49.2	42.7	31.7	27.3	24.7	21.9	18.3	15.7	14.0	12.5	8.46	4.32	0.88	0.11	0.02
-45	56.1	56.3	58.3	56.5	51.7	45.5	39.6	34.1	27.4	21.4	17.7	15.3	13.1	9.08	5.10	1.24	0.11	0.02
-40	69.9	68.8	69.3	69.1	66.0	65.8	62.1	52.3	40.9	28.9	22.6	18.4	15.2	11.5	7.78	3.37	0.28	0.04
-35	174	173	174	177	185	211	219	125	56.9	36.3	25.5	19.9	15.9	11.8	8.28	3.81	0.36	0.05
-30	565	583	612	650	698	739	669	372	77.5	41.4	26.4	19.8	15.0	11.1	7.59	2.68	0.12	0.02
-25	776	811	864	933	1014	1090	1043	668	160	47.8	28.6	20.9	15.5	11.5	8.00	2.96	0.13	0.02
-20	926	957	1010	1081	1170	1279	1360	1270	686	94.8	38.8	25.7	18.9	13.5	10.0	5.29	0.91	0.04
-15	963	992	1039	1100	1175	1262	1340	1324	897	130	41.5	26.9	19.4	13.7	10.3	5.48	1.06	0.04
-10	1002	1034	1077	1128	1186	1241	1284	1291	804	75.8	35.5	24.7	17.6	12.6	9.13	3.73	0.24	0.02
-5	1012	1044	1085	1130	1182	1227	1262	1288	948	77.8	36.1	25.3	18.0	12.9	9.24	3.78	0.27	0.02
0	1007	1034	1071	1111	1154	1200	1235	1266	1320	205	49.4	29.4	21.0	14.8	10.9	6.00	1.40	0.04
5	1005	1031	1068	1109	1153	1200	1234	1261	1299	178	47.9	29.2	20.9	14.6	10.9	5.93	1.36	0.05
10	1002	1032	1073	1121	1174	1221	1255	1274	801	74.4	35.7	25.1	17.8	12.7	9.15	3.76	0.30	0.01
15	984	1016	1062	1119	1183	1244	1279	1240	540	67.3	34.4	24.5	17.4	12.4	8.92	3.63	0.28	0.00
20	932	961	1012	1080	1165	1261	1336	1253	626	87.3	37.9	26.0	19.3	13.5	10.0	5.36	1.10	0.07
25	861	893	949	1026	1122	1225	1266	1036	401	66.0	34.8	24.7	18.5	13.1	9.61	5.07	0.97	0.08
30	608	634	675	730	797	851	741	359	70.9	37.7	26.3	20.4	15.3	11.2	7.62	2.90	0.22	0.00
35	272	280	293	317	361	411	343	143	51.0	31.8	24.2	19.5	14.8	10.8	7.11	2.59	0.21	0.00
40	66.6	65.0	65.4	66.6	63.7	65.2	63.2	50.9	38.6	28.1	22.7	18.8	15.6	11.9	7.76	3.67	0.47	0.07
45	58.8	57.9	59.3	60.4	57.1	54.3	49.5	41.0	32.6	24.9	20.3	17.1	14.6	11.4	7.09	3.15	0.40	0.07
50	47.2	48.4	51.2	50.1	44.3	33.2	27.6	25.2	22.4	18.5	15.8	13.8	12.5	8.81	4.52	1.18	0.18	0.01
55	43.5	43.9	45.9	44.9	39.5	29.2	24.5	22.4	20.1	16.9	14.3	12.4	11.2	7.68	3.70	0.88	0.17	0.02
60	37.1	38.5	37.1	37.8	34.9	26.9	20.8	18.8	17.3	15.3	13.0	11.0	9.52	7.67	3.74	1.02	0.21	0.07
65	31.2	32.2	31.6	32.0	29.6	23.0	18.2	16.4	14.9	13.0	10.9	8.91	7.39	5.67	2.65	0.72	0.19	0.07
70	22.5	22.9	23.6	22.8	20.5	15.4	13.6	12.3	10.6	8.83	6.86	5.04	3.69	2.00	0.55	0.23	0.13	0.03
75	17.7	17.6	17.7	16.8	15.6	14.3	12.8	11.1	8.58	6.31	4.73	3.34	2.35	1.30	0.41	0.20	0.11	0.04
80	10.6	10.0	9.09	8.20	7.40	11.4	12.2	10.4	7.16	3.40	1.87	1.07	0.46	0.28	0.23	0.18	0.11	0.06
85	6.40	6.02	5.48	4.95	4.47	6.90	7.36	6.30	4.33	2.07	1.15	0.67	0.31	0.19	0.16	0.13	0.09	0.06
90	0.05	0.06	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.06	0.06	0.06	0.05	0.05

H(h) Range:-90 - 90DEG
H(h) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:Ryan Chan
Test Date:2015-08-28

V(B) Range:-90 - 90DEG
V(B) Interval: 2.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.266
Humidity:65.0%
Test Distance:10.000m [K=1.0000]
Remarks: