

Floodlight Summary:

Report based on lamp delivering 1000 lumens.

Maximum Intensity	307.9 cd per klm.
(Luminaire orientation as tested.)	0.0 degrees vertical
	0.0 degrees horizontal

Beam Spread	At 10% of Imax	154.0V x 178.7H
	At 50% of Imax	107.4V x 133.7H
	At 90% of Imax	46.6V x 54.6H

Beam Flux	Total	996.3 lumens per klm.
	To 10% of Imax	992.0 lumens per klm.
	To 50% of Imax	762.5 lumens per klm.
	To 90% of Imax	188.8 lumens per klm.

Upward LOR	0.0 %
Downward LOR	99.6 %

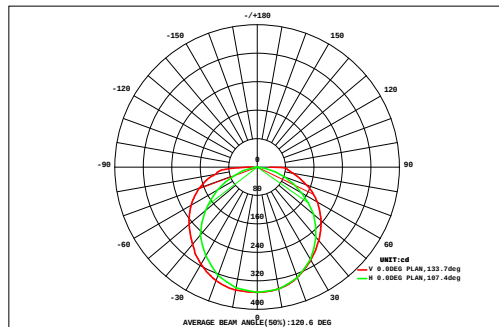
Luminaire Efficiency(Light Output Ratio)	100.0 %
--	---------

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.2DEG
Operators:QC1
Test Date:2024-04-10

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.275
Humidity:76%
Test Distance:8.300m [K=1.0000]
Remarks:

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:24.00V I:0.9012A P:21.63W PF:1.000 Lamp Flux:1141.95x1 lm		
NAME: 8.02.019.0035 LLS-OP-W30A-L12-S	TYPE:LED	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:202404000014
MFR.: TPK OPTOELECTRONIC TECH CO., LTD	SUR.:	PROTECTION ANGLE:



DATA OF LAMP		Eff:52.80lm/W	
MODEL	LLS-OP-W30A-L12-S	Imax(cd)	351.6
NOMINAL POWER(W)	21	AVAILABILITY(%)	99.8
RATED VOLTAGE(V)	24	Avai. FLUX(lm)	1140
NOMINAL FLUX(lm)	1141.95	LOR(%)	100.0
LAMPS INSIDE	1	TOTAL FLUX(lm)	1142
TEST VOLTAGE(V)	24.0	θ @50%(H,V)	134, 107DEG

AREA FLUX DIAGRAM																		UNIT:lm	Φ t	Φ a
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	0.18	0.83	1.67	2.40	2.81	2.88	2.66	2.21	1.71	1.66	1.99	2.28	2.39	2.29	1.95	1.38	0.79	0.25	32.3	32.1
70	0.20	0.88	1.66	2.54	3.23	3.67	3.84	3.76	3.51	3.48	3.59	3.52	3.23	2.73	2.06	1.33	0.70	0.21	44.2	44.2
60	0.23	0.96	1.89	2.97	3.99	4.78	5.30	5.48	5.38	5.37	5.33	4.98	4.34	3.46	2.49	1.54	0.76	0.22	59.5	59.5
50	0.25	1.04	2.09	3.35	4.59	5.72	6.59	7.05	7.12	7.10	6.88	6.23	5.24	4.09	2.89	1.75	0.83	0.22	73.0	73.0
40	0.27	1.11	2.27	3.67	5.10	6.43	7.55	8.27	8.49	8.46	8.03	7.14	5.96	4.61	3.23	1.93	0.90	0.23	83.6	83.6
30	0.28	1.16	2.41	3.89	5.47	7.00	8.35	9.25	9.59	9.56	9.00	7.92	6.54	5.02	3.49	2.07	0.95	0.24	92.2	92.2
20	0.28	1.19	2.48	4.02	5.66	7.33	8.85	9.90	10.3	10.3	9.71	8.49	6.93	5.29	3.66	2.17	0.98	0.24	97.8	97.8
10	0.28	1.20	2.53	4.09	5.78	7.49	9.05	10.2	10.6	10.6	10.00	8.72	7.08	5.39	3.73	2.21	1.00	0.24	100	100
0	0.25	1.18	2.51	4.08	5.75	7.46	9.01	10.1	10.6	10.6	9.95	8.69	7.09	5.40	3.75	2.22	1.00	0.23	99.8	99.8
-10	0.18	1.09	2.45	4.01	5.65	7.25	8.72	9.75	10.2	10.2	9.61	8.43	6.88	5.26	3.65	2.17	0.96	0.18	96.6	96.6
-20	0.16	0.86	2.25	3.77	5.31	6.78	8.12	8.99	9.33	9.33	8.87	7.85	6.50	5.00	3.48	2.06	0.82	0.16	89.6	89.6
-30	0.17	0.69	1.90	3.45	4.87	6.17	7.27	7.97	8.19	8.20	7.86	7.03	5.86	4.54	3.19	1.81	0.71	0.18	80.1	80.1
-40	0.18	0.65	1.53	3.00	4.33	5.44	6.29	6.75	6.80	6.78	6.60	6.01	5.11	4.02	2.83	1.51	0.70	0.19	68.7	68.7
-50	0.18	0.63	1.28	2.45	3.72	4.55	5.01	5.11	4.96	4.91	4.90	4.66	4.15	3.38	2.37	1.33	0.68	0.19	54.4	54.4
-60	0.15	0.62	1.08	1.94	2.96	3.42	3.53	3.39	3.11	3.04	3.17	3.16	2.96	2.58	1.86	1.17	0.61	0.18	38.9	38.9
-70	0.13	0.53	0.93	1.52	2.11	2.26	2.12	1.75	1.36	1.28	1.53	1.77	1.87	1.80	1.38	0.97	0.54	0.17	24.0	23.3
-80	0.06	0.21	0.40	0.61	0.79	0.75	0.54	0.28	0.09	0.06	0.20	0.40	0.56	0.64	0.52	0.38	0.24	0.09	6.84	5.77
-90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Φ t	3.42	14.8	31.4	51.8	72.1	89.4	103	110	111	111	107	97.3	82.7	65.5	46.5	28.0	13.2	3.42	1142	---
Φ a	3.41	14.8	31.4	51.8	72.1	89.4	103	110	111	110	107	97.0	82.6	65.5	46.5	28.0	13.2	3.41	---	1140

one-half-peak spread: U:52.8,D:55.2 , L:70.9,R:63.6

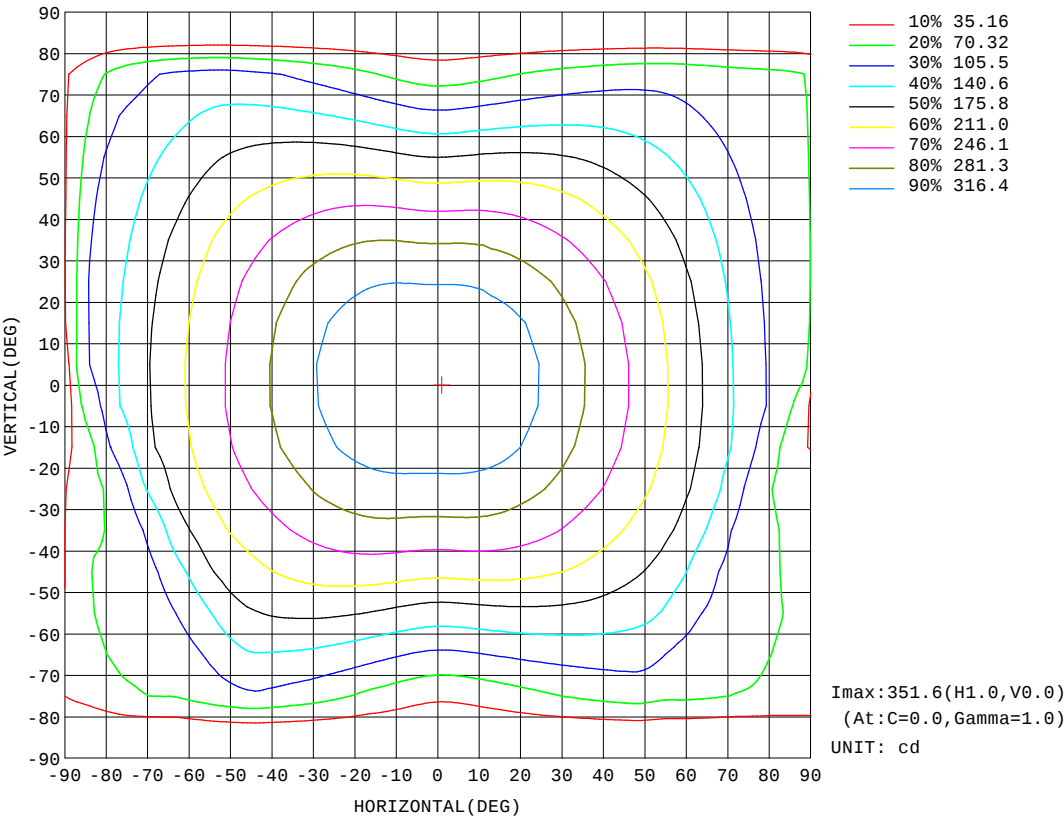
NEMA Beam Type: Type 7

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.2DEG
Operators:QC1
Test Date:2024-04-10

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.275
Humidity:76%
Test Distance:8.300m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:24.00V I:0.9012A P:21.63W PF:1.000 Lamp Flux:1141.95x1 lm		
NAME: 8.02.019.0035 LLS-OP-W30A-L12-S	TYPE:LED	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:202404000014
MFR.: TPK OPTOELECTRONIC TECH CO., LTD	SUR.:	PROTECTION ANGLE:

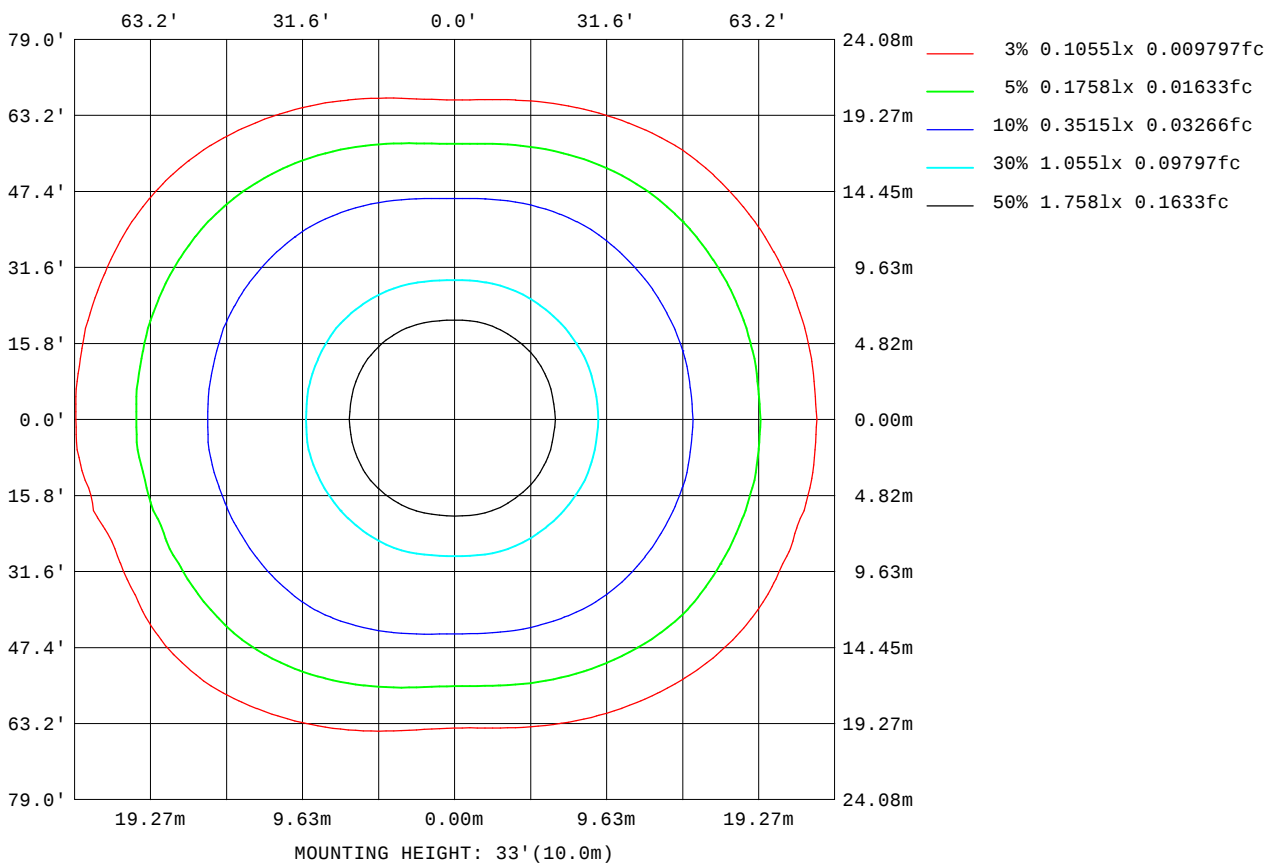


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.2DEG
Operators:QC1
Test Date:2024-04-10

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.275
Humidity:76%
Test Distance:8.300m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:24.00V I:0.9012A P:21.63W PF:1.000 Lamp Flux:1141.95x1 lm		
NAME: 8.02.019.0035 LLS-OP-W30A-L12-S	TYPE:LED	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:202404000014
MFR.: TPK OPTOELECTRONIC TECH CO., LTD	SUR.:	PROTECTION ANGLE:

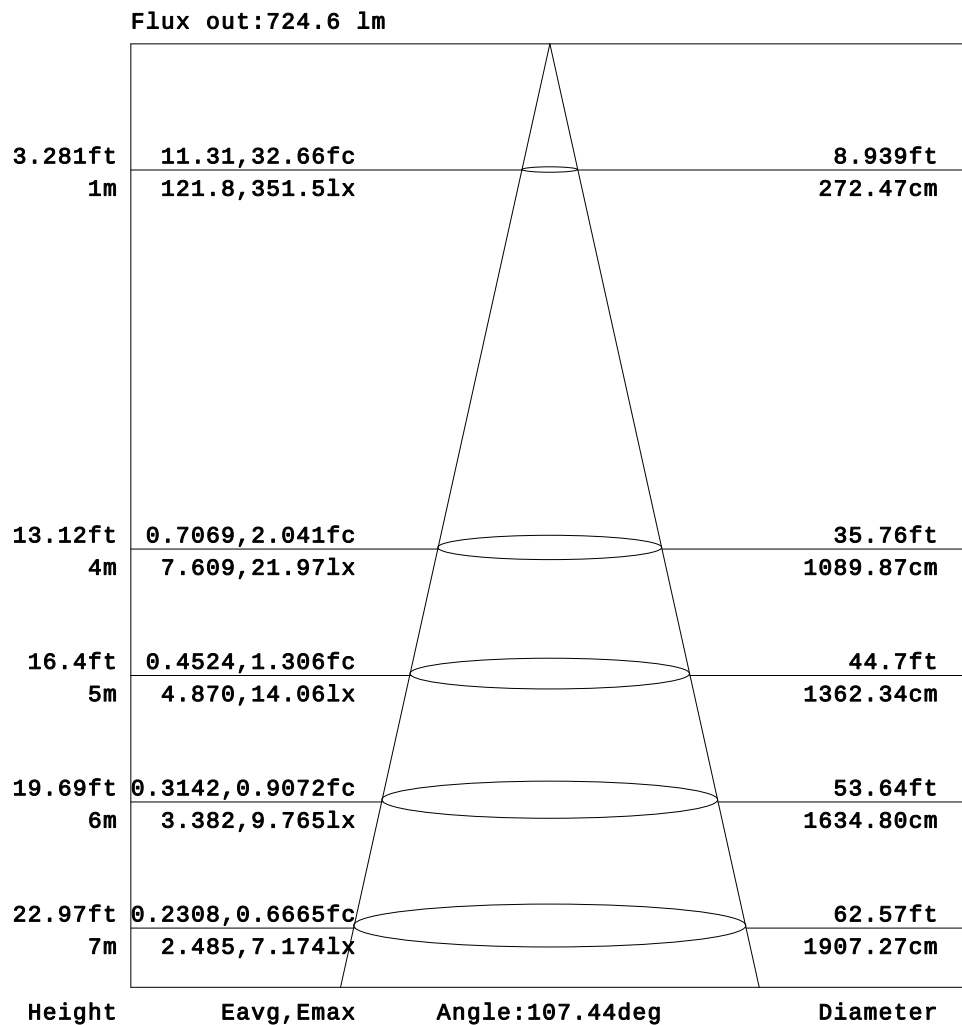


H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.2DEG
Operators:QC1
Test Date:2024-04-10

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.275
Humidity:76%
Test Distance:8.300m [K=1.0000]
Remarks:

AAI Figure

Test:U:24.00V I:0.9012A P:21.63W PF:1.000 Lamp Flux:1141.95x1 lm		
NAME: 8.02.019.0035 LLS-OP-W30A-L12-S	TYPE:LED	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:202404000014
MFR.: TPK OPTOELECTRONIC TECH CO., LTD	SUR.:	PROTECTION ANGLE:

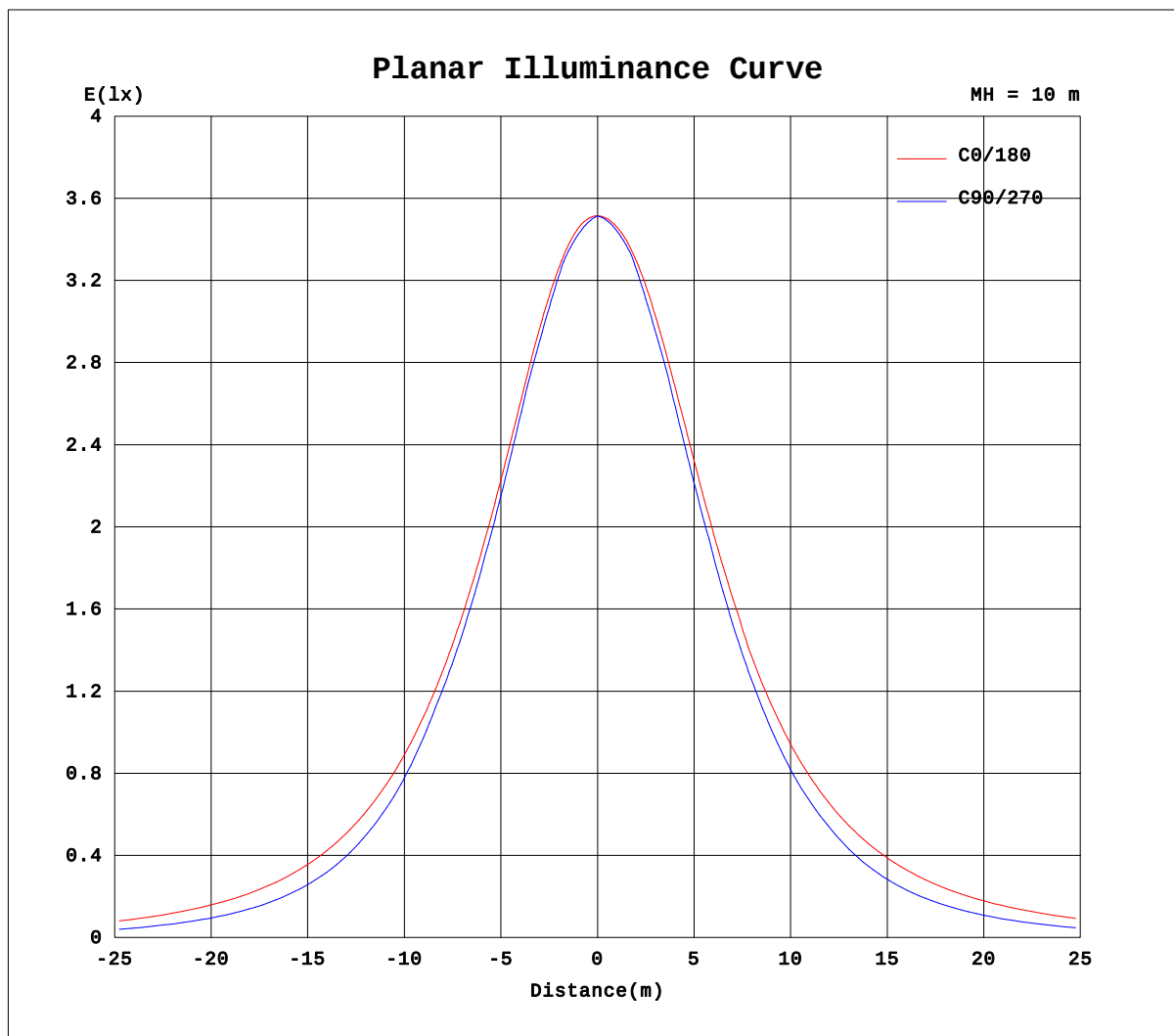


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.2DEG
Operators:QC1
Test Date:2024-04-10

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.275
Humidity:76%
Test Distance:8.300m [K=1.0000]
Remarks:

Planar Illuminance Curve



H(β) Range:-90 - 90DEG
H(β) Interval: 1.0DEG
Test Speed: HIGH
Temperature:25.2DEG
Operators:QC1
Test Date:2024-04-10

V(B) Range:-80 - 80DEG
V(B) Interval: 5.0DEG
Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.275
Humidity:76%
Test Distance:8.300m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.9012A P:21.63W PF:1.000 Lamp Flux:1141.95x1 lm		
NAME: 8.02.019.0035 LLS-OP-W30A-L12-S	TYPE:LED	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:202404000014
MFR.: TPK OPTOELECTRONIC TECH CO., LTD	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

H(°) \ V(°)	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
-90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-80	35.6	42.7	50.3	56.5	63.5	65.3	69.7	76.3	80.7	82.6	79.1	70.9	61.8	52.2	41.8	32.7	25.1	17.4	13.3
-75	35.4	44.5	55.7	65.8	70.1	70.9	78.1	87.5	95.4	100	97.3	91.6	85.4	77.3	68.4	59.9	52.2	45.0	41.0
-70	35.3	46.2	61.1	75.0	76.8	76.6	86.5	98.8	110	118	116	112	109	102	95.0	87.2	79.4	72.5	68.7
-65	35.4	49.8	69.8	78.0	79.3	82.8	95.7	111	127	139	138	136	134	128	122	116	109	102	99.0
-60	35.5	53.3	78.5	81.0	81.9	89.0	105	124	145	159	161	161	158	154	150	144	138	132	129
-55	35.7	56.7	78.5	79.8	83.8	98.8	118	139	161	173	179	181	182	181	178	173	168	163	160
-50	35.8	60.0	78.5	78.6	85.8	109	131	155	178	187	196	202	206	207	205	202	198	193	191
-45	34.8	61.5	75.8	80.1	94.1	119	145	172	190	201	211	218	224	227	229	228	225	222	220
-40	33.8	62.9	73.2	81.6	102	129	158	189	202	214	225	234	241	248	252	254	253	250	249
-35	34.9	60.9	71.2	87.2	112	145	175	198	213	226	237	247	256	263	269	271	271	270	269
-30	36.0	58.8	69.2	92.9	122	161	191	207	223	237	249	260	271	279	285	289	290	289	289
-25	32.6	55.3	72.6	103	143	173	197	215	231	246	259	271	283	293	300	305	306	306	306
-20	29.2	51.8	76.1	114	164	184	203	223	239	255	269	282	295	307	315	321	323	323	323
-15	22.6	54.5	97.0	130	166	189	208	228	245	261	275	289	303	315	324	330	333	334	334
-10	15.9	57.1	118	146	168	194	214	233	250	267	282	297	311	323	333	340	344	345	345
-5	13.6	79.1	118	148	171	194	214	233	250	267	283	299	313	326	336	344	347	348	348
0	11.3	101	119	150	173	195	215	233	250	267	283	301	316	329	339	347	351	351	352
5	22.7	98.7	123	151	173	195	215	233	250	267	283	300	314	327	338	345	349	350	350
10	34.2	96.2	127	151	174	195	215	233	250	267	283	299	313	326	336	343	347	348	348
15	33.6	98.3	127	149	171	192	211	229	246	263	278	293	308	320	329	336	339	339	339
20	33.1	100	126	147	169	189	208	226	242	258	273	287	303	314	322	328	330	330	330
25	33.8	98.9	124	144	166	186	204	222	238	253	266	279	292	302	309	314	316	315	315
30	34.4	97.5	122	142	163	182	200	217	233	247	260	271	281	290	296	300	301	300	299
35	33.9	94.5	119	138	157	176	193	209	224	236	248	257	266	273	278	281	281	279	278
40	33.4	91.5	117	134	152	169	186	201	214	226	235	244	251	257	260	262	261	258	257
45	33.4	86.4	114	130	146	162	177	191	203	213	221	228	234	238	239	239	236	233	232
50	33.4	81.3	111	125	140	154	168	181	192	200	207	212	216	218	218	216	212	208	207
55	33.2	75.7	107	120	133	146	158	170	179	185	189	192	193	192	190	187	182	177	175
60	33.0	70.1	104	116	127	138	149	159	166	170	171	171	169	166	162	157	152	146	144
65	33.1	63.3	95.1	110	119	128	137	145	149	151	150	148	144	140	134	128	122	116	113
70	33.1	56.5	86.2	105	112	119	126	132	133	132	128	124	119	113	106	99.1	91.6	85.3	82.4
75	33.1	50.1	72.0	89.4	100	109	114	117	116	113	108	102	95.0	87.6	79.6	71.2	63.1	56.3	53.1
80	33.1	43.6	57.8	73.9	88.8	98.1	101	101	99.1	93.6	86.8	79.2	70.8	62.0	52.7	43.3	34.6	27.2	23.8
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

$H(\beta)$ Range:-90 - 90DEG
 $H(\beta)$ Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25.2DEG
 Operators:QC1
 Test Date:2024-04-10

$V(\beta)$ Range:-80 - 80DEG
 $V(\beta)$ Interval: 5.0DEG
 Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.275
 Humidity:76%
 Test Distance:8.300m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.9012A P:21.63W PF:1.000 Lamp Flux:1141.95x1 lm		
NAME: 8.02.019.0035 LLS-OP-W30A-L12-S	TYPE:LED	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:202404000014
MFR.: TPK OPTOELECTRONIC TECH CO., LTD	SUR.:	PROTECTION ANGLE:

Table--2

UNIT: cd

H(°) \ V(°)	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
-90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-80	14.8	19.9	26.5	33.8	41.2	48.5	55.5	62.1	68.3	69.3	64.5	66.6	64.3	63.9	64.3	64.7	65.4	66.0
-75	42.4	46.9	52.7	58.9	64.9	70.5	75.8	80.5	84.6	84.7	77.8	77.5	74.5	70.6	68.8	66.6	65.9	66.0
-70	69.9	74.0	79.0	84.0	88.5	92.6	96.0	98.8	101	100	91.0	88.4	84.8	77.2	73.3	68.5	66.5	65.9
-65	100	104	108	112	115	117	119	120	120	117	105	96.7	91.1	83.4	77.0	70.7	67.6	65.6
-60	130	134	137	140	141	142	142	141	139	135	119	105	97.4	89.6	80.8	73.0	68.6	65.2
-55	161	164	166	168	168	167	165	161	156	149	136	116	103	93.6	84.2	74.0	68.7	64.3
-50	192	194	196	196	195	192	188	182	173	163	152	127	109	97.6	87.6	75.1	68.8	63.3
-45	221	223	223	220	217	211	204	196	186	175	162	141	116	99.6	88.1	76.5	67.4	62.5
-40	251	251	249	245	239	231	221	210	199	187	173	155	124	102	88.7	78.0	66.0	61.7
-35	270	270	267	262	254	245	234	223	210	197	182	164	139	110	88.3	76.6	64.1	59.4
-30	289	289	285	279	270	260	248	235	222	207	191	173	154	118	87.8	75.2	62.1	57.0
-25	306	305	301	293	283	272	259	245	231	215	198	180	160	130	98.5	73.2	59.1	52.4
-20	323	322	317	308	297	284	270	256	240	223	205	186	165	142	109	71.1	56.1	47.8
-15	334	331	326	316	304	291	275	260	244	227	208	189	167	144	117	87.0	58.1	33.9
-10	344	341	335	325	312	298	280	264	247	230	212	191	170	147	124	103	60.0	20.0
-5	348	344	338	327	314	300	283	267	250	232	213	193	171	147	124	103	73.2	27.8
0	351	347	341	330	316	301	286	269	252	234	215	194	172	148	124	103	86.5	35.6
5	349	346	339	329	315	300	283	267	250	232	213	192	171	147	124	102	86.2	51.2
10	348	344	337	327	314	299	281	265	248	230	211	191	169	146	123	102	85.9	66.7
15	339	336	329	319	307	293	276	261	244	227	208	188	167	144	121	101	85.5	68.0
20	330	327	321	312	300	286	272	257	241	224	206	186	165	141	120	99.7	85.0	69.4
25	314	312	306	297	287	275	261	248	233	217	199	180	160	138	117	98.5	84.6	69.6
30	299	297	290	283	274	263	251	238	224	209	193	175	155	135	115	97.2	84.2	69.7
35	278	277	272	266	258	249	238	226	214	200	184	167	149	130	111	95.1	83.4	69.6
40	258	257	255	250	243	235	225	215	203	190	176	160	143	125	108	92.9	82.5	69.4
45	233	234	233	230	225	218	209	200	189	178	165	151	135	119	104	90.7	81.6	69.0
50	208	210	211	209	206	200	193	185	176	166	154	142	128	113	99.8	88.4	80.8	68.5
55	177	180	181	182	181	178	173	168	160	152	142	132	119	107	95.6	86.2	79.9	68.3
60	146	149	152	154	155	155	154	150	145	138	130	121	111	101	91.4	84.0	79.1	68.1
65	115	119	123	126	128	130	130	130	127	123	118	111	103	95.0	87.9	82.3	78.4	67.9
70	84.2	88.3	93.0	97.5	101	105	107	109	110	109	106	101	95.3	89.4	84.5	80.7	77.7	67.8
75	55.1	59.7	65.2	70.9	76.3	81.2	85.5	89.3	92.3	94.2	94.3	92.0	88.3	84.6	81.6	79.0	75.4	67.6
80	25.9	31.0	37.5	44.4	51.2	57.8	64.0	69.7	75.0	79.6	82.7	82.8	81.4	79.9	78.6	77.2	73.2	67.3
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

$H(\beta)$ Range:-90 - 90DEG
 $H(\beta)$ Interval: 1.0DEG
 Test Speed: HIGH
 Temperature:25.2DEG
 Operators:QC1
 Test Date:2024-04-10

$V(\beta)$ Range:-80 - 80DEG
 $V(\beta)$ Interval: 5.0DEG
 Test System:EVERFINE G0-2000B_V1 SYSTEM V2.0.275
 Humidity:76%
 Test Distance:8.300m [K=1.0000]
 Remarks: